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# SEMICONDUCTOR GENERAL CATALOG

## 半導体製品総覧表2018年7月版

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### MOSFETs / Junction FETs

### MOSFET / 接合形FET

Low Voltage MOSFETs / 低耐压MOSFET

Mid-High Voltage MOSFETs / 中高耐压MOSFET

Automotive MOSFETs / 車載MOSFET

Junction FETs / 接合形FET

SiC MOSFETs / SiC MOSFET

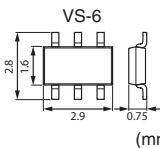
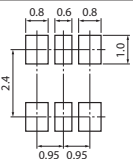
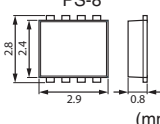
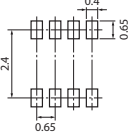
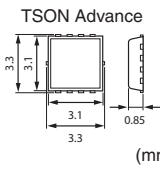
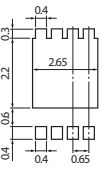
Radio-Frequency MOSFETs / 高周波MOSFET

Low Voltage MOSFETs / 低耐圧MOSFET

High-Speed Switching Series / 高速スイッチングシリーズ

(Single N-Channel) / (シングルNチャンネル)

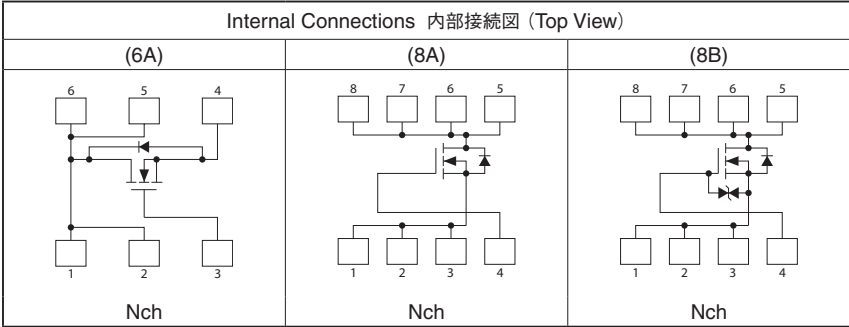
(1/5)

| Package                                                                                    | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                            |
|--------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                            |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 4.5 V |                            |                            |                            |                          |             |                      |                                                                                       |
| <br>(mm)   | TPC6008-H    | 30                       | ±20                  | 5.9                | 2.2 (2)            | 60                           | 74                        | 232                        | 16                         | 68                         | 4.8                      | U-MOSVI-H   | (6A)                 |    |
|                                                                                            | TPC6009-H    | 40                       | ±20                  | 5.3                | 2.2 (2)            | 81                           | 98                        | 225                        | 13                         | 54                         | 4.7                      | U-MOSVI-H   |                      |                                                                                       |
|                                                                                            | TPC6010-H    | 60                       | ±20                  | 6.1                | 2.2 (2)            | 59                           | 63                        | 640                        | 24                         | 95                         | 12                       | U-MOSVI-H   |                      |                                                                                       |
| <br>(mm)   | TPCP8007-H   | 60                       | ±20                  | 5                  | 1.68 (2)           | 57                           | 64                        | 640                        | 25                         | 90                         | 11                       | U-MOSVI-H   | (8A)                 |    |
| <br>(mm) | TPCC8067-H   | 30                       | ±20                  | 9                  | 15                 | 25                           | 33                        | 690                        | 28                         | 120                        | 9.5                      | U-MOSVII-H  | (8A)                 |  |
|                                                                                            | TPCC8066-H   |                          | ±20                  | 11                 | 17                 | 15                           | 19                        | 1100                       | 49                         | 190                        | 15                       | U-MOSVII-H  |                      |                                                                                       |
|                                                                                            | TPCC8065-H   |                          | ±20                  | 13                 | 18                 | 11.4                         | 14.5                      | 1350                       | 63                         | 240                        | 20                       | U-MOSVII-H  |                      |                                                                                       |
|                                                                                            | TPCC8068-H   |                          | ±20                  | 13                 | 17                 | 11.6                         | 16                        | 980                        | 57                         | 210                        | 14                       | U-MOSVII-H  |                      |                                                                                       |
|                                                                                            | TPCC8064-H   |                          | ±20                  | 19                 | 30                 | 8.2                          | 10.6                      | 1600                       | 78                         | 290                        | 23                       | U-MOSVII-H  |                      |                                                                                       |
|                                                                                            | TPCC8062-H   |                          | ±20                  | 27                 | 39                 | 5.6                          | 7.1                       | 2400                       | 120                        | 430                        | 34                       | U-MOSVII-H  |                      |                                                                                       |
|                                                                                            | TPN11003NL   |                          | ±20                  | 31 (1)             | 19                 | 11                           | 16                        | 510                        | 18                         | 300                        | 7.5                      | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN8R903NL   |                          | ±20                  | 37 (1)             | 22                 | 8.9                          | 12.7                      | 630                        | 21                         | 350                        | 9.8                      | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN6R003NL   |                          | ±20                  | 56 (1)             | 32                 | 6                            | 8.3                       | 1050                       | 37                         | 600                        | 17                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN4R303NL   |                          | ±20                  | 63 (1)             | 34                 | 4.3                          | 6.3                       | 1110                       | 39                         | 640                        | 14.8                     | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN5R203PL   |                          | ±20                  | 76 (1)             | 61                 | 5.2                          | 6.4                       | 1520                       | 55                         | 515                        | 22                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN2R703NL   |                          | ±20                  | 90 (1)             | 42                 | 2.7                          | 4.1                       | 1600                       | 53                         | 890                        | 21                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN2R903PL   |                          | ±20                  | 122 (1)            | 75                 | 2.9                          | 4.1                       | 1780                       | 60                         | 620                        | 26                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN1R603PL   |                          | ±20                  | 188 (1)            | 104                | 1.6                          | 2.5                       | 2970                       | 110                        | 850                        | 41                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN7R504PL   | 40                       | ±20                  | 68 (1)             | 61                 | 7.5                          | 10                        | 1570                       | 35                         | 380                        | 24                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN3R704PL   |                          | ±20                  | 92 (1)             | 86                 | 3.7                          | 6                         | 1910                       | 41                         | 470                        | 27                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN2R304PL   |                          | ±20                  | 100 (1)            | 104                | 2.3                          | 4                         | 2750                       | 66                         | 650                        | 41                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN2R805PL   | 45                       | ±20                  | 139 (1)            | 104                | 2.8                          | 5                         | 2450                       | 56                         | 610                        | 39                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN22006NH   | 60                       | ±20                  | 21 (1)             | 18                 | 22                           | —                         | 710                        | 14                         | 235                        | 12                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN14006NH   |                          | ±20                  | 33 (1)             | 30                 | 14                           | —                         | 1000                       | 25                         | 310                        | 15                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN11006NL   |                          | ±20                  | 37 (1)             | 30                 | 11.4                         | 17                        | 1500                       | 23                         | 350                        | 23                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN7R506NH   |                          | ±20                  | 53 (1)             | 42                 | 7.5                          | —                         | 1410                       | 28                         | 480                        | 22                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN11006PL   |                          | ±20                  | 54 (1)             | 61                 | 11.4                         | 18.1                      | 1250                       | 25                         | 225                        | 17                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN7R006PL   |                          | ±20                  | 76 (1)             | 75                 | 7                            | 13.5                      | 1440                       | 35                         | 300                        | 20                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN4R806PL   | 80                       | ±20                  | 105 (1)            | 104                | 4.8                          | 9.1                       | 2130                       | 45                         | 360                        | 29                       | U-MOSIX-H   |                      |                                                                                       |
|                                                                                            | TPN30008NH   |                          | ±20                  | 22 (1)             | 27                 | 30                           | —                         | 710                        | 10                         | 170                        | 11                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN13008NH   |                          | ±20                  | 40 (1)             | 42                 | 13.3                         | —                         | 1230                       | 20                         | 290                        | 18                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN3300ANH   |                          | ±20                  | 21 (1)             | 27                 | 33                           | —                         | 680                        | 8.8                        | 130                        | 11                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN1600ANH   | 100                      | ±20                  | 36 (1)             | 42                 | 16                           | —                         | 1230                       | 18                         | 220                        | 19                       | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN1200APL * |                          | ±20                  | 66 (1)             | 104                | 11.5                         | 20                        | 1425                       | 15                         | 205                        | 24                       | U-MOSIX-H   | (8B)                 |                                                                                       |
|                                                                                            | TPN5900CNH   | 150                      | ±20                  | 18 (1)             | 39                 | 59                           | —                         | 460                        | 3                          | 80                         | 7                        | U-MOSVIII-H | (8A)                 |                                                                                       |
|                                                                                            | TPN1110ENH   | 200                      | ±20                  | 13 (1)             | 39                 | 114                          | —                         | 460                        | 3                          | 55                         | 7                        | U-MOSVIII-H |                      |                                                                                       |
|                                                                                            | TPN2010FNH   | 250                      | ±20                  | 9.9 (1)            | 39                 | 198                          | —                         | 460                        | 3                          | 45                         | 7                        | U-MOSVIII-H |                      |                                                                                       |

Note (1): I<sub>D</sub> (DC) (Silicon Limit)

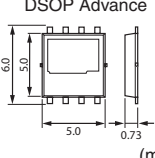
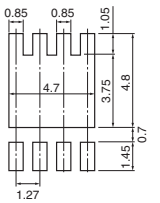
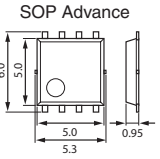
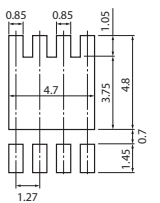
(2): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。

\*: New Product / 新製品



The internal connection diagrams only show the general configurations of the circuits.

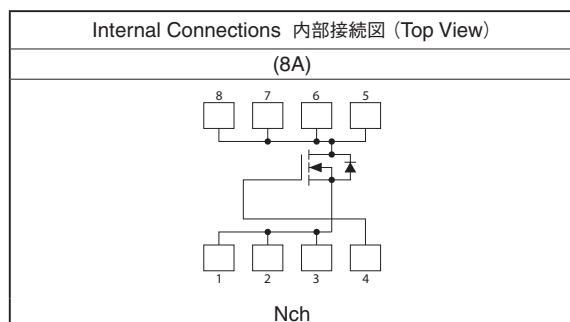
内部接続図はイメージ図です。

| Package                                                                                     | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                          | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                            |
|---------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|--------------------------|----------------|----------------|----------------|--------------|-------------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                             |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GSl</sub> = 10 V      | V <sub>GSl</sub> = 4.5 V |                |                |                |              |             |                      |                                                                                       |
| <br>(mm)   | TPWR8503NL   | 30                       | ±20                  | 300 <sup>(1)</sup> | 142                | 0.85                         | 1.3                      | 5300           | 130            | 2700           | 74           | U-MOSVIII-H | (8A)                 |    |
|                                                                                             | TPWR6003PL   |                          | ±20                  | 412 <sup>(1)</sup> | 170                | 0.6                          | 0.84                     | 7700           | 220            | 2720           | 110          | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPWR8004PL   | 40                       | ±20                  | 340 <sup>(1)</sup> | 170                | 0.8                          | 1.35                     | 7370           | 58             | 1930           | 103          | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPW1R005PL   | 45                       | ±20                  | 300 <sup>(1)</sup> | 170                | 0.99                         | 1.65                     | 7700           | 76             | 1860           | 122          | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPW1R306PL   | 60                       | ±20                  | 260 <sup>(1)</sup> | 170                | 1.29                         | 2.3                      | 6250           | 80             | 1160           | 91           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPW2R508NH   | 75                       | ±20                  | 170 <sup>(1)</sup> | 142                | 2.5                          | —                        | 4600           | 50             | 1100           | 72           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPW4R008NH   | 80                       | ±20                  | 116                | 142                | 4                            | —                        | 4100           | 32             | 890            | 59           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPW4R50ANH   | 100                      | ±20                  | 92                 | 142                | 4.5                          | —                        | 4000           | 31             | 700            | 58           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPW3R70APL * |                          | ±20                  | 150 <sup>(1)</sup> | 170                | 3.7                          | 6.2                      | 4850           | 29             | 640            | 67           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPW1500CNH   | 150                      | ±20                  | 50 <sup>(1)</sup>  | 142                | 15.4                         | —                        | 1700           | 7              | 280            | 22           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPW2900ENH   | 200                      | ±20                  | 36 <sup>(1)</sup>  | 142                | 29                           | —                        | 1700           | 7              | 180            | 22           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPW5200FNH   | 250                      | ±20                  | 27 <sup>(1)</sup>  | 142                | 52                           | —                        | 1700           | 7              | 140            | 22           | U-MOSVIII-H |                      |                                                                                       |
| <br>(mm) | TPCA8068-H   | 30                       | ±20                  | 15                 | 21                 | 11.6                         | 16                       | 980            | 57             | 210            | 14           | U-MOSVII-H  | (8A)                 |  |
|                                                                                             | TPCA8065-H   |                          | ±20                  | 16                 | 25                 | 11.4                         | 14.5                     | 1350           | 63             | 240            | 20           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8064-H   |                          | ±20                  | 20                 | 32                 | 8.2                          | 10.6                     | 1600           | 78             | 290            | 23           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8063-H   |                          | ±20                  | 22                 | 35                 | 6.8                          | 8.7                      | 1900           | 93             | 340            | 27           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8062-H   |                          | ±20                  | 28                 | 42                 | 5.6                          | 7.1                      | 2400           | 120            | 430            | 34           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8059-H   |                          | ±20                  | 32                 | 45                 | 3.8                          | 4.8                      | 2900           | 150            | 530            | 41           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPH11003NL   |                          | ±20                  | 32 <sup>(1)</sup>  | 21                 | 11                           | 16                       | 510            | 18             | 300            | 7.5          | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPCA8091-H   |                          | ±20                  | 35                 | 25                 | 6                            | 8.4                      | 1410           | 110            | 280            | 20           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8058-H   |                          | ±20                  | 38                 | 52                 | 3                            | 3.8                      | 3600           | 200            | 680            | 51           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPH8R903NL   |                          | ±20                  | 38 <sup>(1)</sup>  | 24                 | 8.9                          | 12.7                     | 630            | 21             | 350            | 9.8          | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPCA8057-H   |                          | ±20                  | 42                 | 57                 | 2.6                          | 3.2                      | 4300           | 240            | 810            | 61           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8056-H   |                          | ±20                  | 48                 | 63                 | 2.2                          | 2.7                      | 5200           | 290            | 1000           | 74           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPCA8055-H   |                          | ±20                  | 56                 | 70                 | 1.9                          | 2.3                      | 6400           | 360            | 1200           | 91           | U-MOSVII-H  |                      |                                                                                       |
|                                                                                             | TPH6R003NL   |                          | ±20                  | 57 <sup>(1)</sup>  | 34                 | 6                            | 8.3                      | 1050           | 37             | 600            | 17           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPH4R003NL   |                          | ±20                  | 68 <sup>(1)</sup>  | 36                 | 4                            | 6.2                      | 1110           | 39             | 640            | 14.8         | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPH3R203NL   |                          | ±20                  | 84 <sup>(1)</sup>  | 44                 | 3.2                          | 4.7                      | 1600           | 53             | 890            | 21           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPH4R803PL * |                          | ±20                  | 90 <sup>(1)</sup>  | 69                 | 4.8                          | 6.2                      | 1520           | 55             | 515            | 22           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH2R903PL   |                          | ±20                  | 124 <sup>(1)</sup> | 81                 | 2.9                          | 4.1                      | 1780           | 60             | 620            | 26           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH3R003PL   |                          | ±20                  | 134 <sup>(1)</sup> | 90                 | 3                            | 4.2                      | 2940           | 88             | 850            | 50           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH1R403NL   |                          | ±20                  | 150 <sup>(1)</sup> | 64                 | 1.4                          | 2.1                      | 3400           | 93             | 1800           | 46           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPH2R003PL   |                          | ±20                  | 180 <sup>(1)</sup> | 116                | 2                            | 2.6                      | 4930           | 135            | 1455           | 86           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPHR9003NL   |                          | ±20                  | 220 <sup>(1)</sup> | 78                 | 0.9                          | 1.4                      | 5300           | 130            | 2700           | 74           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                             | TPHR9203PL   |                          | ±20                  | 280 <sup>(1)</sup> | 132                | 0.92                         | 1.29                     | 5800           | 190            | 1750           | 81           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPHR6503PL   |                          | ±20                  | 393 <sup>(1)</sup> | 170                | 0.65                         | 0.89                     | 7700           | 220            | 2720           | 110          | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPCA8052-H   | 40                       | ±20                  | 20                 | 30                 | 11.3                         | 13.1                     | 1620           | 85             | 280            | 25           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                             | TPCA8047-H   |                          | ±20                  | 32                 | 45                 | 7.3                          | 8.5                      | 2590           | 135            | 440            | 43           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                             | TPCA8046-H   |                          | ±20                  | 38                 | 45                 | 5.4                          | 6.3                      | 3545           | 185            | 600            | 55           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                             | TPCA8045-H   |                          | ±20                  | 46                 | 45                 | 3.6                          | 4.1                      | 5800           | 305            | 950            | 90           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                             | TPH7R204PL   |                          | ±20                  | 72 <sup>(1)</sup>  | 69                 | 7.2                          | 9.7                      | 1570           | 35             | 380            | 24           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH6R004PL   |                          | ±20                  | 87 <sup>(1)</sup>  | 81                 | 6                            | 8.4                      | 2100           | 50             | 470            | 30           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH3R704PL   |                          | ±20                  | 92                 | 81                 | 3.7                          | 6                        | 1910           | 41             | 470            | 27           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH3R704PC   |                          | ±20                  | 118 <sup>(1)</sup> | 90                 | 3.7                          | 5.8                      | 2780           | 60             | 640            | 47           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH2R104PL   |                          | ±20                  | 180 <sup>(1)</sup> | 116                | 2.1                          | 3.1                      | 4790           | 70             | 1050           | 78           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH1R204PB   |                          | ±20                  | 240 <sup>(1)</sup> | 132                | 1.2                          | —                        | 4400           | 55             | 1300           | 62           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPH1R204PL   |                          | ±20                  | 246 <sup>(1)</sup> | 132                | 1.24                         | 2.1                      | 5500           | 93             | 1300           | 74           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                             | TPHR8504PL   |                          | ±20                  | 340 <sup>(1)</sup> | 170                | 0.85                         | 1.4                      | 7370           | 58             | 1930           | 103          | U-MOSIX-H   |                      |                                                                                       |

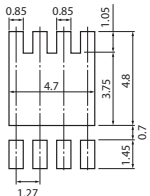
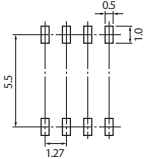
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Note (1): I<sub>D</sub> (DC) (Silicon Limit)

\*: New Product / 新製品

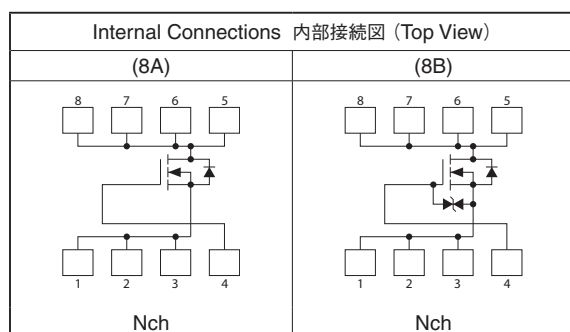


- The internal connection diagrams only show the general configurations of the circuits.
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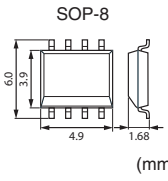
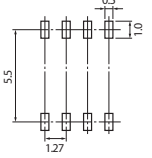
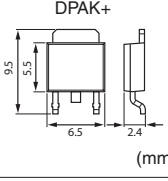
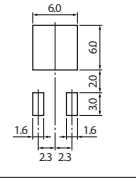
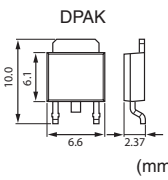
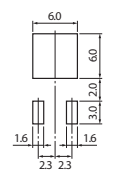
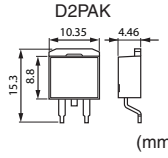
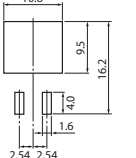
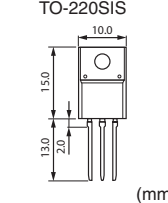
| Package                        | Part Number              | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                           | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                            |             |
|--------------------------------|--------------------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|---------------------------|----------------|----------------|----------------|--------------|-------------|----------------------|---------------------------------------------------------------------------------------|-------------|
|                                |                          | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 4.5 V |                |                |                |              |             |                      |                                                                                       |             |
| (Continued from previous page) | TPH2R805PL               | 45                       | ±20                  | 150 <sup>(1)</sup> | 116                | 2.8                          | 3.9                       | 3980           | 45             | 980            | 73           | U-MOSIX-H   | (8A)                 |    |             |
|                                | TPH1R405PL               |                          | ±20                  | 232 <sup>(1)</sup> | 132                | 1.4                          | 2.3                       | 4830           | 66             | 1210           | 74           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH1R005PL               |                          | ±20                  | 280 <sup>(1)</sup> | 170                | 1.04                         | 1.7                       | 7700           | 76             | 1860           | 122          | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPCA8053-H               | 60                       | ±20                  | 15                 | 30                 | 22.3                         | 24                        | 1620           | 60             | 200            | 25           | U-MOSVI-H   |                      |                                                                                       |             |
|                                | TPCA8049-H               |                          | ±20                  | 28                 | 45                 | 10.4                         | 11.2                      | 3545           | 130            | 420            | 55           | U-MOSVI-H   |                      |                                                                                       |             |
|                                | TPH14006NH               |                          | ±20                  | 34 <sup>(1)</sup>  | 32                 | 14                           | —                         | 1000           | 25             | 310            | 16           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPCA8048-H               |                          | ±20                  | 35                 | 45                 | 6.6                          | 7.1                       | 5800           | 210            | 650            | 90           | U-MOSVI-H   |                      |                                                                                       |             |
|                                | TPH11006NL               |                          | ±20                  | 40 <sup>(1)</sup>  | 34                 | 11.4                         | 17                        | 1500           | 23             | 350            | 23           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH7R506NH               |                          | ±20                  | 55 <sup>(1)</sup>  | 45                 | 7.5                          | —                         | 1785           | 40             | 575            | 31           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH9R506PL               |                          | ±20                  | 68 <sup>(1)</sup>  | 81                 | 9.5                          | 15                        | 1470           | 30             | 270            | 21           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH5R906NH               |                          | ±20                  | 71 <sup>(1)</sup>  | 57                 | 5.9                          | —                         | 2340           | 50             | 745            | 38           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH7R006PL               |                          | ±20                  | 79 <sup>(1)</sup>  | 81                 | 7                            | 13.5                      | 1440           | 35             | 300            | 22           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH4R606NH               |                          | ±20                  | 85 <sup>(1)</sup>  | 63                 | 4.6                          | —                         | 3050           | 60             | 990            | 49           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH2R306NH               |                          | ±20                  | 130 <sup>(1)</sup> | 78                 | 2.3                          | —                         | 4700           | 55             | 1500           | 72           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH3R506PL               |                          | ±20                  | 135 <sup>(1)</sup> | 116                | 3.5                          | 6.7                       | 3400           | 50             | 600            | 55           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH2R506PL               |                          | ±20                  | 160 <sup>(1)</sup> | 132                | 2.5                          | 4.4                       | 4180           | 60             | 770            | 60           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH1R306PL               |                          | ±20                  | 260 <sup>(1)</sup> | 170                | 1.34                         | 2.3                       | 6250           | 80             | 1160           | 91           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH1R306P1               | *                        | ±20                  | 260 <sup>(1)</sup> | 170                | 1.28                         | 2.3                       | 6250           | 80             | 1160           | 91           | U-MOSIX-H   |                      |                                                                                       |             |
|                                | TPH2R608NH               | 75                       | ±20                  | 168 <sup>(1)</sup> | 142                | 2.6                          | —                         | 4600           | 50             | 1100           | 72           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPCA8051-H               |                          | ±20                  | 28                 | 45                 | 9.4                          | 9.8                       | 5800           | 150            | 520            | 91           | U-MOSVI-H   |                      |                                                                                       |             |
|                                | TPH12008NH               | 80                       | ±20                  | 44 <sup>(1)</sup>  | 48                 | 12.3                         | —                         | 1490           | 16             | 330            | 22           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH8R008NH               |                          | ±20                  | 63 <sup>(1)</sup>  | 61                 | 8                            | —                         | 2300           | 23             | 520            | 35           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH4R008NH               | ±20                      | 100 <sup>(1)</sup>   | 78                 | 4                  | —                            | 4100                      | 32             | 890            | 59             | U-MOSVIII-H  |             |                      |                                                                                       |             |
|                                | TPH1400ANH               | 100                      | ±20                  | 42 <sup>(1)</sup>  | 48                 | 13.6                         | —                         | 1440           | 15             | 260            | 22           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH8R80ANH               |                          | ±20                  | 59 <sup>(1)</sup>  | 61                 | 8.8                          | —                         | 2180           | 21             | 410            | 33           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH6R30ANL               |                          | ±20                  | 66 <sup>(1)</sup>  | 54                 | 6.3                          | 10.3                      | 3300           | 27             | 410            | 55           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH4R10ANL               |                          | ±20                  | 92 <sup>(1)</sup>  | 67                 | 4.1                          | 6.6                       | 4850           | 29             | 640            | 75           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH4R50ANH               |                          | ±20                  | 93 <sup>(1)</sup>  | 78                 | 4.5                          | —                         | 4000           | 31             | 700            | 58           | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH5R60APL               |                          | *                    | ±20                | 106 <sup>(1)</sup> | 132                          | 5.6                       | 9.5            | 3300           | 27             | 410          | 52          |                      |                                                                                       | U-MOSIX-H   |
|                                | TPH3R70APL               |                          | *                    | ±20                | 150 <sup>(1)</sup> | 170                          | 3.7                       | 6.2            | 4850           | 29             | 640          | 67          |                      |                                                                                       | U-MOSIX-H   |
|                                | TPH5900CNH               |                          | 150                  | ±20                | 18 <sup>(1)</sup>  | 42                           | 59                        | —              | 460            | 3              | 80           | 7           |                      |                                                                                       | U-MOSVIII-H |
|                                | TPH3300CNH               |                          |                      | ±20                | 29 <sup>(1)</sup>  | 57                           | 33                        | —              | 810            | 3              | 140          | 10.6        |                      |                                                                                       | U-MOSVIII-H |
|                                | TPH1500CNH               |                          |                      | ±20                | 50 <sup>(1)</sup>  | 78                           | 15.4                      | —              | 1700           | 7              | 280          | 22          |                      |                                                                                       | U-MOSVIII-H |
|                                | TPH1110ENH               | ±20                      |                      | 13 <sup>(1)</sup>  | 42                 | 114                          | —                         | 460            | 3              | 55             | 7            | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH6400ENH               | 200                      | ±20                  | 21 <sup>(1)</sup>  | 57                 | 64                           | —                         | 810            | 3              | 90             | 11.2         | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPH2900ENH               |                          | ±20                  | 36 <sup>(1)</sup>  | 78                 | 29                           | —                         | 1700           | 7              | 180            | 22           | U-MOSVIII-H |                      |                                                                                       |             |
| TPH2010FNH                     | ±20                      |                          | 10 <sup>(1)</sup>    | 42                 | 198                | —                            | 460                       | 3              | 45             | 7              | U-MOSVIII-H  |             |                      |                                                                                       |             |
| TPH1110FNH                     | 250                      |                          | ±20                  | 15 <sup>(1)</sup>  | 57                 | 112                          | —                         | 810            | 3              | 75             | 11           | U-MOSVIII-H |                      |                                                                                       |             |
| TPH5200FNH                     |                          | ±20                      | 27 <sup>(1)</sup>    | 78                 | 52                 | —                            | 1700                      | 7              | 140            | 22             | U-MOSVIII-H  |             |                      |                                                                                       |             |
| SOP-8                          | TPC8067-H                | 30                       | ±20                  | 9                  | 1.9                | 25                           | 33                        | 690            | 28             | 120            | 9.5          | U-MOSVII-H  | (8A)                 |  |             |
|                                | TPC8066-H                |                          | ±20                  | 11                 | 1.9                | 16                           | 19                        | 1100           | 49             | 190            | 15           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8065-H                |                          | ±20                  | 13                 | 1.9                | 11.6                         | 14.7                      | 1350           | 63             | 240            | 20           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TP89R103NL               |                          | ±20                  | 15                 | 1.9                | 9.1                          | 12.9                      | 630            | 21             | 350            | 9.8          | U-MOSVIII-H |                      |                                                                                       |             |
|                                | TPC8064-H                |                          | ±20                  | 16                 | 1.9                | 8.4                          | 10.8                      | 1600           | 78             | 290            | 23           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8063-H                |                          | ±20                  | 17                 | 1.9                | 7                            | 8.9                       | 1900           | 93             | 340            | 27           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8055-H                |                          | ±20                  | 18                 | 1.9                | 2.1                          | 2.5                       | 6400           | 360            | 1200           | 91           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8056-H                |                          | ±20                  | 18                 | 1.9                | 2.4                          | 2.9                       | 5200           | 290            | 1000           | 74           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8057-H                |                          | ±20                  | 18                 | 1.9                | 2.8                          | 3.4                       | 4300           | 240            | 810            | 61           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8058-H                |                          | ±20                  | 18                 | 1.9                | 3.2                          | 4                         | 3600           | 200            | 680            | 51           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | TPC8059-H                |                          | ±20                  | 18                 | 1.9                | 4                            | 5                         | 2900           | 150            | 530            | 41           | U-MOSVII-H  |                      |                                                                                       |             |
|                                | (Continued on next page) |                          | TPC8062-H            | ±20                | 18                 | 1.9                          | 5.8                       | 7.3            | 2400           | 120            | 430          | 34          |                      |                                                                                       | U-MOSVII-H  |

Note (1): I<sub>D</sub> (DC) (Silicon Limit)

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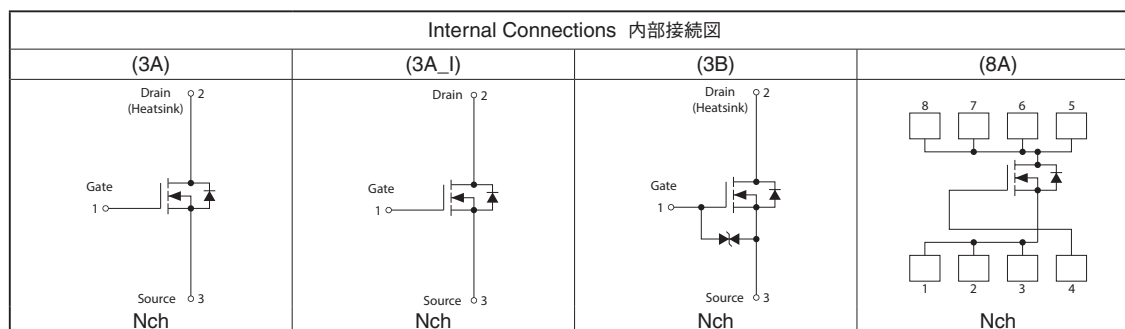


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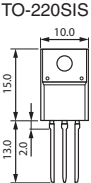
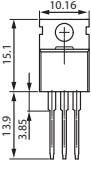
| Package                                                                                                                  | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                          | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                            |
|--------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|--------------------------|----------------|----------------|----------------|--------------|-------------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                                                          |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GSL</sub> = 10 V      | V <sub>GSL</sub> = 4.5 V |                |                |                |              |             |                      |                                                                                       |
| (Continued from previous page)<br> (mm) | TP86R203NL   | 30                       | ±20                  | 19 <sup>(1)</sup>  | 1.9                | 6.2                          | 8.5                      | 1050           | 37             | 600            | 17           | U-MOSVIII-H | (8A)                 |    |
|                                                                                                                          | TPC8089-H    |                          | ±20                  | 7.2                | 1.9                | 32                           | 36                       | 850            | 40             | 145            | 14           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8052-H    |                          | ±20                  | 12                 | 1.9                | 11.5                         | 13.3                     | 1620           | 85             | 280            | 25           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8047-H    | 40                       | ±20                  | 16                 | 1.9                | 7.6                          | 8.8                      | 2590           | 135            | 440            | 43           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8045-H    |                          | ±20                  | 18                 | 1.9                | 3.9                          | 4.4                      | 5800           | 305            | 950            | 90           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8046-H    |                          | ±20                  | 18                 | 1.9                | 5.7                          | 6.6                      | 3545           | 185            | 600            | 57           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8053-H    |                          | ±20                  | 9                  | 1.9                | 22.5                         | 24.2                     | 1620           | 60             | 200            | 25           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8050-H    |                          | ±20                  | 11                 | 1.9                | 14.5                         | 15.6                     | 2590           | 95             | 300            | 41           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8049-H    | 60                       | ±20                  | 13                 | 1.9                | 10.7                         | 11.5                     | 3545           | 130            | 420            | 56           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8048-H    |                          | ±20                  | 16                 | 1.9                | 6.9                          | 7.4                      | 5800           | 210            | 650            | 87           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TPC8051-H    | 80                       | ±20                  | 13                 | 1.9                | 9.7                          | 10.1                     | 5800           | 150            | 520            | 85           | U-MOSVI-H   |                      |                                                                                       |
|  (mm)                                   | TK33S10N1H   | 100                      | ±20                  | 33                 | 125                | 9.7                          | —                        | 2050           | 140            | 1070           | 28           | U-MOSVIII-H | (3B)                 |    |
|  (mm)                                  | TK40P03M1    | 30                       | ±20                  | 40                 | 33                 | 10.8                         | 14.4                     | 1150           | 85             | 260            | 17.5         | U-MOSVI-H   | (3A)                 |   |
|                                                                                                                          | TK45P03M1    |                          | ±20                  | 45                 | 39                 | 9.7                          | 12                       | 1500           | 100            | 320            | 25           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TK50P03M1    |                          | ±20                  | 50                 | 47                 | 7.5                          | 9.8                      | 1700           | 125            | 380            | 25.3         | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TK20P04M1    | 40                       | ±20                  | 20                 | 27                 | 29                           | 34                       | 985            | 37             | 159            | 15           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TK40P04M1    |                          | ±20                  | 40                 | 47                 | 11                           | 13.4                     | 1920           | 90             | 310            | 29           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TK50P04M1    |                          | ±20                  | 50                 | 60                 | 8.7                          | 10.2                     | 2600           | 110            | 420            | 38           | U-MOSVI-H   |                      |                                                                                       |
|                                                                                                                          | TK3R1P04PL * | 60                       | ±20                  | 130 <sup>(1)</sup> | 87                 | 3.1                          | 4.3                      | 4670           | 70             | 1000           | 60           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK6R7P06PL * |                          | ±20                  | 74 <sup>(1)</sup>  | 66                 | 6.7                          | 11.1                     | 1990           | 45             | 350            | 26           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK4R4P06PL * |                          | ±20                  | 106 <sup>(1)</sup> | 87                 | 4.4                          | 7.1                      | 3280           | 60             | 600            | 48.2         | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK110P10PL * | 100                      | ±20                  | 60 <sup>(1)</sup>  | 75                 | 10.6                         | 16                       | 2040           | 22             | 310            | 33           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK7R7P10PL * |                          | ±20                  | 79 <sup>(1)</sup>  | 93                 | 7.7                          | 11.5                     | 2800           | 25             | 450            | 44           | U-MOSIX-H   |                      |                                                                                       |
|  (mm)                                 | TK65G10N1    | 100                      | ±20                  | 136 <sup>(1)</sup> | 156                | 4.5                          | —                        | 5400           | 42             | 950            | 81           | U-MOSVIII-H | (3A)                 |  |
|  (mm)                                 | TK3R1A04PL   | 40                       | ±20                  | 82                 | 36                 | 3.1                          | 3.8                      | 4670           | 70             | 1000           | 63.4         | U-MOSIX-H   | (3A_I)               |                                                                                       |
|                                                                                                                          | TK30A06N1    | 60                       | ±20                  | 43 <sup>(1)</sup>  | 25                 | 15                           | —                        | 1050           | 33             | 400            | 16           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                                                          | TK8R2A06PL   |                          | ±20                  | 50                 | 36                 | 8.2                          | 11.4                     | 1990           | 45             | 350            | 28           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK40A06N1    |                          | ±20                  | 60 <sup>(1)</sup>  | 30                 | 10.4                         | —                        | 1700           | 40             | 580            | 23           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                                                          | TK5R3A06PL * |                          | ±20                  | 62 <sup>(1)</sup>  | 36                 | 5.3                          | 9.3                      | 2380           | 50             | 470            | 36           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK4R3A06PL   |                          | ±20                  | 68                 | 36                 | 4.3                          | 7.2                      | 3280           | 60             | 600            | 48.2         | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK3R3A06PL * |                          | ±20                  | 88 <sup>(1)</sup>  | 42                 | 3.3                          | 4.9                      | 5000           | 55             | 950            | 71           | U-MOSIX-H   |                      |                                                                                       |
|                                                                                                                          | TK58A06N1    |                          | ±20                  | 105 <sup>(1)</sup> | 35                 | 5.4                          | —                        | 3400           | 45             | 1120           | 46           | U-MOSVIII-H |                      |                                                                                       |
|                                                                                                                          | TK100A06N1   |                          | ±20                  | 263 <sup>(1)</sup> | 45                 | 2.7                          | —                        | 10500          | 50             | 3500           | 140          | U-MOSVIII-H |                      |                                                                                       |
| (Continued on next page)                                                                                                 | TK35A08N1    | 80                       | ±20                  | 55 <sup>(1)</sup>  | 30                 | 12.2                         | —                        | 1700           | 18             | 440            | 25           | U-MOSVIII-H |                      |                                                                                       |

Note (1): I<sub>D</sub> (DC) (Silicon Limit)

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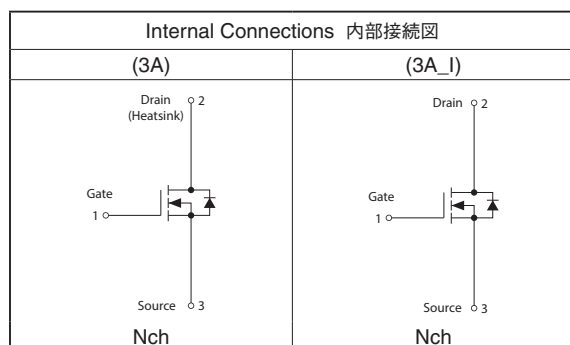


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- 内部接続図はイメージ図です。

| Package                                                                                                                                                           | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                           | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm) |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|---------------------------|----------------|----------------|----------------|--------------|-------------|----------------------|----------------------------|-------------|
|                                                                                                                                                                   |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 4.5 V |                |                |                |              |             |                      |                            |             |
| <div>(Continued from previous page)</div> <div><p>TO-220SIS</p><p>(mm)</p></div> | TK46A08N1    | 80                       | ±20                  | 80 <sup>(1)</sup>  | 35                 | 8.4                          | —                         | 2500           | 22             | 620            | 37           | U-MOSVIII-H | (3A_I)               |                            |             |
|                                                                                                                                                                   | TK72A08N1    |                          | ±20                  | 157 <sup>(1)</sup> | 45                 | 4.5                          | —                         | 5500           | 38             | 1300           | 81           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK100A08N1   |                          | ±20                  | 214 <sup>(1)</sup> | 45                 | 3.2                          | —                         | 9000           | 52             | 2100           | 130          | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK110A10PL * | 100                      | ±20                  | 41 <sup>(1)</sup>  | 36                 | 10.8                         | 16                        | 2040           | 22             | 310            | 33           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK7R4A10PL * |                          | ±20                  | 50                 | 42                 | 7.4                          | 11.2                      | 2800           | 25             | 450            | 44           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK22A10N1    |                          | ±20                  | 52 <sup>(1)</sup>  | 30                 | 13.8                         | —                         | 1800           | 18             | 310            | 28           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK6R7A10PL * |                          | ±20                  | 56                 | 42                 | 6.7                          | 10.1                      | 3455           | 30             | 520            | 58           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK34A10N1    |                          | ±20                  | 75 <sup>(1)</sup>  | 35                 | 9.5                          | —                         | 2600           | 23             | 450            | 38           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK4R1A10PL * |                          | ±20                  | 85 <sup>(1)</sup>  | 54                 | 4.1                          | 5.9                       | 6320           | 45             | 950            | 104          | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK40A10N1    |                          | ±20                  | 90 <sup>(1)</sup>  | 35                 | 8.2                          | —                         | 3000           | 29             | 520            | 49           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK3R2A10PL * |                          | ±20                  | 106 <sup>(1)</sup> | 54                 | 3.2                          | 4.3                       | 9500           | 65             | 1500           | 161          | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK65A10N1    |                          | ±20                  | 148 <sup>(1)</sup> | 45                 | 4.8                          | —                         | 5400           | 42             | 950            | 81           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK100A10N1   |                          | ±20                  | 207 <sup>(1)</sup> | 45                 | 3.8                          | —                         | 8800           | 63             | 1500           | 140          | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK32A12N1    | 120                      | ±20                  | 60 <sup>(1)</sup>  | 30                 | 13.8                         | —                         | 2000           | 13             | 330            | 34           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK42A12N1    |                          | ±20                  | 88 <sup>(1)</sup>  | 35                 | 9.4                          | —                         | 3100           | 16             | 490            | 52           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK56A12N1    |                          | ±20                  | 112 <sup>(1)</sup> | 45                 | 7.5                          | —                         | 4200           | 19             | 650            | 69           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK72A12N1    |                          | ±20                  | 179 <sup>(1)</sup> | 45                 | 4.5                          | —                         | 8100           | 30             | 1200           | 130          | U-MOSVIII-H |                      |                            |             |
| <div><p>TO-220</p><p>(mm)</p></div>                                            | TK3R3E03GL   | 30                       | ±20                  | 147 <sup>(1)</sup> | 104                | 3.3                          | 4.1                       | 4350           | 260            | 710            | 67           | U-MOSVII-H  | (3A)                 |                            |             |
|                                                                                                                                                                   | TK3R1E04PL   | 40                       | ±20                  | 128 <sup>(1)</sup> | 87                 | 3.1                          | 3.8                       | 4670           | 70             | 1000           | 63.4         | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK30E06N1    | 60                       | ±20                  | 43 <sup>(1)</sup>  | 53                 | 15                           | —                         | 1050           | 33             | 400            | 16           | U-MOSVIII-H |                      |                            | (3A_I)      |
|                                                                                                                                                                   | TK40E06N1    |                          | ±20                  | 60 <sup>(1)</sup>  | 67                 | 10.4                         | —                         | 1700           | 40             | 580            | 23           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK3R2E06PL * |                          | ±20                  | 160 <sup>(1)</sup> | 168                | 3.2                          | 4.7                       | 5000           | 55             | 950            | 71           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK8R2E06PL   |                          | ±20                  | 75 <sup>(1)</sup>  | 81                 | 8.2                          | 11.4                      | 1990           | 45             | 350            | 28           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK5R1E06PL * |                          | ±20                  | 98 <sup>(1)</sup>  | 87                 | 5.1                          | 8.8                       | 2380           | 50             | 470            | 36           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK58E06N1    |                          | ±20                  | 105 <sup>(1)</sup> | 110                | 5.4                          | —                         | 3400           | 45             | 1120           | 46           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK4R3E06PL   | 80                       | ±20                  | 106 <sup>(1)</sup> | 87                 | 4.3                          | 7.2                       | 3280           | 60             | 600            | 48.2         | U-MOSIX-H   | (3A)                 |                            |             |
|                                                                                                                                                                   | TK100E06N1   |                          | ±20                  | 263 <sup>(1)</sup> | 255                | 2.3                          | —                         | 10500          | 50             | 3500           | 140          | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK35E08N1    |                          | ±20                  | 55                 | 72                 | 12.2                         | —                         | 1700           | 18             | 440            | 25           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK46E08N1    |                          | ±20                  | 80                 | 103                | 8.4                          | —                         | 2500           | 22             | 620            | 37           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK72E08N1    |                          | ±20                  | 157 <sup>(1)</sup> | 192                | 4.3                          | —                         | 5500           | 38             | 1300           | 81           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK100E08N1   |                          | ±20                  | 214 <sup>(1)</sup> | 255                | 3.2                          | —                         | 9000           | 52             | 2100           | 130          | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK22E10N1    |                          | 100                  | ±20                | 52                 | 72                           | 13.8                      | —              | 1800           | 18             | 310          | 28          |                      |                            | U-MOSVIII-H |
|                                                                                                                                                                   | TK110E10PL * |                          |                      | ±20                | 64 <sup>(1)</sup>  | 87                           | 10.7                      | 16             | 2040           | 22             | 310          | 33          |                      |                            | U-MOSIX-H   |
|                                                                                                                                                                   | TK34E10N1    | ±20                      |                      | 75                 | 103                | 9.5                          | —                         | 2600           | 23             | 450            | 38           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK40E10N1    | ±20                      |                      | 90                 | 126                | 8.2                          | —                         | 3000           | 29             | 520            | 49           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK7R2E10PL * | ±20                      |                      | 94 <sup>(1)</sup>  | 123                | 7.2                          | 11                        | 2800           | 25             | 450            | 44           | U-MOSIX-H   |                      |                            |             |
|                                                                                                                                                                   | TK6R4E10PL * | ±20                      |                      | 112                | 152                | 6.4                          | 9.7                       | 3455           | 30             | 520            | 58           | U-MOSIX-H   | (3A_I)               |                            |             |
|                                                                                                                                                                   | TK65E10N1    | ±20                      |                      | 148 <sup>(1)</sup> | 192                | 4.8                          | —                         | 5400           | 42             | 950            | 81           | U-MOSVIII-H | (3A)                 |                            |             |
|                                                                                                                                                                   | TK3R9E10PL * | ±20                      |                      | 180 <sup>(1)</sup> | 230                | 3.9                          | 5.8                       | 6320           | 45             | 950            | 96           | U-MOSIX-H   | (3A_I)               |                            |             |
|                                                                                                                                                                   | TK100E10N1   | 120                      | ±20                  | 207 <sup>(1)</sup> | 255                | 3.4                          | —                         | 8800           | 63             | 1500           | 140          | U-MOSVIII-H | (3A)                 |                            |             |
|                                                                                                                                                                   | TK2R9A10PL * |                          | ±20                  | 240 <sup>(1)</sup> | 300                | 2.9                          | 4.1                       | 9500           | 65             | 1500           | 161          | U-MOSIX-H   | (3A_I)               |                            |             |
|                                                                                                                                                                   | TK32E12N1    |                          | ±20                  | 60                 | 98                 | 13.8                         | —                         | 2000           | 13             | 330            | 34           | U-MOSVIII-H | (3A)                 |                            |             |
|                                                                                                                                                                   | TK42E12N1    |                          | ±20                  | 88                 | 140                | 9.4                          | —                         | 3100           | 16             | 490            | 52           | U-MOSVIII-H |                      |                            |             |
|                                                                                                                                                                   | TK56E12N1    | ±20                      | 112 <sup>(1)</sup>   | 168                | 7                  | —                            | 4200                      | 19             | 650            | 69             | U-MOSVIII-H  |             |                      |                            |             |
|                                                                                                                                                                   | TK72E12N1    | ±20                      | 179 <sup>(1)</sup>   | 255                | 4.4                | —                            | 8100                      | 30             | 1200           | 130            | U-MOSVIII-H  |             |                      |                            |             |

Note (1): I<sub>D</sub> (DC) (Silicon Limit)

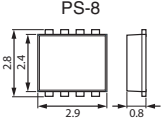
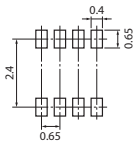
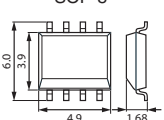
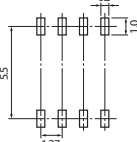
\*: New Product / 新製品



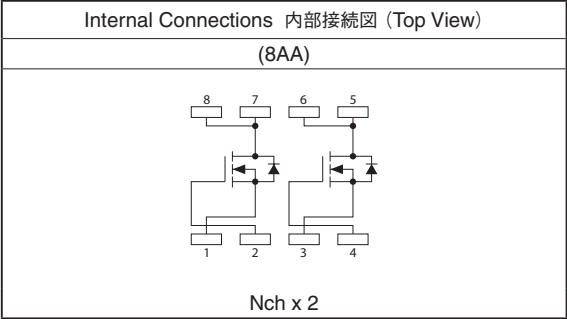
• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

(Dual Channel) / (デュアルチャネル)

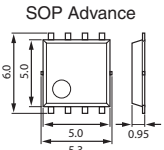
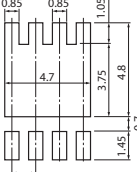
| Package                                                                                   | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                           | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                          |
|-------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|---------------------------|----------------|----------------|----------------|--------------|------------|----------------------|-------------------------------------------------------------------------------------|
|                                                                                           |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 4.5 V |                |                |                |              |            |                      |                                                                                     |
| <br>(mm) | TPCP8205-H  | 30                       | ±20                  | 6.5                | 1.48<br>(1)        | 26                           | 29                        | 830            | 53             | 177            | 13.8         | U-MOSVI-H  | (8AA)                |  |
| <br>(mm) | TPC8224-H   | 30                       | ±20                  | 8                  | 1.5                | 26                           | 34                        | 690            | 28             | 120            | 9.5          | U-MOSVII-H | (8AA)                |  |
|                                                                                           | TPC8223-H   |                          | ±20                  | 9                  | 1.5                | 17                           | 21                        | 1190           | 55             | 210            | 17           | U-MOSVII-H |                      |                                                                                     |
|                                                                                           | TPC8227-H   | 40                       | ±20                  | 5.1                | 1.5                | 33                           | 40                        | 640            | 35             | 115            | 10           | U-MOSVI-H  |                      |                                                                                     |
|                                                                                           | TPC8228-H   | 60                       | ±20                  | 3.8                | 1.5                | 57                           | 64                        | 640            | 25             | 90             | 11           | U-MOSVI-H  |                      |                                                                                     |
|                                                                                           | TPC8229-H   | 80                       | ±20                  | 3.2                | 1.5                | 80                           | 87                        | 640            | 17             | 75             | 11           | U-MOSVI-H  |                      |                                                                                     |

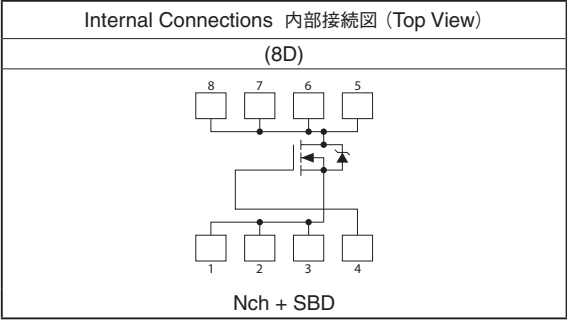
Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。



- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

(Built-in schottky Barrier Diode) / (SBD 混載品)

| Package                                                                                     | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                           | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                            |
|---------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|---------------------------|----------------|----------------|----------------|--------------|------------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 4.5 V |                |                |                |              |            |                      |                                                                                       |
| <br>(mm) | TPCA8A11-H  | 30                       | ±20                  | 35                 | 52                 | 3.6                          | 4.6                       | 3200           | 170            | 600            | 46           | U-MOSVII-H | (8D)                 |  |
|                                                                                             | TPCA8A10-H  |                          | ±20                  | 40                 | 58                 | 3                            | 3.8                       | 4000           | 200            | 810            | 57           | U-MOSVII-H |                      |                                                                                       |
|                                                                                             | TPCA8A09-H  |                          | ±20                  | 51                 | 70                 | 2.3                          | 2.8                       | 5900           | 250            | 1100           | 82           | U-MOSVII-H |                      |                                                                                       |

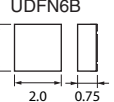
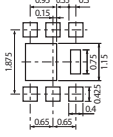
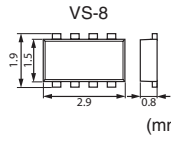
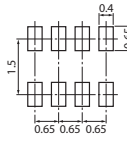
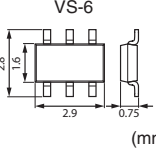
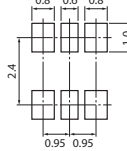
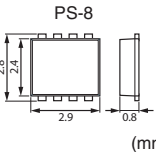
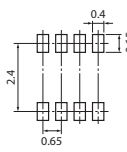
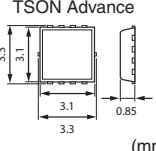
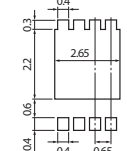


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。



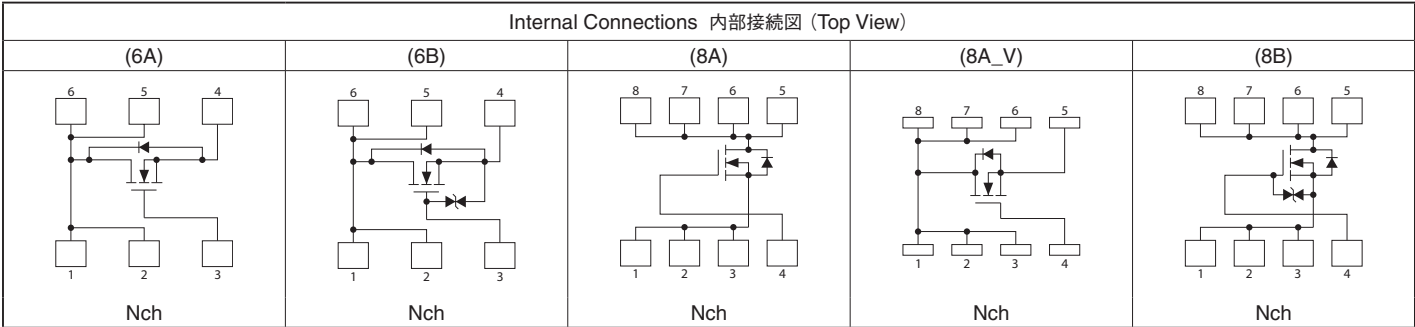
Low On-Resistance Series / 低オン抵抗シリーズ  
(Single N-Channel) / (シングルNチャネル)

(1/4)

| Package                                                                                     | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                            |           |
|---------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|---------------------------------------------------------------------------------------|-----------|
|                                                                                             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 6 V | V <sub>GS</sub>   = 4.5 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V |                            |                            |                            |                          |            |                      |                                                                                       |           |
| <br>(mm)   | SSM6K504NU  | 30                       | ±20                  | 9                  | 1.25               | 19.5                         | —                       | 26                        | —                         | —                         | 620                        | 42                         | 110                        | 4.8                      | U-MOSVII-H | (6B)                 |    |           |
|                                                                                             | SSM6K513NU  |                          | *                    | ±20                | 15                 | 1.25                         | 8.9                     | —                         | 12                        | —                         | —                          | 1130                       | 52                         | 350                      | 7.5        |                      |                                                                                       | U-MOSIX-H |
|                                                                                             | SSM6K514NU  | *                        | 40                   | ±20                | 12                 | 1.25                         | 11.6                    | —                         | 17.3                      | —                         | —                          | 1110                       | 26                         | 245                      | 7.5        | U-MOSIX-H            |                                                                                       | (6A)      |
|                                                                                             | SSM6K341NU  | *                        | 60                   | ±20                | 6                  | 1.25                         | 36                      | —                         | 51                        | —                         | —                          | 550                        | 35                         | 300                      | 9.3        | U-MOSVIII-H          |                                                                                       |           |
|                                                                                             | SSM6K361NU  | *                        | 100                  | ±20                | 3.5                | 1.25                         | 69                      | —                         | 92                        | —                         | —                          | 430                        | 22                         | 160                      | 3.2        | U-MOSVIII-H          |                                                                                       | (6B)      |
| <br>(mm)    | TPCF8003    | 20                       | ±12                  | 7                  | 2.5<br>(1)         | —                            | —                       | 18                        | 34                        | —                         | 500                        | 155                        | 215                        | 9.5                      | U-MOSIV    | (8A_V)               |    |           |
|                                                                                             | TPCF8004    | 30                       | ±20                  | 7                  | 2.5<br>(1)         | 24                           | —                       | 30                        | —                         | —                         | 610                        | 34                         | 130                        | 9                        | U-MOSVII   |                      |                                                                                       |           |
| <br>(mm)   | TPC6012     | 20                       | ±12                  | 6                  | 2.2<br>(1)         | —                            | —                       | 20                        | 38                        | —                         | 630                        | 150                        | 180                        | 9                        | U-MOSIV    | (6A)                 |    |           |
|                                                                                             | TPC6067     | 30                       | ±20                  | 6                  | 2.2<br>(1)         | 23                           | —                       | 29                        | —                         | —                         | 610                        | 34                         | 130                        | 8                        | U-MOSVII   |                      |                                                                                       |           |
| <br>(mm) | TPCP8011    | 40                       | ±20                  | 5                  | 1.96<br>(1)        | 31.8                         | 51.2                    | —                         | —                         | —                         | 505                        | 66                         | 115                        | 11.8                     | U-MOSIV    | (8B)                 |  |           |
|                                                                                             | TPCP8010    |                          | ±20                  | 6                  | 1.96<br>(1)        | 23.8                         | 38.4                    | —                         | —                         | —                         | 600                        | 75                         | 132                        | 13.1                     | U-MOSIV    |                      |                                                                                       |           |
|                                                                                             | TPCP8009    |                          | ±20                  | 10                 | 2.01<br>(1)        | 11.8                         | 19.5                    | —                         | —                         | —                         | 1250                       | 165                        | 265                        | 25.1                     | U-MOSIV    |                      |                                                                                       |           |
|                                                                                             | TPCP8013    | 60                       | ±20                  | 4                  | 1.96<br>(1)        | 51.8                         | 77.9                    | —                         | —                         | —                         | 515                        | 48                         | 86                         | 12                       | U-MOSIV    |                      |                                                                                       |           |
|                                                                                             | TPCP8012    |                          | ±20                  | 8                  | 2.01<br>(1)        | 20.2                         | 29.1                    | —                         | —                         | —                         | 1160                       | 120                        | 200                        | 26.6                     | U-MOSIV    |                      |                                                                                       |           |
| <br>(mm) | TPCC8093    | 20                       | ±12                  | 21                 | 30                 | —                            | —                       | 5.8                       | 9.5                       | —                         | 1860                       | 140                        | 365                        | 16                       | U-MOSVII   | (8A)                 |  |           |
|                                                                                             | TPCC8074    | 30                       | ±20                  | 20                 | 30                 | 6.3                          | —                       | 8.5                       | —                         | —                         | 1800                       | 88                         | 330                        | 25                       | U-MOSVII   |                      |                                                                                       |           |
|                                                                                             | TPCC8073    |                          | ±20                  | 27                 | 39                 | 4.5                          | —                       | 5.9                       | —                         | —                         | 2600                       | 130                        | 470                        | 37                       | U-MOSVII   |                      |                                                                                       |           |
|                                                                                             | TPN6R303NC  |                          | ±20                  | 43 (2)             | 19                 | 6.3                          | —                       | 8.4                       | —                         | —                         | 1370                       | 110                        | 420                        | 24                       | U-MOSVIII  |                      |                                                                                       |           |
|                                                                                             | TPN4R203NC  |                          | ±20                  | 53 (2)             | 22                 | 4.2                          | —                       | 6.4                       | —                         | —                         | 1370                       | 110                        | 420                        | 24                       | U-MOSVIII  |                      |                                                                                       |           |
|                                                                                             | TPN2R503NC  |                          | ±20                  | 85 (2)             | 35                 | 2.5                          | —                       | 4.1                       | —                         | —                         | 2230                       | 160                        | 650                        | 40                       | U-MOSVIII  |                      |                                                                                       |           |
|                                                                                             | TPN2R203NC  |                          | ±20                  | 100 (2)            | 42                 | 2.2                          | —                       | 3.6                       | —                         | —                         | 2230                       | 160                        | 650                        | 34                       | U-MOSVIII  |                      |                                                                                       |           |
|                                                                                             | TPCC8084    | 33                       | ±20                  | 21                 | 32                 | 6.7                          | —                       | 9                         | —                         | —                         | 1900                       | 98                         | 300                        | 27                       | U-MOSVII   | (8B)                 |                                                                                       |           |
|                                                                                             | TPCC8076    |                          | ±20                  | 27                 | 39                 | 4.6                          | —                       | 6.2                       | —                         | —                         | 2500                       | 120                        | 430                        | 34                       | U-MOSVII   |                      |                                                                                       |           |

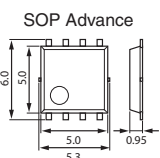
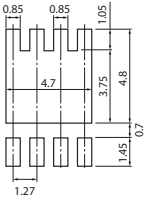
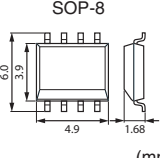
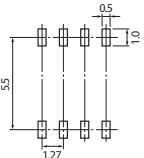
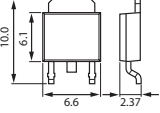
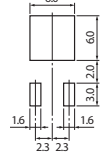
Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。  
(2): I<sub>D</sub> (DC) (Silicon Limit)

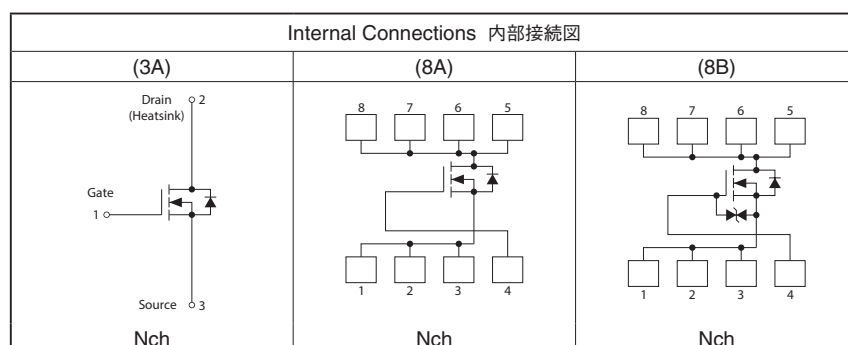
\*: New Product / 新製品



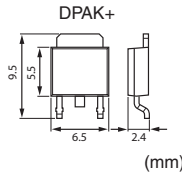
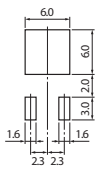
• The internal connection diagrams only show the general configurations of the circuits.  
• 内部接続図はイメージ図です。



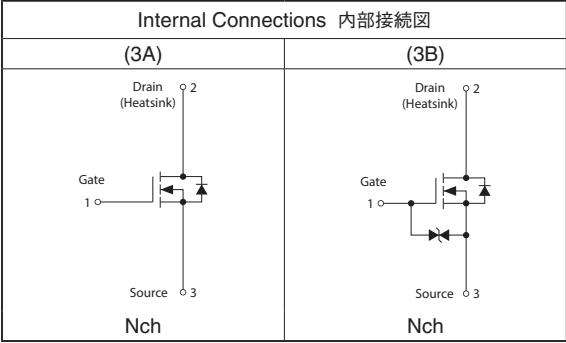
| Package                                                                                     | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                       |                         |                         |                         | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series    | Internal Connections | Land Pattern Examples (mm)                                                            |
|---------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-----------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|----------------------------|--------------------------|-----------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub> = 10 V       | V <sub>GS</sub> = 6 V | V <sub>GS</sub> = 4.5 V | V <sub>GS</sub> = 2.5 V | V <sub>GS</sub> = 1.8 V |                            |                            |                            |                          |           |                      |                                                                                       |
| <br>(mm)   | TPCA8082    | 30                       | ±20                  | 32                 | 45                 | 3.8                          | —                     | 4.8                     | —                       | —                       | 2900                       | 150                        | 530                        | 41                       | U-MOSVII  | (8A)                 |    |
|                                                                                             | TPCA8081    |                          | ±20                  | 38                 | 52                 | 3                            | —                     | 3.8                     | —                       | —                       | 3600                       | 200                        | 680                        | 51                       | U-MOSVII  |                      |                                                                                       |
|                                                                                             | TPCA8080    |                          | ±20                  | 42                 | 57                 | 2.6                          | —                     | 3.2                     | —                       | —                       | 4300                       | 240                        | 810                        | 61                       | U-MOSVII  |                      |                                                                                       |
|                                                                                             | TPCA8088    |                          | ±20                  | 48                 | 63                 | 2.2                          | —                     | 2.7                     | —                       | —                       | 5200                       | 290                        | 1000                       | 74                       | U-MOSVII  |                      |                                                                                       |
|                                                                                             | TPCA8087    |                          | ±20                  | 56                 | 70                 | 1.9                          | —                     | 2.3                     | —                       | —                       | 6400                       | 360                        | 1200                       | 91                       | U-MOSVII  |                      |                                                                                       |
|                                                                                             | TPHR9003NC  |                          | ±20                  | 220 (1)            | 78                 | 0.9                          | —                     | 1.4                     | —                       | —                       | 5300                       | 130                        | 2700                       | 75                       | U-MOSVIII |                      |                                                                                       |
|                                                                                             | TPCA8075    | 33                       | ±20                  | 48                 | 63                 | 2.4                          | —                     | 3.1                     | —                       | —                       | 5200                       | 300                        | 970                        | 70                       | U-MOSVII  |                      |                                                                                       |
|                                                                                             | TPCA8078    |                          | ±20                  | 54                 | 70                 | 2.1                          | —                     | 2.6                     | —                       | —                       | 6400                       | 370                        | 1200                       | 90                       | U-MOSVII  |                      |                                                                                       |
| <br>(mm)  | TPC8092     | 30                       | ±20                  | 15                 | 1.9                | 9                            | —                     | 11.1                    | —                       | —                       | 1800                       | 88                         | 330                        | 25                       | U-MOSVII  | (8A)                 |   |
|                                                                                             | TPC8074     |                          | ±20                  | 17                 | 1.9                | 6.5                          | —                     | 8.7                     | —                       | —                       | 1800                       | 88                         | 330                        | 25                       | U-MOSVII  | (8B)                 |                                                                                       |
|                                                                                             | TPC8086     |                          | ±20                  | 17                 | 1.9                | 6.4                          | —                     | 8.5                     | —                       | —                       | 1900                       | 90                         | 330                        | 26                       | U-MOSVII  | (8A)                 |                                                                                       |
|                                                                                             | TPC8073     |                          | ±20                  | 18                 | 1.9                | 4.7                          | —                     | 6.1                     | —                       | —                       | 2600                       | 130                        | 470                        | 37                       | U-MOSVII  | (8B)                 |                                                                                       |
|                                                                                             | TPC8080     | 30                       | ±20                  | 18                 | 1.9                | 2.8                          | —                     | 3.4                     | —                       | —                       | 4300                       | 240                        | 810                        | 61                       | U-MOSVII  | (8A)                 |                                                                                       |
|                                                                                             | TPC8081     |                          | ±20                  | 18                 | 1.9                | 3.2                          | —                     | 4                       | —                       | —                       | 3600                       | 200                        | 680                        | 51                       | U-MOSVII  | (8B)                 |                                                                                       |
|                                                                                             | TPC8082     |                          | ±20                  | 18                 | 1.9                | 4                            | —                     | 5                       | —                       | —                       | 2900                       | 150                        | 530                        | 41                       | U-MOSVII  | (8A)                 |                                                                                       |
|                                                                                             | TPC8085     |                          | ±20                  | 18                 | 1.9                | 4.7                          | —                     | 6.1                     | —                       | —                       | 2600                       | 130                        | 470                        | 37                       | U-MOSVII  | (8B)                 |                                                                                       |
|                                                                                             | TPC8087     | 33                       | ±20                  | 18                 | 1.9                | 2.1                          | —                     | 2.5                     | —                       | —                       | 6400                       | 360                        | 1200                       | 91                       | U-MOSVII  | (8A)                 |                                                                                       |
|                                                                                             | TPC8088     |                          | ±20                  | 18                 | 1.9                | 2.4                          | —                     | 2.9                     | —                       | —                       | 5200                       | 290                        | 1000                       | 74                       | U-MOSVII  | (8B)                 |                                                                                       |
|                                                                                             | TPC8084     |                          | ±20                  | 17                 | 1.9                | 6.9                          | —                     | 9.2                     | —                       | —                       | 1900                       | 98                         | 300                        | 27                       | U-MOSVII  | (8A)                 |                                                                                       |
|                                                                                             | TPC8075     |                          | ±20                  | 18                 | 1.9                | 2.6                          | —                     | 3.3                     | —                       | —                       | 5200                       | 300                        | 970                        | 70                       | U-MOSVII  | (8B)                 |                                                                                       |
|                                                                                             | TPC8076     | 33                       | ±20                  | 18                 | 1.9                | 4.9                          | —                     | 6.5                     | —                       | —                       | 2500                       | 120                        | 430                        | 34                       | U-MOSVII  | (8A)                 |                                                                                       |
|                                                                                             | TPC8078     |                          | ±20                  | 18                 | 1.9                | 2.3                          | —                     | 2.8                     | —                       | —                       | 6400                       | 370                        | 1200                       | 90                       | U-MOSVII  | (8A)                 |                                                                                       |
| <br>(mm) | TK8P25DA    | 250                      | ±20                  | 7.5                | 55                 | 500                          | —                     | —                       | —                       | —                       | 550                        | 5.1                        | 40                         | 16                       | π-MOSVII  | (3A)                 |  |
|                                                                                             | TK13P25D    |                          | ±20                  | 13                 | 96                 | 250                          | —                     | —                       | —                       | —                       | 1100                       | 8                          | 66                         | 25                       | π-MOSVII  |                      |                                                                                       |

Note (1): I<sub>D</sub> (DC) (Silicon Limit)

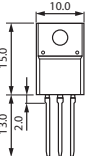
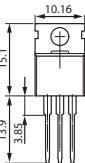
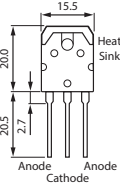
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

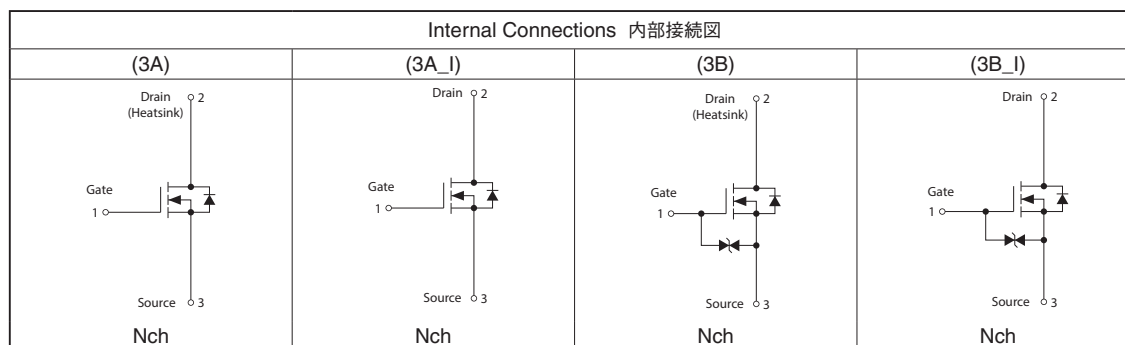
| Package                                                                                                                      | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                                     |
|------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------|----------------------|------------------------------------------------------------------------------------------------|
|                                                                                                                              |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 6 V | V <sub>GS</sub>   = 4.5 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V |                            |                            |                            |                          |             |                      |                                                                                                |
| <div></div> <div>DPAK+</div> <div>(mm)</div> | TK10S04K3L  | 40                       | ±20                  | 10                 | 25                 | 28                           | 54                      | —                         | —                         | —                         | 410                        | 55                         | 100                        | 10                       | U-MOSIV     | (3B)                 | <div></div> |
|                                                                                                                              | TK15S04N1L  |                          | ±20                  | 15                 | 46                 | 17.8                         | —                       | 37                        | —                         | —                         | 610                        | 50                         | 390                        | 10                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK20S04K3L  |                          | ±20                  | 20                 | 38                 | 14                           | 26                      | —                         | —                         | —                         | 820                        | 110                        | 190                        | 18                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK35S04K3L  |                          | ±20                  | 35                 | 58                 | 10.3                         | 15                      | —                         | —                         | —                         | 1370                       | 180                        | 320                        | 28                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK50S04K3L  |                          | ±20                  | 50                 | 68                 | 5.4                          | 10                      | —                         | —                         | —                         | 2010                       | 255                        | 435                        | 42                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK65S04K3L  |                          | ±20                  | 65                 | 88                 | 4.5                          | 7.9                     | —                         | —                         | —                         | 2800                       | 440                        | 680                        | 63                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK65S04N1L  |                          | ±20                  | 65                 | 107                | 4.3                          | —                       | 7.8                       | —                         | —                         | 2550                       | 130                        | 1430                       | 39                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK80S04K3L  |                          | ±20                  | 80                 | 100                | 3.1                          | 4.8                     | —                         | —                         | —                         | 4340                       | 570                        | 910                        | 87                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK100S04N1L |                          | ±20                  | 100                | 180                | 2.3                          | —                       | 4.5                       | —                         | —                         | 5490                       | 220                        | 3000                       | 76                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK1R4S04PB  |                          | ±20                  | 120                | 180                | 1.35                         | 1.9                     | —                         | —                         | —                         | 5500                       | 490                        | 3400                       | 103                      | U-MOSIX-H   |                      |                                                                                                |
|                                                                                                                              | TK8S06K3L   | 60                       | ±20                  | 8                  | 25                 | 54                           | 80                      | —                         | —                         | —                         | 400                        | 40                         | 80                         | 10                       | U-MOSIV     | (3B)                 |                                                                                                |
|                                                                                                                              | TK20S06K3L  |                          | ±20                  | 20                 | 38                 | 29                           | 40                      | —                         | —                         | —                         | 780                        | 75                         | 136                        | 18                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK25S06N1L  |                          | ±20                  | 25                 | 57                 | 18.5                         | —                       | 36.8                      | —                         | —                         | 855                        | 69                         | 490                        | 15                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK30S06K3L  |                          | ±20                  | 30                 | 58                 | 18                           | 30                      | —                         | —                         | —                         | 1350                       | 130                        | 230                        | 28                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK40S06N1L  |                          | ±20                  | 40                 | 88.2               | 10.5                         | —                       | 18                        | —                         | —                         | 1650                       | 107                        | 835                        | 26                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK45S06K3L  |                          | ±20                  | 45                 | 68                 | 10.5                         | 16.4                    | —                         | —                         | —                         | 1950                       | 185                        | 315                        | 41                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK60S06K3L  |                          | ±20                  | 60                 | 88                 | 8                            | 12.3                    | —                         | —                         | —                         | 2900                       | 280                        | 460                        | 60                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK80S06K3L  |                          | ±20                  | 80                 | 100                | 5.5                          | 7.8                     | —                         | —                         | —                         | 4200                       | 400                        | 650                        | 85                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK90S06N1L  |                          | ±20                  | 90                 | 157                | 3.3                          | —                       | 5.2                       | —                         | —                         | 5400                       | 350                        | 2630                       | 81                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK7S10N1Z   |                          | ±20                  | 7                  | 50                 | 48                           | —                       | —                         | —                         | —                         | 470                        | 36                         | 260                        | 7.1                      | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK11S10N1L  | *                        | ±20                  | 11                 | 65                 | 28                           | —                       | 50                        | —                         | —                         | 850                        | 67                         | 370                        | 15                       | U-MOSVIII-H | (3B)                 |                                                                                                |
|                                                                                                                              | TK33S10N1L  | 100                      | ±20                  | 33                 | 125                | 9.7                          | —                       | 16.2                      | —                         | —                         | 2250                       | 145                        | 1010                       | 33                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK33S10N1Z  |                          | ±20                  | 33                 | 125                | 9.7                          | —                       | —                         | —                         | —                         | 2050                       | 140                        | 1070                       | 28                       | U-MOSVIII-H |                      |                                                                                                |
|                                                                                                                              | TK40S10K3Z  |                          | ±20                  | 40                 | 93                 | 18                           | —                       | —                         | —                         | —                         | 3110                       | 245                        | 400                        | 61                       | U-MOSIV     |                      |                                                                                                |
|                                                                                                                              | TK55S10N1   |                          | ±20                  | 55                 | 157                | 6.5                          | —                       | —                         | —                         | —                         | 3280                       | 210                        | 1520                       | 49                       | U-MOSVIII-H |                      |                                                                                                |

\*: New Product / 新製品



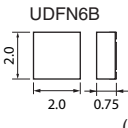
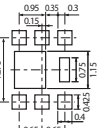
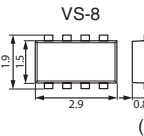
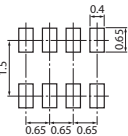
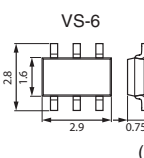
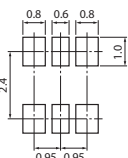
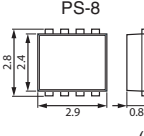
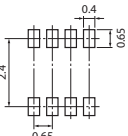
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

| Package                                                                                                                 | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series                 | Internal Connections | Land Pattern Examples (mm) |
|-------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------------------|----------------------|----------------------------|
|                                                                                                                         |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GSL</sub>   = 10 V    | V <sub>GSL</sub>   = 6 V | V <sub>GSL</sub>   = 4.5 V | V <sub>GSL</sub>   = 2.5 V | V <sub>GSL</sub>   = 1.8 V |                            |                            |                            |                          |                        |                      |                            |
| <div>TO-220SIS</div>  <div>(mm)</div>  | TK50A04K3   | 40                       | ±20                  | 50                 | 42                 | 3.5                          | —                        | —                          | —                          | —                          | 4500                       | 900                        | 1100                       | 102                      | U-MOSIV                | (3A_I)               |                            |
|                                                                                                                         | TK80A04K3L  |                          | ±20                  | 80                 | 48                 | 2.4                          | 3.5                      | —                          | —                          | —                          | —                          | 9400                       | 1200                       | 1900                     | 190                    | U-MOSIV              |                            |
|                                                                                                                         | TK80A08K3   | 75                       | ±20                  | 80                 | 40                 | 4.5                          | —                        | —                          | —                          | —                          | 8200                       | 770                        | 1140                       | 175                      | U-MOSIV                | (3A_I)               |                            |
|                                                                                                                         | TK9A20DA    | 200                      | ±20                  | 8.5                | 30                 | 400                          | —                        | —                          | —                          | —                          | 550                        | 5.6                        | 40                         | 14                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK15A20D    |                          | ±20                  | 15                 | 35                 | 180                          | —                        | —                          | —                          | —                          | 1050                       | 9                          | 80                         | 26                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK20A20D    |                          | ±20                  | 20                 | 45                 | 109                          | —                        | —                          | —                          | —                          | 1650                       | 14                         | 120                        | 43                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK25A20D    |                          | ±20                  | 25                 | 45                 | 70                           | —                        | —                          | —                          | —                          | 2550                       | 21                         | 180                        | 60                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK8A25DA    | 250                      | ±20                  | 7.5                | 30                 | 500                          | —                        | —                          | —                          | —                          | 550                        | 5.1                        | 40                         | 16                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK13A25D    |                          | ±20                  | 13                 | 35                 | 250                          | —                        | —                          | —                          | —                          | 1100                       | 8                          | 66                         | 25                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK17A25D    |                          | ±20                  | 17                 | 45                 | 150                          | —                        | —                          | —                          | —                          | 1650                       | 12                         | 110                        | 43                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK20A25D    |                          | ±20                  | 20                 | 45                 | 100                          | —                        | —                          | —                          | —                          | 2550                       | 14                         | 150                        | 55                       | π-MOSVII               |                      |                            |
|                                                                                                                         | TK18A30D    | 300                      | ±20                  | 18                 | 45                 | 139                          | —                        | —                          | —                          | —                          | 2600                       | 17                         | 140                        | 60                       | π-MOSVII               |                      |                            |
| <div>TO-220</div>  <div>(mm)</div>    | TK18E10K3   | 100                      | ±20                  | 18                 | 71                 | 42                           | —                        | —                          | —                          | —                          | 1580                       | 135                        | 200                        | 33                       | U-MOSIV                | (3A)                 |                            |
|                                                                                                                         | TK13E25D    | 250                      | ±20                  | 13                 | 102                | 250                          | —                        | —                          | —                          | —                          | 1100                       | 8                          | 66                         | 25                       | π-MOSVII               |                      |                            |
| <div>TO-3P(N)</div>  <div>(mm)</div> | TK70J04K3Z  | 40                       | ±20                  | 70                 | 125                | 4.1                          | —                        | —                          | —                          | —                          | 4500                       | 800                        | 1150                       | 100                      | U-MOSIV                | (3B)                 |                            |
|                                                                                                                         | TK75J04K3Z  |                          | ±20                  | 75                 | 150                | 3                            | —                        | —                          | —                          | —                          | —                          | 8450                       | 1480                       | 2060                     | 190                    |                      |                            |
|                                                                                                                         | 2SK2313     | 60                       | ±20                  | 60                 | 150                | 11                           | —                        | —                          | —                          | —                          | 5400                       | 920                        | 2600                       | 170                      | L <sup>2</sup> -π-MOSV | (3A)                 |                            |
|                                                                                                                         | TK70J06K3   |                          | ±20                  | 70                 | 125                | 6                            | —                        | —                          | —                          | —                          | 4500                       | 600                        | 800                        | 98                       | U-MOSIV                |                      |                            |
|                                                                                                                         | TK40J20D    | 200                      | ±20                  | 40                 | 260                | 44                           | —                        | —                          | —                          | —                          | 4300                       | 30                         | 280                        | 100                      | π-MOSVII               |                      |                            |
|                                                                                                                         | TK70J20D    |                          | ±20                  | 70                 | 410                | 27                           | —                        | —                          | —                          | —                          | 6950                       | 50                         | 450                        | 160                      | π-MOSVII               |                      |                            |
|                                                                                                                         | TK30J25D    | 250                      | ±20                  | 30                 | 260                | 60                           | —                        | —                          | —                          | —                          | 4300                       | 30                         | 250                        | 100                      | π-MOSVII               |                      |                            |
|                                                                                                                         | TK60J25D    |                          | ±20                  | 60                 | 410                | 38                           | —                        | —                          | —                          | —                          | 7000                       | 44                         | 400                        | 160                      | π-MOSVII               |                      |                            |
| TK50J30D                                                                                                                | 300         | ±20                      | 50                   | 410                | 52                 | —                            | —                        | —                          | —                          | 7000                       | 50                         | 345                        | 160                        | π-MOSVII                 |                        |                      |                            |



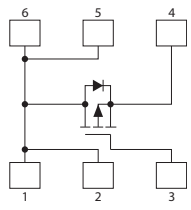
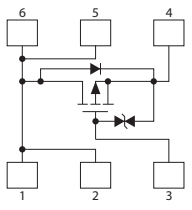
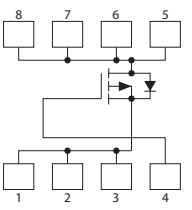
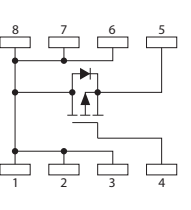
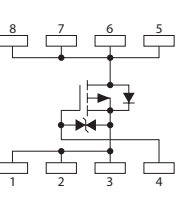
・ The internal connection diagrams only show the general configurations of the circuits.

・ 内部接続図はイメージ図です。

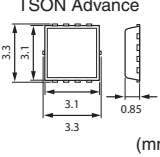
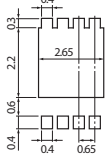
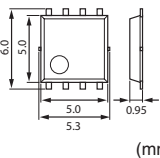
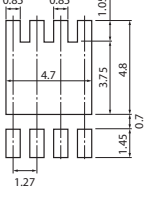
| Package                                                                                    | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series   | Internal Connections | Land Pattern Examples (mm)                                                            |  |
|--------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|----------|----------------------|---------------------------------------------------------------------------------------|--|
|                                                                                            |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GSL</sub>   = 10 V    | V <sub>GSL</sub>   = 6 V | V <sub>GSL</sub>   = 4.5 V | V <sub>GSL</sub>   = 2.5 V | V <sub>GSL</sub>   = 1.8 V |                            |                            |                            |                          |          |                      |                                                                                       |  |
| <br>(mm)  | SSM6J512NU * | -12                      | ±10                  | -10                | 1.25               | —                            | —                        | 18.7                       | 25.7                       | 40.1                       | 1400                       | 225                        | 250                        | 19.5                     | U-MOSVII | (6b)                 |    |  |
|                                                                                            | SSM6J505NU   |                          | ±6                   | -12                | 1.25               | —                            | —                        | 12                         | 16                         | 21                         | 2700                       | 800                        | 800                        | 37.6                     | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | SSM6J511NU * |                          | ±10                  | -14                | 1.25               | —                            | —                        | 10                         | 13.5                       | 19.2                       | 3350                       | 570                        | 590                        | 47                       | U-MOSVII |                      |                                                                                       |  |
|                                                                                            | SSM6J502NU   | -20                      | ±8                   | -6                 | 1                  | —                            | —                        | 23.1                       | 28.3                       | 38.4                       | 1800                       | 190                        | 205                        | 24.8                     | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | SSM6J503NU   |                          | ±8                   | -6                 | 1                  | —                            | —                        | 32.4                       | 41.7                       | 57.9                       | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | SSM6J501NU   |                          | ±8                   | -10                | 1                  | —                            | —                        | 15.3                       | 19                         | 26.5                       | 2600                       | 280                        | 290                        | 29.9                     | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | SSM6J507NU * | -30                      | +20/-25              | -10                | 1.25               | 20                           | —                        | 28                         | —                          | —                          | 1150                       | 185                        | 210                        | 13.6                     | U-MOSVI  |                      |                                                                                       |  |
| <br>(mm)   | TPCF8105     | -20                      | ±12                  | -6                 | 2.5 (1)            | —                            | —                        | 30                         | 41                         | 100                        | 1100                       | 160                        | 190                        | 17                       | U-MOSVI  | (8a_V)               |    |  |
|                                                                                            | TPCF8108     |                          | ±12                  | -7                 | 2.5 (1)            | —                            | —                        | 26                         | 37                         | 95                         | 1320                       | 180                        | 210                        | 19                       | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | TPCF8107     | -30                      | +20/-25              | -6                 | 2.5 (1)            | 28                           | —                        | 38                         | —                          | —                          | 970                        | 170                        | 200                        | 22                       | U-MOSVI  |                      |                                                                                       |  |
| <br>(mm)   | TPC6130      | -20                      | ±12                  | -2.8               | 2.2 (1)            | —                            | —                        | 106                        | 164                        | —                          | 360                        | 47                         | 63                         | 5.1                      | U-MOSVI  | (6a)                 |    |  |
|                                                                                            | TPC6113      |                          | ±12                  | -5                 | 2.2 (1)            | —                            | —                        | 55                         | 85                         | —                          | 690                        | 93                         | 117                        | 10                       | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | TPC6111      |                          | ±8                   | -5.5               | 2.2 (1)            | —                            | —                        | 40                         | 57                         | 80                         | 700                        | 100                        | 140                        | 10                       | U-MOSV   | (6b)                 |                                                                                       |  |
|                                                                                            | TPC6110      | -30                      | +20/-25              | -4.5               | 2.2 (1)            | 56                           | —                        | 77                         | —                          | —                          | 510                        | 85                         | 110                        | 14                       | U-MOSVI  | (6a)                 |                                                                                       |  |
| <br>(mm) | TPCP8105     | -20                      | ±12                  | -7.2               | 1.68 (1)           | —                            | —                        | 17                         | 23                         | 60                         | 2280                       | 296                        | 340                        | 28                       | U-MOSVI  | (8b)                 |  |  |
|                                                                                            | TPCP8106     | -30                      | +20/-25              | -5.2               | 1.68 (1)           | 33                           | —                        | 44                         | —                          | —                          | 870                        | 150                        | 190                        | 19                       | U-MOSVI  | (8a)                 |                                                                                       |  |
|                                                                                            | TPCP8109     | -40                      | +10/-20              | -4.5               | 1.96 (1)           | 52.3                         | 76.8                     | —                          | —                          | —                          | 810                        | 85                         | 130                        | 18                       | U-MOSVI  | (8b)                 |                                                                                       |  |
|                                                                                            | TPCP8107     |                          | +10/-20              | -8                 | 2.01 (1)           | 18                           | 26.8                     | —                          | —                          | —                          | 2160                       | 238                        | 292                        | 44.6                     | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | TPCP8111     | -60                      | +10/-20              | -3                 | 1.96 (1)           | 117                          | 158.4                    | —                          | —                          | —                          | 760                        | 60                         | 90                         | 17                       | U-MOSVI  |                      |                                                                                       |  |
|                                                                                            | TPCP8110     |                          | +10/-20              | -5                 | 2.01 (1)           | 39.5                         | 53.2                     | —                          | —                          | —                          | 2075                       | 150                        | 205                        | 45                       | U-MOSVI  |                      |                                                                                       |  |

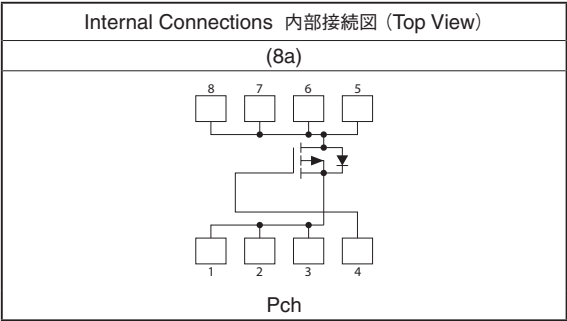
Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。

\*: New Product / 新製品

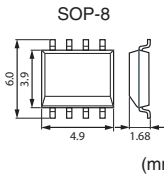
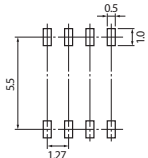
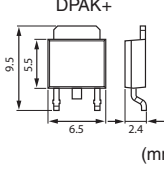
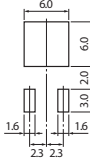
| Internal Connections 内部接続図 (Top View)                                                      |                                                                                            |                                                                                            |                                                                                             |                                                                                              |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| (6a)                                                                                       | (6b)                                                                                       | (8a)                                                                                       | (8a_V)                                                                                      | (8b)                                                                                         |
| <br>Pch | <br>Pch | <br>Pch | <br>Pch | <br>Pch |

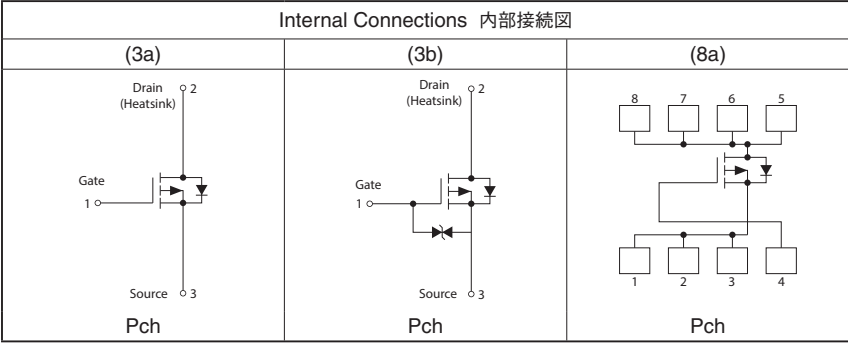
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

| Package                                                                                   | Part Number | Absolute Maximum Ratings |                     |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                          |
|-------------------------------------------------------------------------------------------|-------------|--------------------------|---------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|---------|----------------------|-------------------------------------------------------------------------------------|
|                                                                                           |             | V <sub>DS</sub> (V)      | V <sub>GS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 6 V | V <sub>GS</sub>   = 4.5 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V |                            |                            |                            |                          |         |                      |                                                                                     |
| <br>(mm) | TPCC8136    | -20                      | ±12                 | -9.4               | 18                 | —                            | —                       | 16                        | 22                        | 60                        | 2350                       | 330                        | 360                        | 36                       | U-MOSVI | (8a)                 |  |
|                                                                                           | TPCC8137    |                          | ±12                 | -13                | 30                 | —                            | —                       | 10                        | 16                        | 52                        | 2990                       | 400                        | 435                        | 43                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCC8138    |                          | ±12                 | -18                | 39                 | —                            | —                       | 7.5                       | 11                        | 42                        | 4165                       | 575                        | 620                        | 63                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPN4R712MD  |                          | ±12                 | -36                | 42                 | —                            | —                       | 4.7                       | 8.1                       | —                         | 4300                       | 640                        | 700                        | 65                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCC8131    | -30                      | +20/-25             | -10                | 20                 | 17.6                         | —                       | 23                        | —                         | —                         | 1700                       | 280                        | 320                        | 40                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCC8103    |                          | ±20                 | -18                | 27                 | 12                           | —                       | —                         | —                         | —                         | 1600                       | 340                        | 490                        | 38                       | U-MOSV  |                      |                                                                                     |
|                                                                                           | TPCC8104    |                          | +20/-25             | -20                | 27                 | 8.8                          | —                       | 12.4                      | —                         | —                         | 2260                       | 430                        | 485                        | 58                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCC8105    |                          | +20/-25             | -23                | 30                 | 7.8                          | —                       | 10.4                      | —                         | —                         | 3240                       | 520                        | 580                        | 76                       | U-MOSVI |                      |                                                                                     |
| <br>(mm) | TPH1R712MD  | -20                      | ±12                 | -60                | 78                 | —                            | —                       | 1.7                       | 2.7                       | —                         | 1090                       | 1550                       | 2010                       | 182                      | U-MOSVI | (8a)                 |  |
|                                                                                           | TPCA8131    | -30                      | +20/-25             | -13                | 27                 | 17                           | —                       | 22                        | —                         | —                         | 1700                       | 280                        | 320                        | 40                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCA8109    |                          | +20/-25             | -24                | 30                 | 9                            | —                       | 13                        | —                         | —                         | 2400                       | 400                        | 460                        | 56                       | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCA8128    |                          | +20/-25             | -34                | 45                 | 4.8                          | —                       | 6.7                       | —                         | —                         | 4800                       | 800                        | 900                        | 115                      | U-MOSVI |                      |                                                                                     |
|                                                                                           | TPCA8120    |                          | +20/-25             | -45                | 45                 | 3                            | —                       | 4                         | —                         | —                         | 7420                       | 1180                       | 1440                       | 190                      | U-MOSVI |                      |                                                                                     |



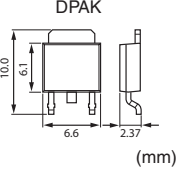
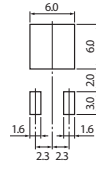
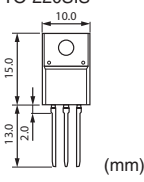
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

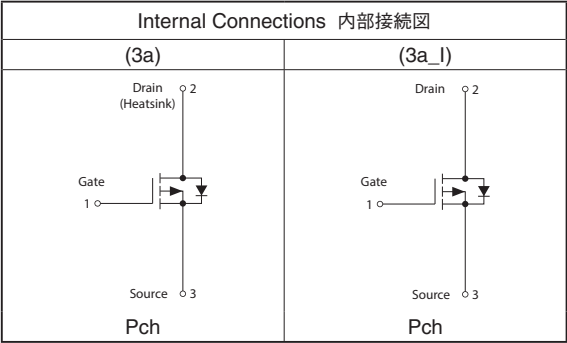
| Package                                                                                                     | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                       |                         |                         |                         | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                            |
|-------------------------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-----------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|----------------------------|--------------------------|---------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                                             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub> = 10 V       | V <sub>GS</sub> = 6 V | V <sub>GS</sub> = 4.5 V | V <sub>GS</sub> = 2.5 V | V <sub>GS</sub> = 1.8 V |                            |                            |                            |                          |         |                      |                                                                                       |
|  <p>SOP-8</p> <p>(mm)</p>   | TPC8129     | -30                      | +20/-25              | -9                 | 1.9                | 22                           | —                     | 28                      | —                       | —                       | 1650                       | 260                        | 300                        | 39                       | U-MOSVI | (8a)                 |    |
|                                                                                                             | TPC8125     |                          | +20/-25              | -10                | 1.9                | 13                           | —                     | 17                      | —                       | —                       | 2580                       | 430                        | 490                        | 64                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8123     |                          | +20/-25              | -11                | 1.9                | 9                            | —                     | 12.5                    | —                       | —                       | 2940                       | 460                        | 520                        | 68                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8126     |                          | +20/-25              | -11                | 1.9                | 10                           | —                     | 14                      | —                       | —                       | 2400                       | 400                        | 460                        | 56                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8127     |                          | +20/-25              | -13                | 1.9                | 6.5                          | —                     | 8.9                     | —                       | —                       | 3800                       | 620                        | 710                        | 92                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8128     |                          | +20/-25              | -16                | 1.9                | 5                            | —                     | 6.9                     | —                       | —                       | 4800                       | 800                        | 900                        | 115                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8120     |                          | +20/-25              | -18                | 1.9                | 3.2                          | —                     | 4.2                     | —                       | —                       | 7420                       | 1180                       | 1440                       | 180                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8134     | -40                      | +20/-25              | -5                 | 1.9                | 52                           | —                     | 66                      | —                       | —                       | 890                        | 100                        | 130                        | 20                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8132     |                          | +20/-25              | -7                 | 1.9                | 25                           | —                     | 33                      | —                       | —                       | 1580                       | 190                        | 230                        | 34                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8133     |                          | +20/-25              | -9                 | 1.9                | 15                           | —                     | 18                      | —                       | —                       | 2900                       | 350                        | 410                        | 64                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPC8124     |                          | +20/-25              | -12                | 1.9                | 8                            | —                     | 10                      | —                       | —                       | 4750                       | 540                        | 620                        | 104                      | U-MOSVI |                      |                                                                                       |
|  <p>DPAK+</p> <p>(mm)</p> | TJ10S04M3L  | -40                      | +10/-20              | -10                | 27                 | 44                           | 62                    | —                       | —                       | —                       | 930                        | 90                         | 140                        | 19                       | U-MOSVI | (3b)                 |  |
|                                                                                                             | TJ20S04M3L  |                          | +10/-20              | -20                | 41                 | 22.2                         | 32                    | —                       | —                       | —                       | 1850                       | 180                        | 250                        | 37                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ40S04M3L  |                          | +10/-20              | -40                | 68                 | 9.1                          | 13                    | —                       | —                       | —                       | 4140                       | 410                        | 510                        | 83                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ60S04M3L  |                          | +10/-20              | -60                | 90                 | 6.3                          | 9.4                   | —                       | —                       | —                       | 6510                       | 570                        | 780                        | 125                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ80S04M3L  |                          | +10/-20              | -80                | 100                | 5.2                          | 7.9                   | —                       | —                       | —                       | 7770                       | 740                        | 970                        | 158                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ8S06M3L   | -60                      | +10/-20              | -8                 | 27                 | 104                          | 130                   | —                       | —                       | —                       | 890                        | 60                         | 100                        | 19                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ15S06M3L  |                          | +10/-20              | -15                | 41                 | 50                           | 63                    | —                       | —                       | —                       | 1770                       | 130                        | 180                        | 36                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ30S06M3L  |                          | +10/-20              | -30                | 68                 | 21.8                         | 28                    | —                       | —                       | —                       | 3950                       | 270                        | 360                        | 80                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ50S06M3L  |                          | +10/-20              | -50                | 90                 | 13.8                         | 17.4                  | —                       | —                       | —                       | 6290                       | 410                        | 560                        | 124                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ60S06M3L  |                          | +10/-20              | -60                | 100                | 11.2                         | 14.5                  | —                       | —                       | —                       | 7760                       | 530                        | 690                        | 156                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TJ15S10M3   | -100                     | +10/-20              | -15                | 75                 | 130                          | —                     | —                       | —                       | —                       | 3200                       | 135                        | 190                        | 69                       | U-MOSVI | (3a)                 |                                                                                       |



• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

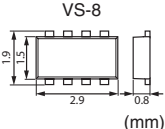
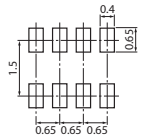
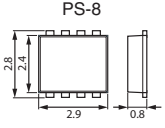
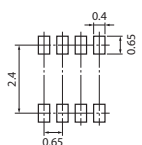
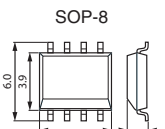
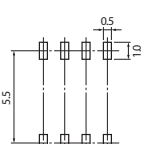
| Package                                                                                   | Part Number | Absolute Maximum Ratings |          |        |        | RDS(ON) max (mΩ) |            |              |              |              | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                          |
|-------------------------------------------------------------------------------------------|-------------|--------------------------|----------|--------|--------|------------------|------------|--------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|----------------------|-------------------------------------------------------------------------------------|
|                                                                                           |             | Vbss (V)                 | Vgss (V) | Id (A) | Pd (W) | Vgs  = 10 V      | Vgs  = 6 V | Vgs  = 4.5 V | Vgs  = 2.5 V | Vgs  = 1.8 V |                |                |                |              |         |                      |                                                                                     |
| <br>(mm) | TJ15P04M3   | -40                      | ±20      | -15    | 29     | 36               | —          | 48           | —            | —            | 1100           | 130            | 170            | 26           | U-MOSVI | (3a)                 |  |
| <br>(mm) | TJ9A10M3    | -100                     | ±20      | -9     | 19     | 170              | —          | —            | —            | —            | 2900           | 120            | 150            | 47           | U-MOSVI | (3a_l)               |                                                                                     |
|                                                                                           | TJ11A10M3   |                          | ±20      | -11    | 24     | 130              | —          | —            | —            | —            | 3200           | 135            | 190            | 69           | U-MOSVI |                      |                                                                                     |



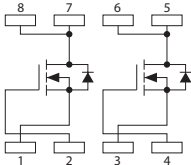
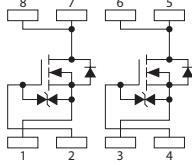
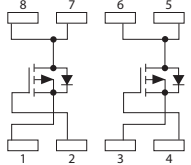
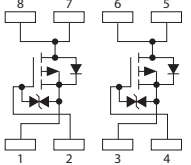
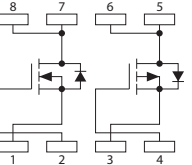
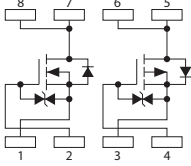
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。



(Dual Channel / Complementary) / (デュアルチャネル / コンプリメンタリ)

| Package                                                                                    | Polarity    | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                            |       |  |
|--------------------------------------------------------------------------------------------|-------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|---------------------------------------------------------------------------------------|-------|--|
|                                                                                            |             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 6 V | V <sub>GS</sub>   = 4.5 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V |                            |                            |                            |                          |            |                      |                                                                                       |       |  |
| <br>(mm)   | P-ch x 2    | TPCF8305    | -20                      | ±12                  | -4                 | 1.35               | —                            | —                       | 58                        | 83                        | 265                       | 680                        | 85                         | 108                        | 9.2                      | U-MOSVI    | (8aa)                |    |       |  |
|                                                                                            |             | TPCF8306    | -30                      | +20/-25              | -3.2               | 1.35               | 72                           | —                       | 120                       | —                         | —                         | 390                        | 65                         | 85                         | 10                       | U-MOSVI    |                      |                                                                                       |       |  |
| <br>(mm)   | N-ch x 2    | TPCP8206    | 20                       | ±12                  | 6                  | 1.48 (1)           | —                            | —                       | 24                        | 35                        | —                         | 630                        | 47                         | 144                        | 5.8                      | U-MOSVII   | (8AA)                |    |       |  |
|                                                                                            |             | TPCP8204    | 30                       | ±20                  | 4.2                | 1.48 (1)           | 50                           | —                       | 77                        | —                         | —                         | 190                        | 45                         | 65                         | 4.6                      | U-MOSIV    |                      |                                                                                       |       |  |
|                                                                                            |             | TPCP8207    | 40                       | ±20                  | 5                  | 1.77 (1)           | 36.3                         | 62.8                    | —                         | —                         | —                         | 505                        | 66                         | 115                        | 11.8                     | U-MOSIV    |                      |                                                                                       |       |  |
|                                                                                            | P-ch x 2    | TPCP8303    | —                        | ±8                   | -3.8               | 1.48 (1)           | —                            | —                       | 46                        | 60                        | 90                        | 640                        | 100                        | 140                        | 10                       | U-MOSV     | (8bb)                |                                                                                       |       |  |
|                                                                                            |             | TPCP8306    | -20                      | ±12                  | -4                 | 1.48 (1)           | —                            | —                       | 58                        | 83                        | 265                       | 680                        | 85                         | 108                        | 9.2                      | U-MOSVI    |                      |                                                                                       | (8aa) |  |
|                                                                                            |             | TPCP8305    | —                        | ±12                  | -6                 | 1.48 (1)           | —                            | —                       | 30                        | 42                        | —                         | 1500                       | 215                        | 250                        | 21.5                     | U-MOSVI    |                      |                                                                                       |       |  |
|                                                                                            | N-ch + P-ch | TPCP8404    | 30                       | ±20                  | 4                  | 1.48 (1)           | 50                           | —                       | 80                        | —                         | —                         | 190                        | 45                         | 60                         | 4.6                      | U-MOSIV    | (8Aa)                |                                                                                       |       |  |
|                                                                                            |             |             | -30                      | ±20                  | -4                 | 1.48 (1)           | 50                           | —                       | 80                        | —                         | —                         | 510                        | 110                        | 170                        | 13                       | U-MOSV     |                      |                                                                                       |       |  |
|                                                                                            |             | TPCP8405    | 30                       | ±20                  | 6.5                | 1.48 (1)           | 26                           | —                       | 29                        | —                         | —                         | 830                        | 53                         | 177                        | 13.8                     | U-MOSVI-H  | (8Aa)                |                                                                                       |       |  |
|                                                                                            |             |             | -30                      | ±20                  | -6                 | 1.48 (1)           | 31.3                         | —                       | 42                        | —                         | —                         | 1075                       | 190                        | 234                        | 24.1                     | U-MOSVI    |                      |                                                                                       |       |  |
|                                                                                            |             | TPCP8407    | 40                       | ±20                  | 5                  | 1.77 (1)           | 36.3                         | 62.8                    | —                         | —                         | —                         | 505                        | 66                         | 115                        | 11.8                     | U-MOSIV    | (8Bb)                |                                                                                       |       |  |
|                                                                                            |             |             | -40                      | +10/-20              | -4                 | 1.77 (1)           | 56.8                         | 82.2                    | —                         | —                         | —                         | 810                        | 85                         | 130                        | 18                       | U-MOSVI    |                      |                                                                                       |       |  |
| TPCP8406                                                                                   | 40          | ±20         | 6                        | 1.48 (1)             | 32                 | —                  | 36                           | —                       | —                         | 850                       | 40                        | 142                        | 13.7                       | U-MOSVI-H                  | (8Aa)                    |            |                      |                                                                                       |       |  |
|                                                                                            | -40         | ±20         | -5                       | 1.48 (1)             | 43.2               | —                  | 53.4                         | —                       | —                         | 1105                      | 133                       | 166                        | 24.2                       | U-MOSVI                    |                          |            |                      |                                                                                       |       |  |
| <br>(mm) | N-ch + P-ch | TPC8407     | 30                       | ±20                  | 9                  | 1.5                | 17                           | —                       | 21                        | —                         | —                         | 1190                       | 55                         | 210                        | 17                       | U-MOSVII-H | (8Aa)                |  |       |  |
|                                                                                            |             |             | -30                      | ±20                  | -7.4               | 1.5                | 23                           | —                       | 29                        | —                         | —                         | 1650                       | 260                        | 300                        | 39                       | U-MOSVI    |                      |                                                                                       |       |  |
|                                                                                            |             | TPC8408     | 40                       | ±20                  | 6.1                | 1.5                | 32                           | —                       | 36                        | —                         | —                         | 850                        | 40                         | 145                        | 14                       | U-MOSVI-H  |                      |                                                                                       |       |  |
|                                                                                            |             |             | -40                      | ±20                  | -5.3               | 1.5                | 43                           | —                       | 53                        | —                         | —                         | 1105                       | 135                        | 165                        | 24                       | U-MOSVI    |                      |                                                                                       |       |  |

Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。

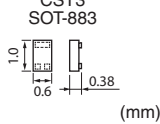
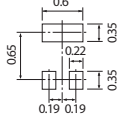
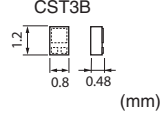
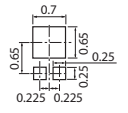
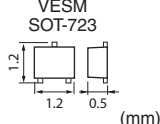
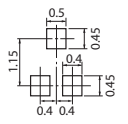
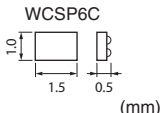
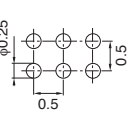
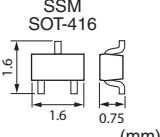
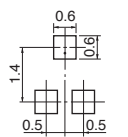
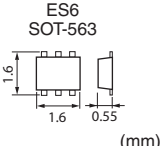
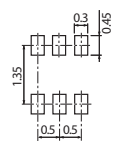
| Internal Connections 内部接続図 (Top View)                                                            |                                                                                                |                                                                                                |                                                                                                 |                                                                                                    |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| (8AA)                                                                                            | (8BB)                                                                                          | (8aa)                                                                                          | (8bb)                                                                                           | (8Aa)                                                                                              |
| <br>Nch x 2   | <br>Nch x 2 | <br>Pch x 2 | <br>Pch x 2 | <br>Nch + Pch |
| <br>Nch + Pch |                                                                                                |                                                                                                |                                                                                                 |                                                                                                    |

- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

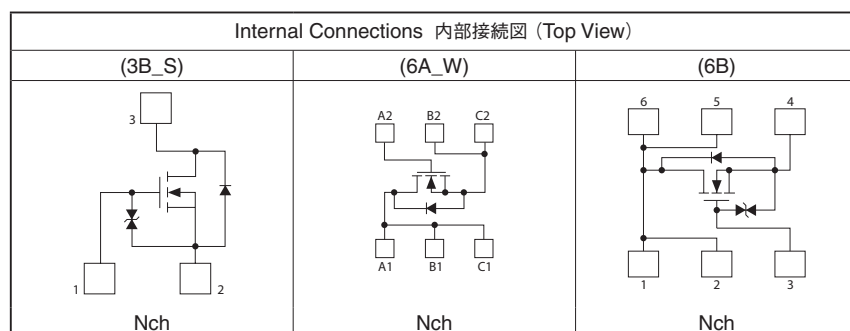
# Small-Package Series / 小型パッケージシリーズ

(Semi-Power Type : Single N-Channel) / (セミパワータイプ : シングルNチャネル)

(1/2)

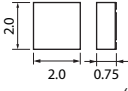
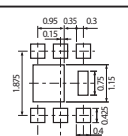
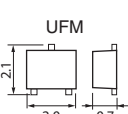
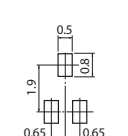
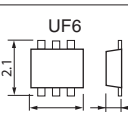
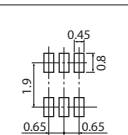
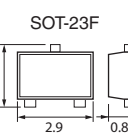
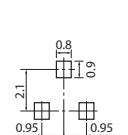
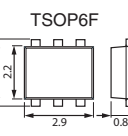
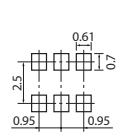
| Package                                                                                     | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                           |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                                    |
|---------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|---------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|-----------------------------------------------------------------------------------------------|
|                                                                                             |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 4.5 V | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |            |                      |                                                                                               |
| <br>(mm)   | SSM3K56CT    | 20                       | ±8                   | 0.8                | 0.5                | —                            | 235                       | —                       | 300                       | 480                       | 840                       | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H | (3B_S)               | <br>(mm)   |
|                                                                                             | SSM3K56ACT   |                          | ±8                   | 1.4                | 0.5                | —                            | 235                       | —                       | 300                       | 480                       | 840                       | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H |                      |                                                                                               |
| <br>(mm)   | SSM3K59CTB * | 40                       | ±12                  | 2                  | 1                  | —                            | 228                       | —                       | 268                       | 420                       | —                         | 130                        | 7.5                        | 26                         | 1.1                      | U-MOSVII-H | (3B_S)               | <br>(mm)   |
| <br>(mm)   | SSM3K56MFV   | 20                       | ±8                   | 0.8                | 0.5                | —                            | 235                       | —                       | 300                       | 480                       | 840                       | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H | (3B_S)               | <br>(mm)   |
| <br>(mm)  | SSM6K781G *  | 12                       | ±8                   | 7                  | 1.6                | —                            | 18                        | —                       | 23.2                      | 47.4                      | 124                       | 600                        | 120                        | 250                        | 5.4                      | U-MOSVII-H | (6A_W)               | <br>(mm)  |
| <br>(mm) | SSM3K56FS *  | 20                       | ±8                   | 0.8                | 0.5                | —                            | 235                       | —                       | 300                       | 480                       | 840                       | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H | (3B_S)               | <br>(mm) |
| <br>(mm) | SSM6K204FE   | 20                       | ±10                  | 2                  | 0.5                | —                            | —                         | 126                     | 164                       | 214                       | 307                       | 195                        | 29                         | 35                         | 3.4                      | U-MOSIII   | (6B)                 | <br>(mm) |
|                                                                                             | SSM6K211FE   |                          | ±10                  | 3.2                | 0.5                | —                            | 47                        | —                       | 59                        | 82                        | 118                       | 510                        | 85                         | 98                         | 10.8                     | U-MOSIII   |                      |                                                                                               |
|                                                                                             | SSM6K208FE   | 30                       | ±12                  | 1.9                | 0.5                | —                            | —                         | 133                     | 177                       | 296                       | —                         | 123                        | 18                         | 43                         | 1.9                      | U-MOSIII   |                      |                                                                                               |
|                                                                                             | SSM6K202FE   |                          | ±12                  | 2.3                | 0.5                | —                            | —                         | 85                      | 101                       | 145                       | —                         | 270                        | 47                         | 56                         | —                        | U-MOSIII   |                      |                                                                                               |
|                                                                                             | SSM6K217FE   | 40                       | ±12                  | 1.8                | 0.5                | —                            | 208                       | —                       | 248                       | 400                       | —                         | 130                        | 7.5                        | 26                         | 1.1                      | U-MOSVII-H |                      |                                                                                               |

\*: New Product / 新製品



• The internal connection diagrams only show the general configurations of the circuits.

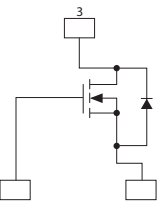
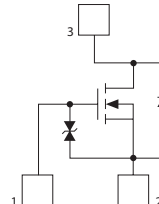
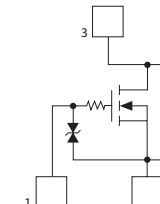
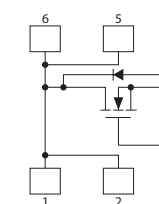
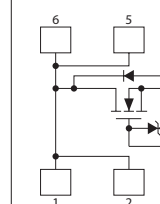
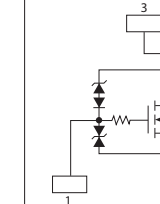
• 内部接続図はイメージ図です。

| Package                                                                                             | Part Number   | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                       |                         |                         |                         | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                            |
|-----------------------------------------------------------------------------------------------------|---------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|-----------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                                     |               | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub> = 10 V       | V <sub>GS</sub> = 4.5 V | V <sub>GS</sub> = 4 V | V <sub>GS</sub> = 2.5 V | V <sub>GS</sub> = 1.8 V | V <sub>GS</sub> = 1.5 V |                            |                            |                            |                          |             |                      |                                                                                       |
|  UDFN6B<br>(mm)    | SSM6K504NU    | 30                       | ±20                  | 9                  | 1.25               | 19.5                         | 26                      | —                     | —                       | —                       | —                       | 620                        | 42                         | 110                        | 4.8                      | U-MOSVII-H  | (6B)                 |    |
|                                                                                                     | SSM6K513NU *  |                          | ±20                  | 15                 | 1.25               | 8.9                          | 12                      | —                     | —                       | —                       | —                       | 1130                       | 52                         | 350                        | 7.5                      | U-MOSIX-H   | (6A)                 |                                                                                       |
|                                                                                                     | SSM6K514NU *  | 40                       | ±20                  | 12                 | 1.25               | 11.6                         | 17.3                    | —                     | —                       | —                       | —                       | 1110                       | 26                         | 245                        | 7.5                      | U-MOSIX-H   | (6B)                 |                                                                                       |
|                                                                                                     | SSM6K341NU *  | 60                       | ±20                  | 6                  | 1.25               | 36                           | 51                      | 69                    | —                       | —                       | —                       | 550                        | 35                         | 300                        | 9.3                      | U-MOSVIII-H | (6B)                 |                                                                                       |
|                                                                                                     | SSM6K361NU *  | 100                      | ±20                  | 3.5                | 1.25               | 69                           | 92                      | —                     | —                       | —                       | —                       | 430                        | 22                         | 160                        | 3.2                      | U-MOSVIII-H | (6B)                 |                                                                                       |
|  UFM<br>(mm)       | SSM3K62TU *   | 20                       | ±8                   | 0.8                | 0.5                | —                            | 57                      | —                     | 68                      | 89                      | 139                     | 177                        | 17                         | 52                         | 2                        | U-MOSVII-H  | (3C_S)               |    |
|                                                                                                     | SSM3K122TU    |                          | ±10                  | 2                  | 0.5                | —                            | —                       | 123                   | 161                     | 211                     | 304                     | 195                        | 29                         | 35                         | 3.4                      | U-MOSIII    | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K121TU    |                          | ±10                  | 3.2                | 0.5                | —                            | —                       | 48                    | 63                      | 93                      | 140                     | 400                        | 60                         | 68                         | 5.9                      | U-MOSIII    | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K123TU    |                          | ±10                  | 4.2                | 0.5                | —                            | —                       | 28                    | 32                      | 43                      | 66                      | 1010                       | 150                        | 162                        | 13.6                     | U-MOSIII    | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K127TU    | 30                       | ±12                  | 2                  | 0.5                | —                            | —                       | 123                   | 167                     | 286                     | —                       | 123                        | 18                         | 43                         | 1.5                      | U-MOSIII    | (3A_S)               |                                                                                       |
|                                                                                                     | SSM3K116TU    |                          | ±12                  | 2.2                | 0.5                | —                            | 100                     | —                     | 135                     | —                       | —                       | 245                        | 33                         | 41                         | —                        | U-MOSIII    | (3A_S)               |                                                                                       |
|                                                                                                     | SSM3K119TU    |                          | ±12                  | 2.5                | 0.5                | —                            | —                       | 74                    | 90                      | 134                     | —                       | 270                        | 47                         | 56                         | —                        | U-MOSIII    | (3A_S)               |                                                                                       |
|                                                                                                     | SSM3K131TU    | 60                       | ±20                  | 6                  | 0.5                | 27.6                         | 41.5                    | —                     | —                       | —                       | —                       | 450                        | 77                         | 120                        | 10.1                     | U-MOSIV     | (3A_S)               |                                                                                       |
|                                                                                                     | SSM3K2615TU * |                          | ±20                  | 2                  | 0.8                | 300                          | —                       | 440                   | —                       | —                       | —                       | 150                        | 25                         | 70                         | 6                        | π-MOSV      | (3C_S)               |                                                                                       |
|                                                                                                     | SSM3K341TU *  |                          | ±20                  | 6                  | 1                  | 36                           | 51                      | 69                    | —                       | —                       | —                       | 550                        | 35                         | 300                        | 9.3                      | U-MOSVIII-H | (3B_S)               |                                                                                       |
|  UF6<br>(mm)      | SSM6K403TU    | 20                       | ±10                  | 4.2                | 0.5                | —                            | —                       | 28                    | 32                      | 43                      | 66                      | 1050                       | 160                        | 175                        | 16.8                     | U-MOSIII    | (6B)                 |   |
|                                                                                                     | SSM6K404TU    |                          | ±10                  | 3                  | 0.5                | —                            | —                       | 55                    | 70                      | 100                     | 147                     | 400                        | 60                         | 68                         | 5.9                      | U-MOSIII    | (6B)                 |                                                                                       |
|                                                                                                     | SSM6K405TU    |                          | ±10                  | 2                  | 0.5                | —                            | —                       | 126                   | 164                     | 214                     | 307                     | 195                        | 29                         | 35                         | 3.4                      | U-MOSIII    | (6B)                 |                                                                                       |
|                                                                                                     | SSM6K406TU    | 30                       | ±20                  | 4.4                | 0.5                | 25                           | 38.5                    | —                     | —                       | —                       | —                       | 490                        | 105                        | 143                        | 12.4                     | U-MOSIV     | (6B)                 |                                                                                       |
|                                                                                                     | SSM6K407TU    | 60                       | ±20                  | 2                  | 0.5                | 300                          | —                       | 440                   | —                       | —                       | —                       | 150                        | 25                         | 70                         | 6                        | π-MOSV      | (6B)                 |                                                                                       |
|  SOT-23F<br>(mm) | SSM3K344R *   | 20                       | ±8                   | 3                  | 1                  | —                            | 71                      | —                     | 91                      | 139                     | 232                     | 153                        | 15                         | 37                         | 2                        | U-MOSVII-H  | (3B_S)               |  |
|                                                                                                     | SSM3K345R *   |                          | ±8                   | 4                  | 1                  | —                            | 33                      | —                     | 45                      | 74                      | 108                     | 410                        | 40                         | 85                         | 3.6                      | U-MOSVI     | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K336R *   | 30                       | ±20                  | 3                  | 1                  | 95                           | 140                     | —                     | —                       | —                       | —                       | 126                        | 8                          | 26                         | 1.7                      | U-MOSVII-H  | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K329R     |                          | ±12                  | 3.5                | 1                  | —                            | —                       | 126                   | 170                     | 289                     | —                       | 123                        | 18                         | 43                         | 1.5                      | U-MOSIII    | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K324R     |                          | ±12                  | 4                  | 1                  | —                            | 56                      | —                     | 72                      | 109                     | —                       | 200                        | 13                         | 40                         | 2.2                      | U-MOSVII-H  | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K333R     | 60                       | ±20                  | 6                  | 1                  | 28                           | 42                      | —                     | —                       | —                       | —                       | 436                        | 28                         | 77                         | 3.4                      | U-MOSVII-H  | (3A_S)               |                                                                                       |
|                                                                                                     | SSM3K335R     |                          | ±20                  | 6                  | 1                  | 38                           | 56                      | —                     | —                       | —                       | —                       | 340                        | 20                         | 60                         | 2.7                      | U-MOSVII-H  | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K337R *   | 38                       | ±20                  | 2                  | 1                  | 150                          | 176                     | 200                   | —                       | —                       | —                       | 120                        | 7.2                        | 33                         | 3                        | U-MOSIV     | (3ZC_2)              |                                                                                       |
|                                                                                                     | SSM3K339R *   | 40                       | ±12                  | 2                  | 1                  | —                            | 198                     | —                     | 238                     | 390                     | —                       | 130                        | 7.5                        | 26                         | 1.1                      | U-MOSVII-H  | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K2615R    | 60                       | ±20                  | 2                  | 1                  | 300                          | —                       | 440                   | —                       | —                       | —                       | 150                        | 25                         | 70                         | 6                        | π-MOSV      | (3C_S)               |                                                                                       |
|                                                                                                     | SSM3K318R     |                          | ±20                  | 2.5                | 1                  | 107                          | 145                     | —                     | —                       | —                       | —                       | 235                        | 23                         | 31                         | 7                        | U-MOSIV     | (3B_S)               |                                                                                       |
|                                                                                                     | SSM3K341R *   |                          | ±20                  | 6                  | 1.2                | 36                           | 51                      | 69                    | —                       | —                       | —                       | 550                        | 35                         | 300                        | 9.3                      | U-MOSVIII-H | (3B_S)               |                                                                                       |
|  TSOP6F<br>(mm)  | SSM6K809R **  | 60                       | ±20                  | 6                  | 1.5                | 36                           | 51                      | 69                    | —                       | —                       | —                       | 550                        | 35                         | 300                        | 9.3                      | U-MOSVIII-H | (6B)                 |  |
|                                                                                                     | SSM6K810R **  | 100                      | ±20                  | 3.5                | 1.5                | 69                           | 92                      | —                     | —                       | —                       | —                       | 430                        | 22                         | 160                        | 3.2                      | U-MOSVIII-H | (6B)                 |                                                                                       |

\*: New Product / 新製品

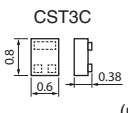
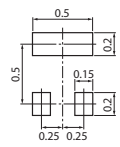
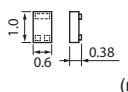
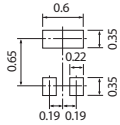
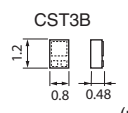
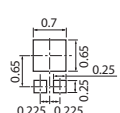
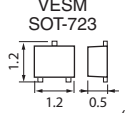
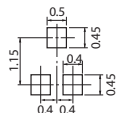
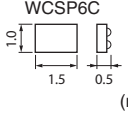
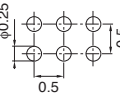
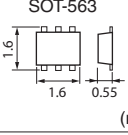
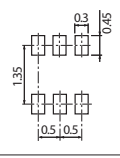
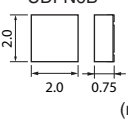
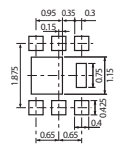
\*\*: Under Development / 開発中

Internal Connections 内部接続図 (Top View)

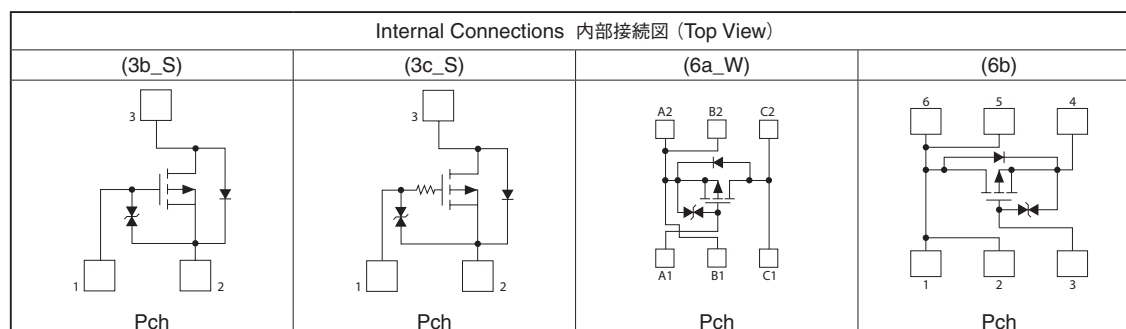
| (3A_S)                                                                                  | (3B_S)                                                                                  | (3C_S)                                                                                  | (6A)                                                                                    | (6B)                                                                                      | (3ZC_2)                                                                                        |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|  Nch |  Nch |  Nch |  Nch |  Nch |  Nch + ZD |

• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

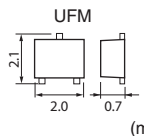
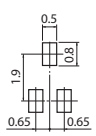
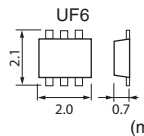
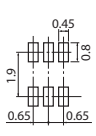
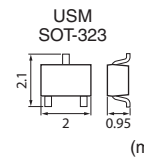
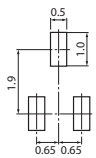
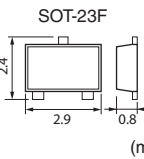
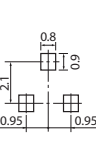
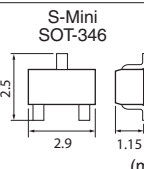
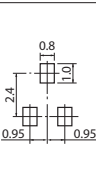
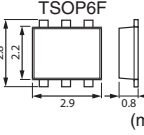
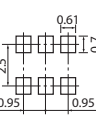
| Package                                                                                                 | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series   | Internal Connections | Land Pattern Examples (mm)                                                            |
|---------------------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|----------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                                         |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 4.5 V    | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |          |                      |                                                                                       |
|  CST3C<br>(mm)         | SSM3J64CTC * | -12                      | ±10                  | -1                 | 0.5                | 370                          | —                       | 560                       | 890                       | 1310                      | 50                         | 7.5                        | 12                         | —                        | U-MOSVII | (3c_S)               |    |
|                                                                                                         | SSM3J65CTC * | -20                      | ±10                  | -0.7               | 0.5                | 500                          | —                       | 700                       | 1070                      | 1550                      | 48                         | 4.6                        | 8.9                        | —                        | U-MOSVII |                      |                                                                                       |
|  CST3 SOT-883<br>(mm)  | SSM3J56ACT   | -20                      | ±8                   | -1.4               | 0.5                | 390                          | —                       | 480                       | 660                       | 900                       | 100                        | 10                         | 16                         | 1.6                      | U-MOSVI  | (3c_S)               |    |
|  CST3B<br>(mm)         | SSM3J46CTB   | -20                      | ±8                   | -2                 | 1                  | 103                          | —                       | 133                       | 178                       | 250                       | 290                        | 32                         | 44                         | 4.7                      | U-MOSVI  | (3b_S)               |    |
|  VESM SOT-723<br>(mm) | SSM3J56MFV   | -20                      | ±8                   | -0.8               | 0.5                | 390                          | —                       | 480                       | 660                       | 900                       | 100                        | 10                         | 16                         | 1.6                      | U-MOSVI  | (3b_S)               |   |
|  WCSP6C<br>(mm)      | SSM6J771G    | -20                      | ±12                  | -5                 | 1.6                | 35                           | —                       | 47.5                      | —                         | —                         | 870                        | 120                        | 150                        | 9.8                      | U-MOSVI  | (6a_W)               |  |
|  ES6 SOT-563<br>(mm) | SSM6J216FE   | -12                      | ±8                   | -4.8               | 0.5                | 32                           | —                       | 39.3                      | 56                        | 88.1                      | 1040                       | 180                        | 200                        | 12.7                     | U-MOSVI  | (6b)                 |  |
|                                                                                                         | SSM6J213FE   | —                        | ±8                   | -2.6               | 0.5                | 103                          | —                       | 133                       | 178                       | 250                       | 290                        | 32                         | 44                         | 4.7                      | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J215FE   | -20                      | ±8                   | -3.4               | 0.5                | 59                           | —                       | 79                        | 104                       | 154                       | 630                        | 60                         | 75                         | 10.4                     | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J212FE   | —                        | ±8                   | -4                 | 0.5                | 40.7                         | —                       | 49                        | 65.4                      | 94                        | 970                        | 109                        | 127                        | 14.1                     | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J207FE   | —                        | ±20                  | -1.4               | 0.5                | —                            | 491                     | —                         | —                         | —                         | 137                        | 20                         | 39                         | —                        | U-MOSII  |                      |                                                                                       |
|  UDFN6B<br>(mm)      | SSM6J214FE   | -30                      | ±12                  | -3.6               | 0.5                | 57                           | —                       | 77.6                      | 149.6                     | —                         | 560                        | 65                         | 80                         | 7.9                      | U-MOSVI  | (6b)                 |  |
|                                                                                                         | SSM6J512NU * | —                        | ±10                  | -10                | 1.25               | 18.7                         | —                       | 25.7                      | 40.1                      | —                         | 1400                       | 225                        | 250                        | 19.5                     | U-MOSVII |                      |                                                                                       |
|                                                                                                         | SSM6J505NU   | -12                      | ±6                   | -12                | 1.25               | 12                           | —                       | 16                        | 21                        | 30                        | 2700                       | 800                        | 800                        | 37.6                     | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J511NU * | —                        | ±10                  | -14                | 1.25               | 10                           | —                       | 13.5                      | 19.2                      | —                         | 3350                       | 570                        | 590                        | 47                       | U-MOSVII |                      |                                                                                       |
|                                                                                                         | SSM6J502NU   | —                        | ±8                   | -6                 | 1                  | 23.1                         | —                       | 28.3                      | 38.4                      | 60.5                      | 1800                       | 190                        | 205                        | 24.8                     | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J503NU   | -20                      | ±8                   | -6                 | 1                  | 32.4                         | —                       | 41.7                      | 57.9                      | 89.6                      | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J501NU   | —                        | ±8                   | -10                | 1                  | 15.3                         | —                       | 19                        | 26.5                      | 43                        | 2600                       | 280                        | 290                        | 29.9                     | U-MOSVI  |                      |                                                                                       |
|                                                                                                         | SSM6J507NU * | -30                      | +20/-25              | -10                | 1.25               | 28                           | 32                      | —                         | —                         | —                         | 1150                       | 185                        | 210                        | 13.6                     | U-MOSVI  |                      |                                                                                       |

\*: New Product / 新製品



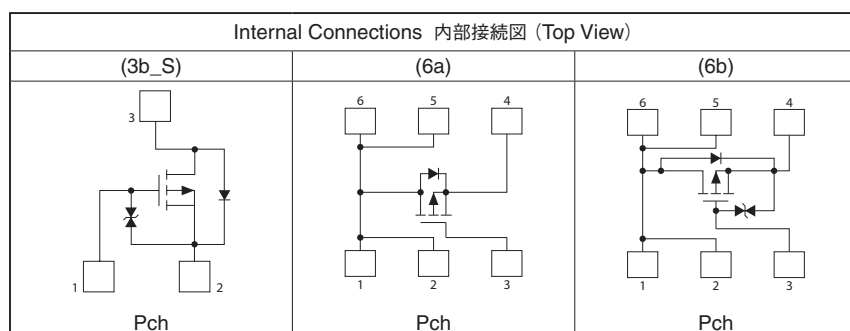
• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

| Package                                                                                     | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series   | Internal Connections | Land Pattern Examples (mm)                                                            |
|---------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|----------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 4.5 V    | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |          |                      |                                                                                       |
| <br>(mm)   | SSM3J132TU  | -12                      | ±6                   | -5.4               | 0.5                | 17                           | —                       | 21                        | 29                        | 39                        | 2700                       | 525                        | 525                        | 33                       | U-MOSVI  | (3b_S)               |    |
|                                                                                             | SSM3J135TU  | —                        | ±8                   | -3                 | 0.5                | 103                          | —                       | 132                       | 180                       | 260                       | 270                        | 32                         | 40                         | 4.6                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J134TU  | —                        | ±8                   | -3.2               | 0.5                | 93                           | —                       | 123                       | 168                       | 240                       | 290                        | 32                         | 44                         | 4.7                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J130TU  | —                        | ±8                   | -4.4               | 0.5                | 25.8                         | —                       | 31                        | 41.1                      | 63.2                      | 1800                       | 190                        | 205                        | 24.8                     | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J133TU  | —                        | ±8                   | -5.5               | 0.5                | 29.8                         | —                       | 39.7                      | 56                        | 88.4                      | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI  |                      |                                                                                       |
| <br>(mm)   | SSM6J50TU   | —                        | ±10                  | -2.5               | 0.5                | 64                           | —                       | 100                       | —                         | —                         | 800                        | 120                        | 160                        | —                        | U-MOSIV  | (6b)                 |    |
|                                                                                             | SSM6J412TU  | -20                      | ±8                   | -4                 | 1                  | 42.7                         | —                       | 51.4                      | 67.8                      | 99.6                      | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM6J414TU  | —                        | ±8                   | -6                 | 1                  | 22.5                         | —                       | 26                        | 36                        | 54                        | 1650                       | 90                         | 220                        | 23.1                     | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM6J402TU  | —                        | ±20                  | -2                 | 0.5                | —                            | 225                     | —                         | —                         | —                         | 280                        | 45                         | 80                         | 5.3                      | U-MOSII  |                      |                                                                                       |
|                                                                                             | SSM6J410TU  | -30                      | ±20                  | -2.1               | 0.5                | —                            | 393                     | —                         | —                         | —                         | 120                        | 21                         | 32                         | 2.9                      | U-MOSIII |                      |                                                                                       |
|                                                                                             | SSM6J401TU  | —                        | ±20                  | -2.5               | 0.5                | —                            | 145                     | —                         | —                         | —                         | 730                        | 90                         | 110                        | 16                       | U-MOSIII |                      |                                                                                       |
| <br>(mm)   | SSM3J112TU  | —                        | ±20                  | -1.1               | 0.5                | —                            | 790                     | —                         | —                         | —                         | 86                         | 14                         | 25                         | —                        | U-MOSII  | (3b_S)               |    |
|                                                                                             | SSM3J118TU  | -30                      | ±20                  | -1.4               | 0.5                | —                            | 480                     | —                         | —                         | —                         | 137                        | 20                         | 39                         | —                        | U-MOSII  |                      |                                                                                       |
|                                                                                             | SSM3J117TU  | —                        | ±20                  | -2                 | 0.5                | —                            | 225                     | —                         | —                         | —                         | 280                        | 45                         | 80                         | —                        | U-MOSII  |                      |                                                                                       |
| <br>(mm) | SSM3J338R   | -12                      | ±10                  | -6                 | 1                  | 20.2                         | —                       | 27.9                      | 45.3                      | —                         | 1400                       | 225                        | 250                        | 19.5                     | U-MOSVII | (3b_S)               |  |
|                                                                                             | SSM3J327R   | —                        | ±8                   | -3.9               | 1                  | 93                           | —                       | 123                       | 168                       | 240                       | 290                        | 32                         | 44                         | 4.6                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J331R   | —                        | ±8                   | -4                 | 1                  | 55                           | —                       | 75                        | 100                       | 150                       | 630                        | 60                         | 75                         | 10.4                     | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J328R   | -20                      | ±8                   | -6                 | 1                  | 29.8                         | —                       | 39.7                      | 56                        | 88.4                      | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J355R   | *                        | ±10                  | -6                 | 1                  | 30.1                         | —                       | 38.8                      | 52.3                      | —                         | 1030                       | 94                         | 113                        | 16.6                     | U-MOSVII |                      |                                                                                       |
|                                                                                             | SSM3J358R   | *                        | ±10                  | -6                 | 1                  | 25.3                         | —                       | 32.8                      | 49.3                      | —                         | 1331                       | 118                        | 135                        | 38.5                     | U-MOSVII |                      |                                                                                       |
|                                                                                             | SSM3J334R   | —                        | ±20                  | -4                 | 1                  | 105                          | 136                     | —                         | —                         | —                         | 280                        | 40                         | 55                         | 5.9                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J340R   | -30                      | +20/-25              | -4                 | 1                  | 73                           | 86                      | —                         | —                         | —                         | 492                        | 75                         | 97                         | 6.2                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J332R   | —                        | ±12                  | -6                 | 1                  | 50                           | —                       | 72                        | 144                       | —                         | 560                        | 65                         | 80                         | 8.2                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J356R   | *                        | +10/-20              | -2                 | 1                  | 360                          | 400                     | —                         | —                         | —                         | 330                        | 25                         | 40                         | 8.3                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J351R   | *                        | +10/-20              | -3.5               | 1                  | 164                          | 184                     | —                         | —                         | —                         | 660                        | 50                         | 70                         | 15.1                     | U-MOSVI  |                      |                                                                                       |
| <br>(mm) | SSM3J325F   | —                        | ±8                   | -2                 | 0.6                | 150                          | —                       | 179                       | 231                       | 311                       | 270                        | 32                         | 40                         | 4.6                      | U-MOSVI  | (3b_S)               |  |
|                                                                                             | SSM3J352F   | *                        | ±12                  | -2                 | 0.6                | 136                          | —                       | 199                       | 443                       | —                         | 210                        | 31                         | 39                         | 5.1                      | U-MOSVI  |                      |                                                                                       |
|                                                                                             | SSM3J353F   | *                        | +20/-25              | -2                 | 0.6                | 232                          | 274                     | —                         | —                         | —                         | 159                        | 23                         | 30                         | 3.4                      | U-MOSVI  |                      |                                                                                       |
| <br>(mm) | SSM6J801R   | *                        | -20                  | +6/-8              | -6                 | 1.5                          | 32.5                    | —                         | 39.7                      | 56                        | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI  | (6b)                 |  |
|                                                                                             | SSM6J808R   | **                       | -40                  | +10/-20            | -7                 | 1.5                          | 54                      | —                         | —                         | —                         | 1105                       | 133                        | 166                        | 24.2                     | U-MOSVI  | (6a)                 |                                                                                       |

\*: New Product / 新製品

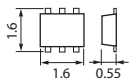
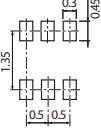
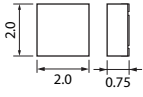
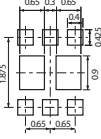
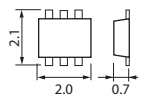
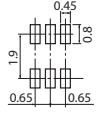
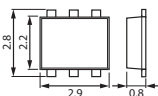
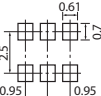
\*\*: Under Development / 開発中



• The internal connection diagrams only show the general configurations of the circuits.

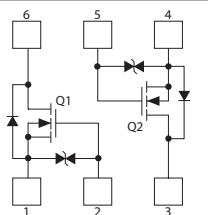
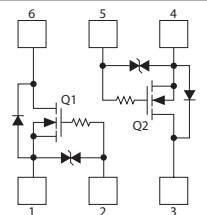
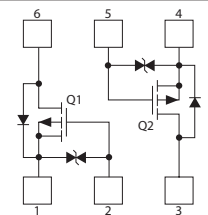
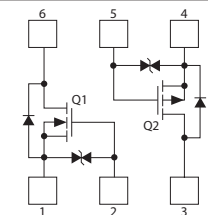
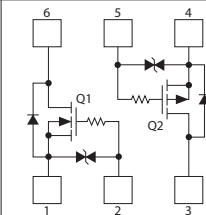
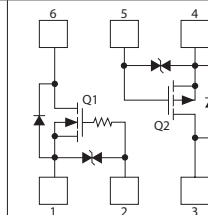
• 内部接続図はイメージ図です。

## (Semi-Power Type: Dual Channel/Complementary) / (セミパワータイプ:デュアルチャネル/コンプリメンタリ)

| Package                                                                                                                         | Polarity    | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm)                                                            |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------|----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                 |             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS1</sub>   = 4.5 V   | V <sub>GS1</sub>   = 4 V | V <sub>GS1</sub>   = 2.5 V | V <sub>GS1</sub>   = 1.8 V | V <sub>GS1</sub>   = 1.5 V |                            |                            |                            |                          |             |                      |                                                                                       |                                                                                       |
| <div>ES6<br/>SOT-563</div>  <div>(mm)</div>    | N-ch x 2    | SSM6N56FE   | 20                       | ±8                   | 0.8                | 0.25               | 235                          | —                        | 300                        | 480                        | 840                        | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H  | (6BB)                |    |                                                                                       |
|                                                                                                                                 | P-ch x 2    | SSM6P41FE   | −20                      | ±8                   | −0.72              | 0.15               | 300                          | —                        | 440                        | 670                        | 1040                       | 110                        | 20                         | 28                         | 1.76                     | U-MOSV      | (6bb)                |                                                                                       |                                                                                       |
|                                                                                                                                 | N-ch + P-ch | SSM6L14FE   | 20                       | ±10                  | 0.8                | 0.15               | 240                          | —                        | 330                        | 450                        | 600                        | 90                         | 15                         | 21                         | 2                        | U-MOSIII    | (6Cb)                |                                                                                       |                                                                                       |
|                                                                                                                                 |             |             | −20                      | ±8                   | −0.72              | 0.15               | 300                          | —                        | 440                        | 670                        | 1040                       | 110                        | 20                         | 28                         | 1.76                     | U-MOSV      |                      |                                                                                       |                                                                                       |
| <div>UDFN6<br/>SOT-1118</div>  <div>(mm)</div> | N-ch x 2    | SSM6N61NU   | *                        | 20                   | ±8                 | 4                  | 1                            | 33                       | —                          | 45                         | 74                         | 108                        | 410                        | 40                         | 85                       | 3.6         | U-MOSVII-H           | (6BB)                                                                                 |    |
|                                                                                                                                 |             | SSM6N55NU   |                          | ±20                  | 4                  | 1                  | 64                           | —                        | —                          | —                          | 280                        | 20                         | 53                         | 2.5                        | U-MOSVII-H               |             |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6N57NU   | 30                       | ±12                  | 4                  | 1                  | 39.1                         | —                        | 53                         | 82                         | —                          | 310                        | 20                         | 52                         | 3.2                      | U-MOSVII-H  |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6N58NU   |                          | ±12                  | 4                  | 1                  | 84                           | —                        | 117                        | 180                        | —                          | 129                        | 13                         | 34                         | 1.8                      | U-MOSVII-H  |                      |                                                                                       |                                                                                       |
|                                                                                                                                 | P-ch x 2    | SSM6P47NU   |                          | −20                  | ±8                 | −4                 | 1                            | 95                       | —                          | 125                        | 170                        | 242                        | 290                        | 32                         | 44                       | 4.6         | U-MOSVI              | (6bb)                                                                                 |                                                                                       |
|                                                                                                                                 |             | SSM6P49NU   |                          | ±12                  | −4                 | 1                  | 56                           | —                        | 76                         | 157                        | —                          | 480                        | 76                         | 90                         | 6.74                     | U-MOSVI     |                      |                                                                                       |                                                                                       |
|                                                                                                                                 | N-ch + P-ch | SSM6L61NU   | 20                       | ±8                   | 4                  | 1                  | —                            | 33                       | 45                         | 74                         | 108                        | 410                        | 40                         | 85                         | 3.6                      | U-MOSVII-H  | (6Bb)                |                                                                                       |                                                                                       |
|                                                                                                                                 |             |             | −20                      | ±12                  | −4                 | 1                  | 56                           | —                        | 76                         | 157                        | —                          | 480                        | 76                         | 90                         | 6.74                     | U-MOSVI     |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6L63NU   | **                       | 30                   | ±20                | 4                  | 1                            | 48 (typ.)                | —                          | —                          | —                          | 280                        | 20                         | 53                         | 2.5                      | U-MOSVII-H  | (6Cc)                |                                                                                       |                                                                                       |
|                                                                                                                                 |             |             | −30                      | ±20                  | −4                 | 1                  | 80 (typ.)                    | —                        | —                          | —                          | 280                        | 40                         | 55                         | 5.9                        | U-MOSVII-H               |             |                      |                                                                                       |                                                                                       |
| <div>UF6</div>  <div>(mm)</div>              | N-ch x 2    | SSM6N62TU   |                          | 20                   | ±8                 | 0.8                | 0.5                          | 85                       | —                          | 98                         | 120                        | 173                        | 177                        | 17                         | 52                       | 2           | U-MOSVII-H           | (6BB)                                                                                 |  |
|                                                                                                                                 |             | SSM6N39TU   |                          | ±10                  | 1.6                | 0.5                | —                            | 119                      | 139                        | 190                        | 247                        | 260                        | 37                         | 45                         | 7.5                      | U-MOSIII    |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6N40TU   | 30                       | ±20                  | 1.6                | 0.5                | —                            | 182                      | —                          | —                          | 180                        | 27                         | 34                         | 5.1                        | U-MOSIII                 |             |                      |                                                                                       |                                                                                       |
|                                                                                                                                 | P-ch x 2    | SSM6P54TU   |                          | −20                  | ±8                 | −1.2               | 0.5                          | —                        | —                          | 228                        | 350                        | 555                        | 331                        | 39                         | 48                       | 7.7         | U-MOSIV              | (6bb)                                                                                 |                                                                                       |
|                                                                                                                                 |             | SSM6P39TU   |                          | ±8                   | −1.5               | 0.5                | —                            | 213                      | 294                        | 430                        | —                          | 250                        | 35                         | 43                         | 6.4                      | U-MOSIII    |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6P40TU   | −30                      | ±20                  | −1.4               | 0.5                | —                            | 403                      | —                          | —                          | —                          | 120                        | 21                         | 32                         | 2.9                      | U-MOSIII    |                      |                                                                                       |                                                                                       |
|                                                                                                                                 | N-ch + P-ch | SSM6L39TU   | 20                       | ±10                  | 1.6                | 0.5                | —                            | 119                      | 139                        | 190                        | 247                        | 260                        | 37                         | 45                         | 7.5                      | U-MOSIII    | (6Bb)                |                                                                                       |                                                                                       |
|                                                                                                                                 |             |             | −20                      | ±8                   | −1.5               | 0.5                | —                            | 213                      | 294                        | 430                        | —                          | 250                        | 35                         | 43                         | 6.4                      | U-MOSIII    |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6L12TU   | 30                       | ±12                  | 0.5                | 0.5                | 145                          | —                        | 180                        | —                          | —                          | 245                        | 33                         | 41                         | —                        | U-MOSIII    | (6Cc)                |                                                                                       |                                                                                       |
|                                                                                                                                 |             |             | −20                      | ±12                  | −0.5               | 0.5                | —                            | 260                      | 430                        | —                          | —                          | 218                        | 42                         | 52                         | —                        | U-MOSIII    |                      |                                                                                       |                                                                                       |
|                                                                                                                                 |             | SSM6L40TU   | 30                       | ±20                  | 1.6                | 0.5                | —                            | 182                      | —                          | —                          | —                          | 180                        | 27                         | 34                         | 5.1                      | U-MOSIII    | (6Bb)                |                                                                                       |                                                                                       |
|                                                                                                                                 |             |             | −30                      | ±20                  | −1.4               | 0.5                | —                            | 403                      | —                          | —                          | —                          | 120                        | 21                         | 32                         | 2.9                      | U-MOSIII    |                      |                                                                                       |                                                                                       |
| <div>TSOP6F</div>  <div>(mm)</div>           | N-ch x 2    | SSM6N813R   | *                        | 100                  | ±20                | 3.5                | 1.5                          | 154                      | —                          | —                          | —                          | 242                        | 7                          | 106                        | 3.6                      | U-MOSVIII-H | (6CC)                |  |                                                                                       |
|                                                                                                                                 |             | SSM6N815R   | *                        | ±20                  | 2                  | 1.4                | 142                          | 180                      | —                          | —                          | —                          | 290                        | 16                         | 108                        | 3.1                      | U-MOSVIII-H | (6BB)                |                                                                                       |                                                                                       |

\*: New Product / 新製品

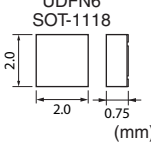
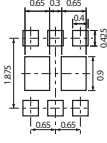
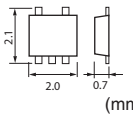
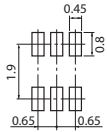
\*\*: Under Development / 開発中

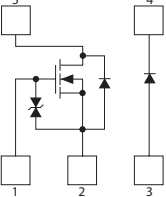
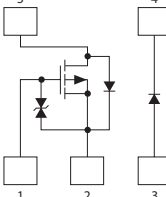
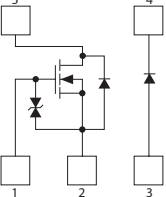
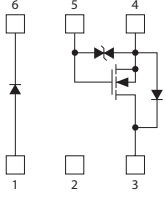
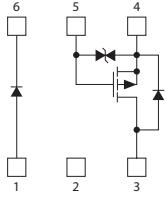
| Internal Connections 内部接続図 (Top View)                                                          |                                                                                                |                                                                                                |                                                                                                   |                                                                                                    |                                                                                                    |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| (6BB)                                                                                          | (6CC)                                                                                          | (6bb)                                                                                          | (6Bb)                                                                                             | (6Cc)                                                                                              | (6Cb)                                                                                              |
| <br>Nch x 2 | <br>Nch x 2 | <br>Pch x 2 | <br>Nch + Pch | <br>Nch + Pch | <br>Nch + Pch |

• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

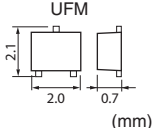
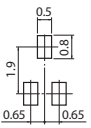
(Semi-Power Type: Built-in Diode) / (セミパワータイプ: ダイオード混載品)

| Package                                                                                                       | Polarity               | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                          |  |
|---------------------------------------------------------------------------------------------------------------|------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|-------------------------------------------------------------------------------------|--|
|                                                                                                               |                        |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 4.5 V    | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |            |                      |                                                                                     |  |
| <br>UDFN6<br>SOT-1118<br>(mm) | N-ch + SBD             | SSM6H19NU   | 40                       | ±12                  | 2                  | 1                  | 198                          | —                       | 238                       | 390                       | —                         | 130                        | 7.5                        | 26                         | 1.1                      | U-MOSVII-H | (6SB)                |  |  |
|                                                                                                               | P-ch + SBD             | SSM6G18NU   | −20                      | ±8                   | −2                 | 1                  | 112                          | —                       | 143                       | 185                       | 261                       | 270                        | 32                         | 40                         | 4.6                      | U-MOSVI    | (6Sb)                |                                                                                     |  |
| <br>UFV<br>(mm)               | N-ch + SBD             | SSM5H08TU   | 20                       | ±12                  | 1.5                | 0.5                | —                            | 160                     | 220                       | —                         | —                         | 125                        | 17                         | 42                         | —                        | U-MOSIII   | (5BS)                |  |  |
|                                                                                                               |                        | SSM5H01TU   |                          | ±20                  | 1.4                | 0.5                | —                            | 450                     | —                         | —                         | —                         | 106                        | 15                         | 28                         | —                        | U-MOSIII   |                      |                                                                                     |  |
|                                                                                                               |                        | SSM5H11TU   | 30                       | ±20                  | 1.6                | 0.5                | —                            | 182                     | —                         | —                         | —                         | 180                        | 27                         | 34                         | 5.1                      | U-MOSIII   |                      |                                                                                     |  |
|                                                                                                               |                        | SSM5H16TU   |                          | ±12                  | 1.9                | 0.5                | —                            | 133                     | 177                       | 296                       | —                         | 123                        | 18                         | 43                         | 1.9                      | U-MOSIII   |                      |                                                                                     |  |
|                                                                                                               | P-ch + SBD             | SSM5G02TU   | −12                      | ±12                  | −1                 | 0.5                | —                            | 160                     | 240                       | —                         | —                         | 310                        | 70                         | 110                        | —                        | U-MOSII    | (5bS)                |                                                                                     |  |
|                                                                                                               |                        | SSM5G09TU   |                          | ±8                   | −1.5               | 0.5                | —                            | 130                     | 200                       | —                         | —                         | 550                        | 155                        | 170                        | —                        | U-MOSIII   |                      |                                                                                     |  |
|                                                                                                               |                        | SSM5G11TU   | −30                      | ±20                  | −1.4               | 0.5                | —                            | 403                     | —                         | —                         | —                         | 120                        | 21                         | 32                         | 2.9                      | U-MOSIII   |                      |                                                                                     |  |
|                                                                                                               | N-ch + Switching Diode | SSM5H90ATU  | 20                       | ±10                  | 2.4                | 0.5                | —                            | 65                      | 89                        | —                         | —                         | 200                        | 13                         | 40                         | 2.2                      | U-MOSVII-H | (5BW)                |                                                                                     |  |

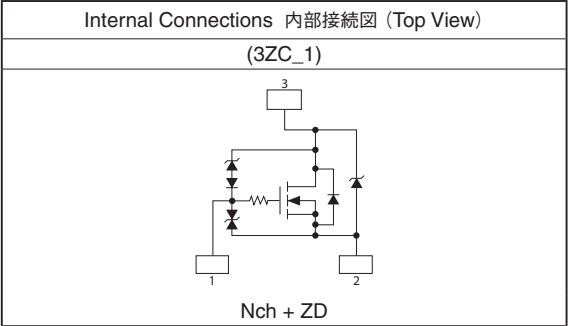
| Internal Connections 内部接続図 (Top View)                                                            |                                                                                                  |                                                                                                              |                                                                                                   |                                                                                                    |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| (5BS)                                                                                            | (5bS)                                                                                            | (5BW)                                                                                                        | (6SB)                                                                                             | (6Sb)                                                                                              |
| <br>Nch + SBD | <br>Pch + SBD | <br>Nch + Switching Diode | <br>Nch + SBD | <br>Pch + SBD |

- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

(Semi-Power Type: Built-in Zener Diode) / (セミパワータイプ: ZD 混載品)

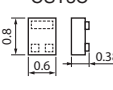
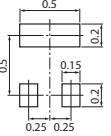
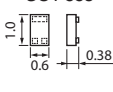
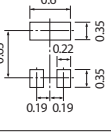
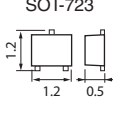
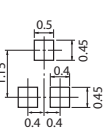
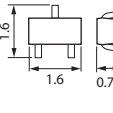
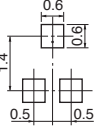
| Package                                                                                   | Polarity     | Part Number | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                          |
|-------------------------------------------------------------------------------------------|--------------|-------------|--------------------------|----------------------|--------------------|--------------------|------------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|---------|----------------------|-------------------------------------------------------------------------------------|
|                                                                                           |              |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS1</sub>   = 4.5 V   | V <sub>GS1</sub>   = 4 V | V <sub>GS1</sub>   = 2.5 V | V <sub>GS1</sub>   = 1.8 V | V <sub>GS1</sub>   = 1.5 V |                            |                            |                            |                          |         |                      |                                                                                     |
| <br>(mm) | N-ch + Zener | SSM3H137TU  | 34                       | ±20                  | 2                  | 0.8                | 280                          | 295                      | —                          | —                          | —                          | 119                        | 8                          | 40                         | 3                        | U-MOSIV | (3ZC_1)              |  |

\*: New Product / 新製品

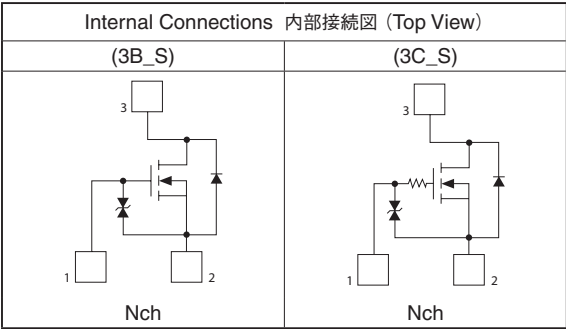


- ・ The internal connection diagrams only show the general configurations of the circuits.
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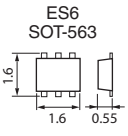
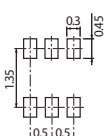
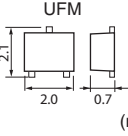
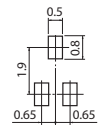
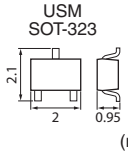
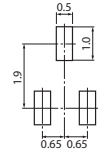
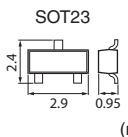
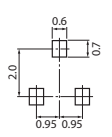
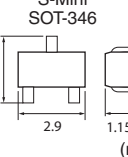
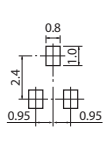
| Package                                                                                                                                   | Part Number   | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (Ω) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                                       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|----------------------|--------------------|--------------------|-----------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|--------------------------------------------------------------------------------------------------|--|
|                                                                                                                                           |               | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 4.5 V   | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |            |                      |                                                                                                  |  |
| <div>CST3C</div> <div></div> <div>(mm)</div>             | SSM3K16CTC *  | 20                       | ±10                  | 0.2                | 0.5                | 2.2                         | —                       | 3                         | 4                         | 5.6                       | 12                         | 4.1                        | 5.5                        | —                        | U-MOSIII   | (3C_S)               | <div></div>   |  |
|                                                                                                                                           | SSM3K35CTC    |                          | ±10                  | 0.25               | 0.5                | 1.1                         | —                       | 1.6                       | 2.4                       | 3.1                       | 18                         | 5                          | 6                          | 0.34                     | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K15ACTC * | 30                       | ±20                  | 0.1                | 0.5                | —                           | 3.6                     | 6                         | —                         | —                         | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K72CTC *  | 60                       | ±20                  | 0.15               | 0.5                | 4.7                         | —                       | —                         | —                         | —                         | 11                         | 0.7                        | 3                          | 0.27                     | U-MOSVII-H |                      |                                                                                                  |  |
| <div>CST3<br/>SOT-883</div> <div></div> <div>(mm)</div>  | SSM3K16CT     | 20                       | ±10                  | 0.1                | 0.1                | —                           | 3                       | 4                         | —                         | 15                        | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (3C_S)               | <div></div>   |  |
|                                                                                                                                           | SSM3K35CT     |                          | ±10                  | 0.18               | 0.1                | —                           | 3                       | 4                         | —                         | 8                         | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K37CT     |                          | ±10                  | 0.2                | 0.1                | 2.2                         | —                       | 3.02                      | 4.05                      | 5.6                       | 12                         | 4.1                        | 5.5                        | —                        | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K15ACT    | 30                       | ±20                  | 0.1                | 0.1                | —                           | 3.6                     | 6                         | —                         | —                         | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K72KCT *  | 60                       | ±20                  | 0.4                | 0.5                | 1.75                        | —                       | —                         | —                         | —                         | 26                         | 1.3                        | 5.5                        | 0.39                     | U-MOSVII-H |                      |                                                                                                  |  |
| <div>VESM<br/>SOT-723</div> <div></div> <div>(mm)</div>  | SSM3K16FV     | 20                       | ±10                  | 0.1                | 0.15               | —                           | 3                       | 4                         | —                         | 15                        | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (3C_S)               | <div></div>   |  |
|                                                                                                                                           | SSM3K35MFV    |                          | ±10                  | 0.18               | 0.15               | —                           | 3                       | 4                         | —                         | 8                         | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K35AMFV * |                          | ±10                  | 0.25               | 0.15               | 1.1                         | —                       | 1.6                       | 2.4                       | 3.1                       | 18                         | 5                          | 6                          | 0.34                     | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K37MFV    |                          | ±10                  | 0.25               | 0.15               | 2.2                         | —                       | 3.02                      | 4.05                      | 5.6                       | 12                         | 4.1                        | 5.5                        | —                        | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K36MFV    |                          | ±10                  | 0.5                | 0.15               | 0.66                        | —                       | 0.85                      | 1.14                      | 1.52                      | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K56MFV    | 30                       | ±8                   | 0.8                | 0.15               | 0.235                       | —                       | 0.3                       | 0.48                      | 0.84                      | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H | (3B_S)               |                                                                                                  |  |
|                                                                                                                                           | SSM3K15AMFV   |                          | ±20                  | 0.1                | 0.15               | —                           | 3.6                     | 6                         | —                         | —                         | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   | (3C_S)               |                                                                                                  |  |
|                                                                                                                                           | SSM3K44MFV    |                          | ±20                  | 0.1                | 0.15               | —                           | 4                       | 7                         | —                         | —                         | 8.5                        | 5.3                        | 9.4                        | —                        | π-MOSVI    | (3C_S)               |                                                                                                  |  |
| <div>SSM<br/>SOT-416</div> <div></div> <div>(mm)</div> | SSM3K16FS     | 20                       | ±10                  | 0.1                | 0.1                | —                           | 3                       | 4                         | —                         | 15                        | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (3C_S)               | <div></div> |  |
|                                                                                                                                           | SSM3K35FS     |                          | ±10                  | 0.18               | 0.1                | —                           | 3                       | 4                         | —                         | 8                         | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K37FS     |                          | ±10                  | 0.2                | 0.1                | 2.2                         | —                       | 3.02                      | 4.05                      | 5.6                       | 12                         | 4.1                        | 5.5                        | —                        | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K35AFS *  |                          | ±10                  | 0.25               | 0.15               | 1.1                         | —                       | 1.6                       | 2.4                       | 3.1                       | 18                         | 5                          | 6                          | 0.34                     | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K36FS     |                          | ±10                  | 0.5                | 0.15               | 0.66                        | —                       | 0.85                      | 1.14                      | 1.52                      | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K56FS     | 30                       | ±8                   | 0.8                | 0.15               | 0.235                       | —                       | 0.3                       | 0.48                      | 0.84                      | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H | (3B_S)               |                                                                                                  |  |
|                                                                                                                                           | SSM3K15AFS    |                          | ±20                  | 0.1                | 0.1                | —                           | 3.6                     | 6                         | —                         | —                         | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   | (3C_S)               |                                                                                                  |  |
|                                                                                                                                           | SSM3K44FS     |                          | ±20                  | 0.1                | 0.15               | —                           | 4                       | 7                         | —                         | —                         | 8.5                        | 5.3                        | 9.4                        | —                        | π-MOSVI    |                      |                                                                                                  |  |
|                                                                                                                                           | SSM3K72CFs *  | 60                       | ±20                  | 0.17               | 0.15               | 4.7                         | —                       | —                         | —                         | —                         | 11                         | 0.7                        | 3                          | 0.27                     | U-MOSVII-H | (3C_S)               |                                                                                                  |  |
|                                                                                                                                           | SSM3K72KFs *  |                          | ±20                  | 0.3                | 0.15               | 1.75                        | —                       | —                         | —                         | —                         | 26                         | 1.3                        | 5.5                        | 0.39                     | U-MOSVII-H |                      |                                                                                                  |  |

\*: New Product / 新製品

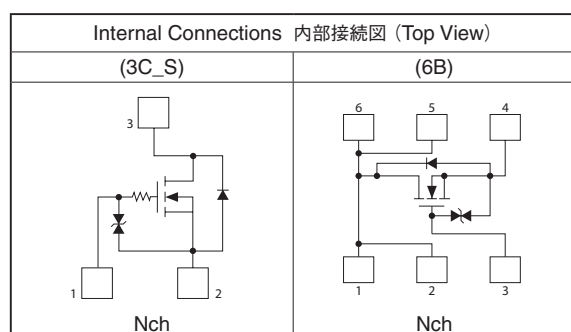


- The internal connection diagrams only show the general configurations of the circuits.

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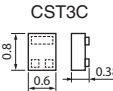
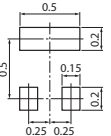
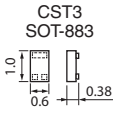
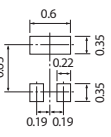
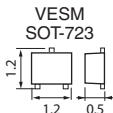
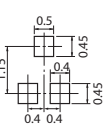
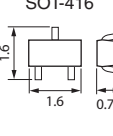
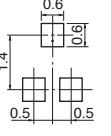
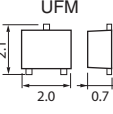
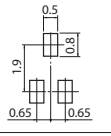
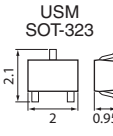
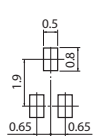
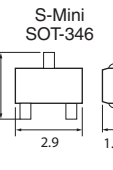
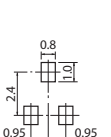
| Package                                                                                                          | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (Ω) |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                            |
|------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------|--------------------|--------------------|-----------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                                                  |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS1</sub>   = 4.5 V  | V <sub>GS1</sub>   = 4 V | V <sub>GS1</sub>   = 2.5 V | V <sub>GS1</sub>   = 1.8 V | V <sub>GS1</sub>   = 1.5 V |                            |                            |                            |                          |            |                      |                                                                                       |
| <br>ES6<br>SOT-563<br>(mm)      | SSM6K24FE    | 30                       | ±12                  | 0.5                | 0.5                | 0.145                       | —                        | 0.18                       | —                          | —                          | 245                        | 33                         | 41                         | —                        | U-MOSIII   | (6B)                 |    |
| <br>UFM<br>(mm)                 | SSM3K36TU    | 20                       | ±10                  | 0.5                | 0.5                | 0.66                        | —                        | 0.85                       | 1.14                       | 1.52                       | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   | (3C_S)               |    |
| <br>USM<br>SOT-323<br>(mm)      | SSM3K16FU    | 20                       | ±10                  | 0.1                | 0.15               | —                           | 3                        | 4                          | —                          | 15                         | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (3C_S)               |    |
|                                                                                                                  | SSM3K15AFU   | 30                       | ±20                  | 0.1                | 0.15               | —                           | 3.6                      | 6                          | —                          | —                          | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   |                      |                                                                                       |
|                                                                                                                  | SSM3K48FU    | 30                       | ±20                  | 0.1                | 0.15               | —                           | 3.2                      | 5.4                        | —                          | —                          | 15.1                       | 7.8                        | 12.4                       | —                        | U-MOSIII   |                      |                                                                                       |
|                                                                                                                  | SSM3K09FU    | 30                       | ±20                  | 0.4                | 0.15               | —                           | 1.2                      | —                          | —                          | —                          | 20                         | 7                          | 16                         | —                        | π-MOSVI    |                      |                                                                                       |
|                                                                                                                  | SSM3K17FU    | 50                       | ±7                   | 0.1                | 0.15               | —                           | 20                       | 40                         | —                          | —                          | 7                          | 3                          | 7                          | —                        | π-MOSV     |                      |                                                                                       |
|                                                                                                                  | SSM3K7002CFU | 60                       | ±20                  | 0.17               | 0.15               | 4.7                         | —                        | —                          | —                          | —                          | 11                         | 0.7                        | 3                          | 0.27                     | U-MOSVII-H |                      |                                                                                       |
| <br>SOT23<br>(mm)              | T2N7002AK    | 60                       | ±20                  | 0.2                | 0.32               | 4.7                         | —                        | —                          | —                          | —                          | 11                         | 0.7                        | 3                          | 0.27                     | U-MOSVII-H | (3C_S)               |   |
|                                                                                                                  | T2N7002BK    | 60                       | ±20                  | 0.4                | 0.32               | 1.75                        | —                        | —                          | —                          | —                          | 26                         | 1.3                        | 5.5                        | 0.39                     | U-MOSVII-H |                      |                                                                                       |
| <br>S-Mini<br>SOT-346<br>(mm) | SSM3K15F     | 30                       | ±20                  | 0.1                | 0.2                | —                           | 4                        | 7                          | —                          | —                          | 7.8                        | 3.6                        | 8.8                        | —                        | π-MOSVI    | (3C_S)               |  |
|                                                                                                                  | SSM3K7002KF  | 60                       | ±20                  | 0.4                | 0.27               | 1.75                        | —                        | —                          | —                          | —                          | 26                         | 1.3                        | 5.5                        | 0.39                     | U-MOSVII-H |                      |                                                                                       |

\*: New Product / 新製品

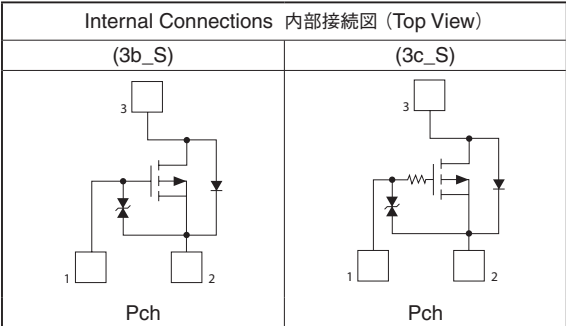


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

(Small-Signal Type: Single P-Channel) / (小信号スタンダードタイプ: シングルPチャネル)

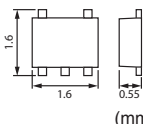
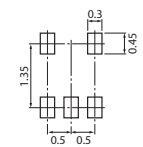
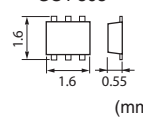
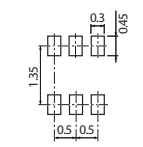
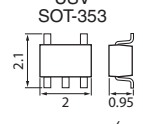
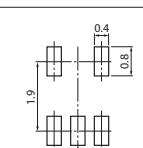
| Package                                                                                                                                      | Part Number   | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (Ω) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series   | Internal Connections | Land Pattern Examples (mm)                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|----------------------|--------------------|--------------------|-----------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|----------|----------------------|--------------------------------------------------------------------------------------------------|
|                                                                                                                                              |               | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 4.5 V   | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |          |                      |                                                                                                  |
| <div>CST3C</div> <div></div> <div>(mm)</div>                | SSM3J35CTC *  | -20                      | ±10                  | -0.25              | 0.5                | 1.4                         | —                       | 2.1                       | 2.9                       | 4                         | 21                         | 2                          | 6                          | —                        | U-MOSVII | (3c_S)               | <div></div>   |
| <div>CST3<br/>SOT-883</div> <div></div> <div>(mm)</div>     | SSM3J35CT     | -20                      | ±10                  | -0.1               | 0.1                | —                           | 8                       | 11                        | —                         | 22                        | 12.2                       | 6.5                        | 10.4                       | —                        | π-MOSVI  | (3c_S)               | <div></div>   |
|                                                                                                                                              | SSM3J15CT     | -30                      | ±20                  | -0.1               | 0.1                | —                           | 12                      | 32                        | —                         | —                         | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI  |                      |                                                                                                  |
| <div>VESM<br/>SOT-723</div> <div></div> <div>(mm)</div>     | SSM3J16FV     | -20                      | ±10                  | -0.1               | 0.15               | —                           | 8                       | 12                        | —                         | 45                        | 11                         | 3.7                        | 10                         | —                        | π-MOSVI  | (3c_S)               | <div></div>   |
|                                                                                                                                              | SSM3J35MFV    |                          | ±10                  | -0.1               | 0.15               | —                           | 8                       | 11                        | —                         | 22                        | 12.2                       | 6.5                        | 10.4                       | —                        | π-MOSVI  |                      |                                                                                                  |
|                                                                                                                                              | SSM3J35AMFV * |                          | ±10                  | -0.25              | 0.5                | 1.4                         | —                       | 2.1                       | 2.9                       | 4                         | 21                         | 2                          | 6                          | —                        | U-MOSVII |                      |                                                                                                  |
|                                                                                                                                              | SSM3J56MFV    |                          | ±8                   | -0.8               | 0.15               | 0.39                        | —                       | 0.48                      | 0.66                      | 0.9                       | 100                        | 10                         | 16                         | 1.6                      | U-MOSVI  | (3b_S)               |                                                                                                  |
|                                                                                                                                              | SSM3J15FV     | -30                      | ±20                  | -0.1               | 0.15               | —                           | 12                      | 32                        | —                         | —                         | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI  | (3c_S)               |                                                                                                  |
| <div>SSM<br/>SOT-416</div> <div></div> <div>(mm)</div>     | SSM3J35FS     | -20                      | ±10                  | -0.1               | 0.1                | —                           | 8                       | 11                        | —                         | 22                        | 12.2                       | 6.5                        | 10.4                       | —                        | π-MOSVI  | (3c_S)               | <div></div>  |
|                                                                                                                                              | SSM3J35AFS *  |                          | ±10                  | -0.25              | 0.15               | 1.4                         | —                       | 2.1                       | 2.9                       | 4                         | 21                         | 2                          | 6                          | —                        | U-MOSVII |                      |                                                                                                  |
|                                                                                                                                              | SSM3J36FS     |                          | ±8                   | -0.33              | 0.15               | 1.31                        | —                       | —                         | 2.7                       | 3.6                       | 43                         | 6.1                        | 10.3                       | 1.2                      | U-MOSIII |                      |                                                                                                  |
|                                                                                                                                              | SSM3J15FS     | -30                      | ±20                  | -0.1               | 0.1                | —                           | 12                      | 32                        | —                         | —                         | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI  |                      |                                                                                                  |
| <div>UFM</div> <div></div> <div>(mm)</div>                | SSM3J36TU     | -20                      | ±8                   | -0.33              | 0.5                | 1.31                        | —                       | —                         | 2.7                       | 3.6                       | 43                         | 6.1                        | 10.3                       | 1.2                      | U-MOSIII | (3c_S)               | <div></div> |
| <div>USM<br/>SOT-323</div> <div></div> <div>(mm)</div>    | SSM3J16FU     | -20                      | ±10                  | -0.1               | 0.15               | —                           | 8                       | 12                        | —                         | 45                        | 11                         | 3.7                        | 10                         | —                        | π-MOSVI  | (3c_S)               | <div></div> |
|                                                                                                                                              | SSM3J15FU     | -30                      | ±20                  | -0.1               | 0.15               | —                           | 12                      | 32                        | —                         | —                         | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI  |                      |                                                                                                  |
|                                                                                                                                              | SSM3J09FU     |                          | ±20                  | -0.2               | 0.15               | —                           | 4.2                     | —                         | —                         | —                         | 22                         | 5                          | 14                         | —                        | π-MOSVI  |                      |                                                                                                  |
| <div>S-Mini<br/>SOT-346</div> <div></div> <div>(mm)</div> | SSM3J15F      | -30                      | ±20                  | -0.1               | 0.2                | —                           | 12                      | 32                        | —                         | —                         | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI  | (3c_S)               | <div></div> |
|                                                                                                                                              | 2SJ168        | -60                      | ±20                  | -0.2               | 0.2                | —                           | —                       | —                         | —                         | —                         | 73                         | 15                         | 48                         | —                        | U-MOSVI  | (3b_S)               |                                                                                                  |
|                                                                                                                                              | SSM3J168F *   |                          | +10/<br>-20          | -0.4               | 0.6                | 1.9                         | 2                       | —                         | —                         | —                         | 82                         | 5.5                        | 13                         | 3                        |          |                      |                                                                                                  |

\*: New Product / 新製品

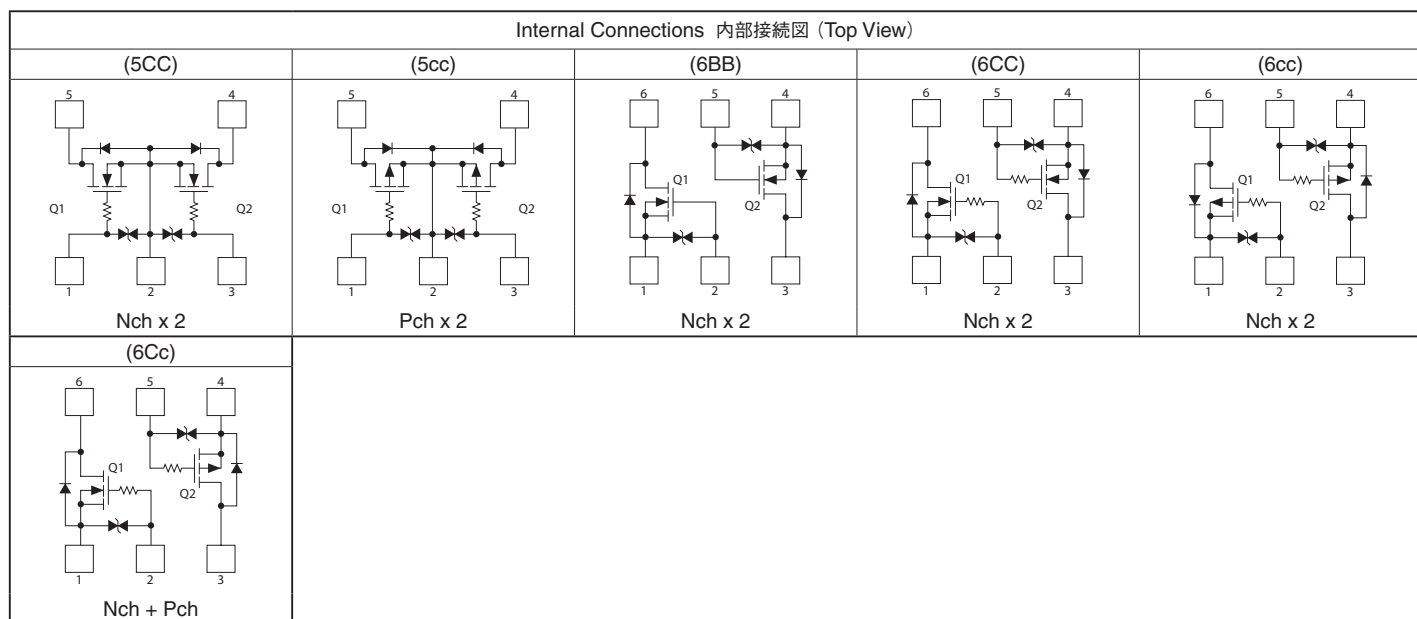


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

## (Small-Signal Type: Dual Channel/Complementary) / (小信号スタンダードタイプ: デュアルチャネル/コンプリメンタリ) (1/2)

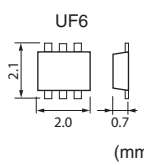
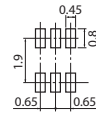
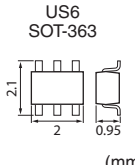
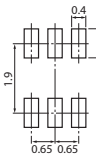
| Package                                                                                                                        | Polarity    | Part Number  | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (Ω) |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------------------|----------------------|--------------------|--------------------|-----------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|---------------------------------------------------------------------------------------|--|
|                                                                                                                                |             |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS1</sub>   = 4.5 V  | V <sub>GS1</sub>   = 4 V | V <sub>GS1</sub>   = 2.5 V | V <sub>GS1</sub>   = 1.8 V | V <sub>GS1</sub>   = 1.5 V |                            |                            |                            |                          |            |                      |                                                                                       |  |
| <div>ESV<br/>SOT-553</div>  <div>(mm)</div>   | N-ch x 2    | SSM5N16FE    | 20                       | ±10                  | 0.1                | 0.15               | —                           | 3                        | 4                          | —                          | 15                         | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (5CC)                |    |  |
|                                                                                                                                | N-ch x 2    | SSM5N15FE    | 30                       | ±20                  | 0.1                | 0.15               | —                           | 4                        | 7                          | —                          | —                          | 7.8                        | 3.6                        | 8.8                        | —                        | π-MOSVI    |                      |                                                                                       |  |
|                                                                                                                                | P-ch x 2    | SSM5P16FE    | −20                      | ±10                  | −0.1               | 0.15               | —                           | 8                        | 12                         | —                          | 45                         | 11                         | 3.7                        | 10                         | —                        | π-MOSVI    | (5cc)                |                                                                                       |  |
| <div>ES6<br/>SOT-563</div>  <div>(mm)</div>   | N-ch x 2    | SSM6N16FE    | 20                       | ±10                  | 0.1                | 0.15               | —                           | 3                        | 4                          | —                          | 15                         | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (6CC)                |    |  |
|                                                                                                                                |             | SSM6N35FE    |                          | ±10                  | 0.18               | 0.15               | —                           | 3                        | 4                          | —                          | 8                          | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6N35AFE * |                          | ±10                  | 0.25               | 0.15               | 1.1                         | —                        | 1.6                        | 2.4                        | 3.1                        | 18                         | 5                          | 6                          | 0.34                     | U-MOSIII   |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6N37FE    |                          | ±10                  | 0.25               | 0.15               | 2.2                         | —                        | 3.02                       | 4.05                       | 5.6                        | 12                         | 4.1                        | 5.5                        | —                        | U-MOSIII   |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6N36FE    | 30                       | ±10                  | 0.5                | 0.15               | 0.66                        | —                        | 0.85                       | 1.14                       | 1.52                       | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   | (6BB)                |                                                                                       |  |
|                                                                                                                                |             | SSM6N56FE *  |                          | ±8                   | 0.8                | 0.15               | 0.235                       | —                        | 0.3                        | 0.48                       | 0.84                       | 55                         | 6                          | 16                         | 1                        | U-MOSVII-H |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6N15AFE   |                          | ±20                  | 0.1                | 0.15               | —                           | 3.6                      | 6                          | —                          | —                          | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6N44FE    |                          | ±20                  | 0.1                | 0.15               | —                           | 4                        | 7                          | —                          | —                          | 8.5                        | 5.3                        | 9.4                        | —                        | π-MOSVI    |                      |                                                                                       |  |
|                                                                                                                                | P-ch x 2    | SSM6N7002BFE | 60                       | ±20                  | 0.2                | 0.15               | 3.3                         | —                        | —                          | —                          | —                          | 17                         | 1.9                        | 3.6                        | —                        | U-MOSIV    | (6CC)                |                                                                                       |  |
|                                                                                                                                |             | SSM6P35FE    | −20                      | ±10                  | −0.1               | 0.15               | —                           | 8                        | 11                         | —                          | 22                         | 12.2                       | 6.5                        | 10.4                       | —                        | π-MOSVI    |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6P35AFE * |                          | ±10                  | −0.25              | 0.15               | 1.4                         | —                        | 2.1                        | 2.9                        | 4                          | 21                         | 2                          | 6                          | —                        | U-MOSVII   |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6P36FE    |                          | ±8                   | −0.33              | 0.15               | 1.31                        | —                        | —                          | 2.7                        | 3.6                        | 43                         | 6.1                        | 10.3                       | 1.2                      | U-MOSIII   |                      |                                                                                       |  |
|                                                                                                                                | N-ch + P-ch | SSM6P15FE    | −30                      | ±20                  | −0.1               | 0.15               | —                           | 12                       | 32                         | —                          | —                          | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI    | (6Cc)                |                                                                                       |  |
|                                                                                                                                |             | SSM6L35FE    | 20                       | ±10                  | 0.18               | 0.15               | —                           | 3                        | 4                          | —                          | 8                          | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    |                      |                                                                                       |  |
|                                                                                                                                |             | SSM6L36FE    | 20                       | ±10                  | 0.5                | 0.15               | 0.66                        | —                        | 0.85                       | 1.14                       | 1.52                       | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   |                      |                                                                                       |  |
|                                                                                                                                |             |              | −20                      | ±8                   | −0.33              | 0.15               | 1.31                        | —                        | —                          | 2.7                        | 3.6                        | 43                         | 6.1                        | 10.3                       | 1.2                      | U-MOSIII   |                      |                                                                                       |  |
| <div>USV<br/>SOT-353</div>  <div>(mm)</div> | N-ch x 2    | SSM5N16FU    | 20                       | ±10                  | 0.1                | 0.2                | —                           | 3                        | 4                          | —                          | 15                         | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (5CC)                |  |  |
|                                                                                                                                | N-ch x 2    | SSM5N15FU    | 30                       | ±20                  | 0.1                | 0.2                | —                           | 4                        | 7                          | —                          | —                          | 7.8                        | 3.6                        | 8.8                        | —                        | π-MOSVI    |                      |                                                                                       |  |
|                                                                                                                                | P-ch x 2    | SSM5P15FU    | −30                      | ±20                  | −0.1               | 0.2                | —                           | 12                       | 32                         | —                          | —                          | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI    | (5cc)                |                                                                                       |  |

\*: New Product / 新製品

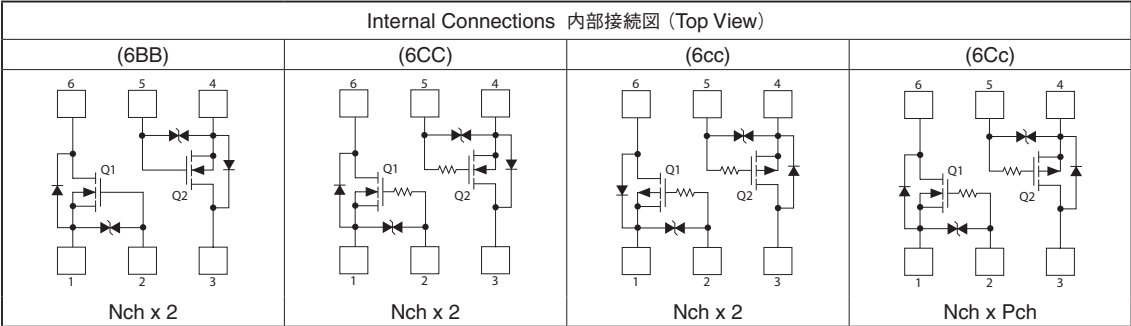


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

(Small-Signal Type: Dual Channel/Complementary) / (小信号スタンダードタイプ:デュアルチャネル/コンプリメンタリ) (2/2)

| Package                                                                                   | Polarity    | Part Number    | Absolute Maximum Ratings |                      |                    |                    | R <sub>DS(ON)</sub> max (Ω) |                         |                           |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                           |
|-------------------------------------------------------------------------------------------|-------------|----------------|--------------------------|----------------------|--------------------|--------------------|-----------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|--------------------------------------------------------------------------------------|
|                                                                                           |             |                | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | V <sub>GS</sub>   = 4.5 V   | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V | V <sub>GS</sub>   = 1.5 V |                            |                            |                            |                          |            |                      |                                                                                      |
| <br>(mm)  | N-ch x 2    | SSM6N36TU      | 20                       | ±10                  | 0.5                | 0.5                | 0.66                        | —                       | 0.85                      | 1.14                      | 1.52                      | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   | (6CC)                |   |
|                                                                                           |             | SSM6N62TU      |                          | ±8                   | 0.8                | 0.5                | 0.085                       | —                       | 0.098                     | 0.12                      | 0.173                     | 177                        | 17                         | 52                         | 2                        | U-MOSVII-H |                      |                                                                                      |
|                                                                                           |             | SSM6N24TU      | 30                       | ±12                  | 0.5                | 0.5                | 0.145                       | —                       | 0.18                      | —                         | —                         | 245                        | 33                         | 41                         | —                        | U-MOSIII   | (6BB)                |                                                                                      |
|                                                                                           | P-ch x 2    | SSM6P36TU      | −20                      | ±8                   | −0.33              | 0.5                | 1.31                        | —                       | —                         | 2.7                       | 3.6                       | 43                         | 6.1                        | 10.3                       | 1.2                      | U-MOSIII   | (6cc)                |                                                                                      |
|                                                                                           |             | N-ch + P-ch    | SSM6L12TU                | 30                   | ±12                | 0.5                | 0.5                         | 0.145                   | —                         | 0.18                      | —                         | —                          | 245                        | 33                         | 41                       | —          | U-MOSIII             |                                                                                      |
|                                                                                           | SSM6L12TU   |                | −20                      | ±12                  | −0.5               | 0.5                | —                           | 0.26                    | 0.43                      | —                         | —                         | 218                        | 42                         | 52                         | —                        | U-MOSIII   |                      |                                                                                      |
|                                                                                           | SSM6L36TU   |                | 20                       | ±10                  | 0.5                | 0.5                | 0.66                        | —                       | 0.85                      | 1.14                      | 1.52                      | 46                         | 7.3                        | 10.8                       | 1.23                     | U-MOSIII   |                      |                                                                                      |
| SSM6L36TU                                                                                 | −20         |                | ±8                       | −0.33                | 0.5                | 1.31               | —                           | —                       | 2.7                       | 3.6                       | 43                        | 6.1                        | 10.3                       | 1.2                        | U-MOSIII                 |            |                      |                                                                                      |
| <br>(mm) | N-ch x 2    | SSM6N16FU      | 20                       | ±10                  | 0.1                | 0.2                | —                           | 3                       | 4                         | —                         | 15                        | 9.3                        | 4.5                        | 9.8                        | —                        | π-MOSVI    | (6CC)                |  |
|                                                                                           |             | SSM6N35FU      |                          | ±10                  | 0.18               | 0.2                | —                           | 3                       | 4                         | —                         | 8                         | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    |                      |                                                                                      |
|                                                                                           |             | SSM6N35AFU *   |                          | ±10                  | 0.25               | 0.285              | 1.1                         | —                       | 1.6                       | 2.4                       | 3.1                       | 18                         | 5                          | 6                          | 0.34                     | U-MOSIII   |                      |                                                                                      |
|                                                                                           |             | SSM6N37FU      |                          | ±10                  | 0.25               | 0.3                | 2.2                         | —                       | 3.02                      | 4.05                      | 5.6                       | 12                         | 4.1                        | 5.5                        | —                        | U-MOSIII   |                      |                                                                                      |
|                                                                                           |             | SSM6N43FU      |                          | ±10                  | 0.5                | 0.2                | 0.66                        | —                       | 0.85                      | 1.14                      | 1.52                      | 46                         | 7.3                        | 10.8                       | 1.23                     | π-MOSVI    |                      |                                                                                      |
|                                                                                           |             | SSM6N15AFU     | 30                       | ±20                  | 0.1                | 0.3                | —                           | 3.6                     | 6                         | —                         | —                         | 13.5                       | 6.5                        | 8                          | —                        | U-MOSIII   |                      |                                                                                      |
|                                                                                           |             | SSM6N44FU      |                          | ±20                  | 0.1                | 0.2                | —                           | 4                       | 7                         | —                         | —                         | 8.5                        | 5.3                        | 9.4                        | —                        | π-MOSVI    |                      |                                                                                      |
|                                                                                           |             | SSM6N48FU      |                          | ±20                  | 0.1                | 0.3                | —                           | 3.2                     | 5.4                       | —                         | —                         | 15.1                       | 7.8                        | 12.4                       | —                        | U-MOSIII   |                      |                                                                                      |
|                                                                                           |             | SSM6N09FU      |                          | ±20                  | 0.4                | 0.3                | —                           | 1.2                     | —                         | —                         | —                         | 20                         | 7                          | 16                         | —                        | π-MOSVI    |                      |                                                                                      |
|                                                                                           |             | SSM6N17FU      | 50                       | ±7                   | 0.1                | 0.2                | —                           | 20                      | 40                        | —                         | —                         | 7                          | 3                          | 7                          | —                        | π-MOSV     |                      |                                                                                      |
|                                                                                           | P-ch x 2    | SSM6N7002CFU * | 60                       | ±20                  | 0.17               | 0.285              | 4.7                         | —                       | —                         | —                         | —                         | 11                         | 0.7                        | 3                          | 0.27                     | U-MOSVII-H | (6cc)                |                                                                                      |
|                                                                                           |             | SSM6N7002KFU * |                          | ±20                  | 0.3                | 0.285              | 1.75                        | —                       | —                         | —                         | —                         | 26                         | 1.3                        | 5.5                        | 0.39                     | U-MOSVII-H |                      |                                                                                      |
|                                                                                           |             | SSM6P35FU      | −20                      | ±10                  | −0.1               | 0.2                | —                           | 8                       | 11                        | —                         | 22                        | 12.2                       | 6.5                        | 10.4                       | —                        | π-MOSVI    |                      |                                                                                      |
|                                                                                           | N-ch + P-ch | SSM6P35AFU *   | −30                      | ±10                  | −0.25              | 0.285              | 1.4                         | —                       | 2.1                       | 2.9                       | 4                         | 21                         | 2                          | 6                          | —                        | U-MOSVII   | (6Cc)                |                                                                                      |
|                                                                                           |             | SSM6P15FU      |                          | ±20                  | −0.1               | 0.2                | —                           | 12                      | 32                        | —                         | 9.1                       | 3.5                        | 8.6                        | —                          | π-MOSVI                  |            |                      |                                                                                      |
|                                                                                           |             | SSM6L09FU      | 30                       | ±20                  | 0.4                | 0.3                | —                           | 1.2                     | —                         | —                         | —                         | 20                         | 7                          | 16                         | —                        | π-MOSVI    |                      |                                                                                      |
|                                                                                           |             | SSM6L35FU      | −30                      | ±20                  | −0.2               | 0.3                | —                           | 4.2                     | —                         | —                         | —                         | 22                         | 5                          | 14                         | —                        | π-MOSVI    |                      |                                                                                      |
|                                                                                           |             | SSM6L35FU      | 20                       | ±10                  | 0.18               | 0.2                | —                           | 3                       | 4                         | —                         | 8                         | 9.5                        | 4.1                        | 9.5                        | —                        | π-MOSVI    | (6Cc)                |                                                                                      |
|                                                                                           |             | SSM6L35FU      | −20                      | ±10                  | −0.1               | 0.2                | —                           | 8                       | 11                        | —                         | 22                        | 12.2                       | 6.5                        | 10.4                       | —                        | π-MOSVI    |                      |                                                                                      |

\*: New Product / 新製品



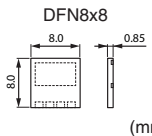
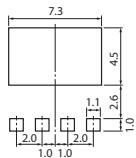
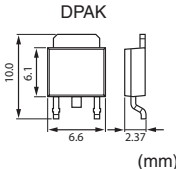
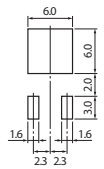
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

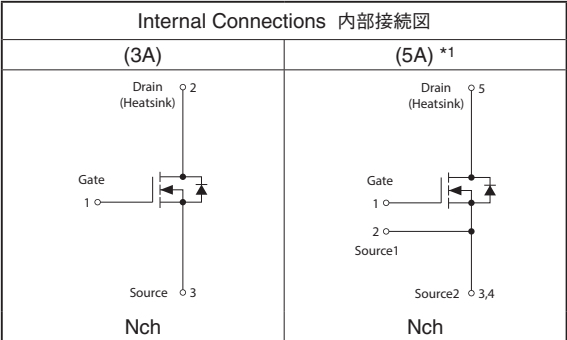
Mid-High Voltage MOSFETs / 中高耐压 MOSFET

DTMOS Series / DTMOS シリーズ

(Single N-Channel) / (シングルNチャネル)

(1/5)

| Package                                                                                     | Part Number | Absolute Maximum Ratings |                         |                       |                       | R <sub>DS(ON)</sub><br>max (Ω)<br> V <sub>GS</sub>   =<br>10 V | C <sub>iss</sub><br>typ.<br>(pF) | C <sub>rss</sub><br>typ.<br>(pF) | C <sub>oss</sub><br>typ.<br>(pF) | Q <sub>g</sub><br>typ.<br>(nC) | Series         | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm)                                                      |
|---------------------------------------------------------------------------------------------|-------------|--------------------------|-------------------------|-----------------------|-----------------------|----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------|-----------------------------------|---------------------------------------------------------------------------------------|
|                                                                                             |             | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
| <br>(mm)   | TK10V60W    | 600                      | ±30                     | 9.7                   | 83.3                  | 0.38                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        | (5A)                              |    |
|                                                                                             | TK12V60W    |                          | ±30                     | 11.5                  | 104                   | 0.3                                                            | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK16V60W    |                          | ±30                     | 15.8                  | 139                   | 0.19                                                           | 1350                             | 4                                | 35                               | 38                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK16V60W5   |                          | ±30                     | 15.8                  | 139                   | 0.245                                                          | 1350                             | 4                                | 35                               | 43                             | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             | TK20V60W    |                          | ±30                     | 20                    | 156                   | 0.17                                                           | 1680                             | 7                                | 40                               | 48                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK20V60W5   |                          | ±30                     | 20                    | 156                   | 0.19                                                           | 1800                             | 5.5                              | 45                               | 55                             | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             | TK25V60X    |                          | ±30                     | 25                    | 180                   | 0.135                                                          | 2400                             | 6                                | 60                               | 40                             | DTMOSIV-H      |                                   |                                                                                       |
|                                                                                             | TK25V60X5   |                          | ±30                     | 25                    | 180                   | 0.15                                                           | 2400                             | 6                                | 60                               | 60                             | DTMOSIV-H(HSD) |                                   |                                                                                       |
|                                                                                             | TK31V60W    |                          | ±30                     | 30.8                  | 240                   | 0.098                                                          | 3000                             | 9.5                              | 70                               | 86                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK31V60W5   |                          | ±30                     | 30.8                  | 240                   | 0.109                                                          | 3000                             | 9.5                              | 70                               | 105                            | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             | TK31V60X    |                          | ±30                     | 30.8                  | 240                   | 0.098                                                          | 3000                             | 7                                | 70                               | 65                             | DTMOSIV-H      |                                   |                                                                                       |
|                                                                                             | TK14V65W    | 650                      | ±30                     | 13.7                  | 139                   | 0.28                                                           | 1300                             | 4                                | 35                               | 35                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK17V65W    |                          | ±30                     | 17.3                  | 156                   | 0.21                                                           | 1800                             | 7                                | 40                               | 45                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK22V65X5   |                          | ±30                     | 22                    | 180                   | 0.17                                                           | 2400                             | 6                                | 60                               | 50                             | DTMOSIV-H(HSD) |                                   |                                                                                       |
|                                                                                             | TK28V65W    |                          | ±30                     | 27.6                  | 240                   | 0.12                                                           | 3000                             | 8                                | 70                               | 75                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK28V65W5   |                          | ±30                     | 27.6                  | 240                   | 0.14                                                           | 3000                             | 8                                | 70                               | 90                             | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
| <br>(mm) | TK10P50W    | 500                      | ±30                     | 9.7                   | 80                    | 0.43                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        | (3A)                              |  |
|                                                                                             | TK12P50W    |                          | ±30                     | 11.5                  | 100                   | 0.34                                                           | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK5P60W5    | 600                      | ±30                     | 4.5                   | 60                    | 0.99                                                           | 370                              | 1                                | 11                               | 11.5                           | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             | TK5P60W     |                          | ±30                     | 5.4                   | 60                    | 0.9                                                            | 380                              | 1.5                              | 10                               | 10.5                           | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK6P60W     |                          | ±30                     | 6.2                   | 60                    | 0.82                                                           | 390                              | 1.7                              | 12                               | 12                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK560P60Y   |                          | ±30                     | 7                     | 60                    | 0.56                                                           | 380                              | 2.5                              | 18                               | 14.5                           | DTMOSV         |                                   |                                                                                       |
|                                                                                             | TK7P60W     |                          | ±30                     | 7                     | 60                    | 0.6                                                            | 490                              | 1.7                              | 13                               | 15                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK7P60W5    |                          | ±30                     | 7                     | 60                    | 0.67                                                           | 490                              | 1.7                              | 13                               | 16                             | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             | TK8P60W     |                          | ±30                     | 8                     | 80                    | 0.5                                                            | 570                              | 2.5                              | 16                               | 18.5                           | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK8P60W5    |                          | ±30                     | 8                     | 80                    | 0.56                                                           | 590                              | 1.7                              | 16                               | 22                             | DTMOSIV(HSD)   |                                   |                                                                                       |
|                                                                                             | TK10P60W    |                          | ±30                     | 9.7                   | 80                    | 0.43                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK380P60Y   |                          | ±30                     | 9.7                   | 80                    | 0.38                                                           | 590                              | 2.5                              | 23                               | 20                             | DTMOSV         |                                   |                                                                                       |
|                                                                                             | TK12P60W    |                          | ±30                     | 11.5                  | 100                   | 0.34                                                           | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK290P60Y   |                          | ±30                     | 11.5                  | 100                   | 0.29                                                           | 730                              | 2.5                              | 26                               | 25                             | DTMOSV         |                                   |                                                                                       |
|                                                                                             | TK5P65W     | 650                      | ±30                     | 5.2                   | 60                    | 1.22                                                           | 380                              | 1.5                              | 10                               | 10.5                           | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK6P65W     |                          | ±30                     | 5.8                   | 60                    | 1.05                                                           | 390                              | 1.7                              | 12                               | 11                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK7P65W     |                          | ±30                     | 6.8                   | 60                    | 0.8                                                            | 490                              | 1.7                              | 13                               | 15                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK560P65Y   |                          | ±30                     | 7                     | 60                    | 0.56                                                           | 380                              | 2.5                              | 18                               | 14.5                           | DTMOSV         |                                   |                                                                                       |
|                                                                                             | TK8P65W     |                          | ±30                     | 7.8                   | 80                    | 0.67                                                           | 570                              | 2.5                              | 16                               | 16                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK9P65W     |                          | ±30                     | 9.3                   | 80                    | 0.56                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK380P65Y   |                          | ±30                     | 9.7                   | 80                    | 0.38                                                           | 590                              | 2.5                              | 23                               | 20                             | DTMOSV         |                                   |                                                                                       |
|                                                                                             | TK11P65W    |                          | ±30                     | 11.1                  | 100                   | 0.44                                                           | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                                   |                                                                                       |
|                                                                                             | TK290P65Y   |                          | ±30                     | 11.5                  | 100                   | 0.29                                                           | 730                              | 2.5                              | 26                               | 25                             | DTMOSV         |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |
|                                                                                             |             |                          |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                                                                       |

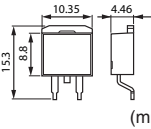
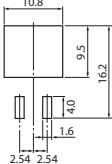
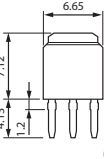
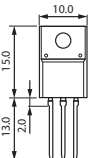


(\*1) Notice : Please use the source1 pin for gate input signal return. Make sure that the main current flows into the source2 pins.

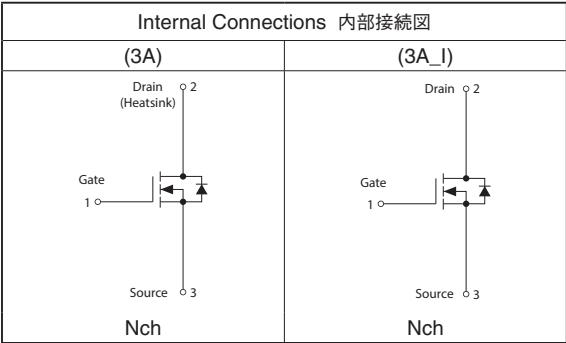
(\*1) ご注意：ソース1はゲート入力信号のリターン用として使用してください。主電流はソース2を流すように配線パターンを設計してください。

・ The internal connection diagrams only show the general configurations of the circuits.

・ 内部接続図はイメージ図です。

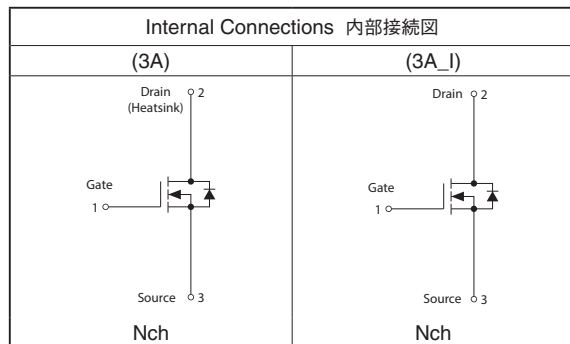
| Package                                                                                                                                      | Part Number | Absolute Maximum Ratings |                         |                       |                       | R <sub>DS(ON)</sub><br>max (Ω)<br> V <sub>GS</sub>   =<br>10 V | C <sub>iss</sub><br>typ.<br>(pF) | C <sub>rss</sub><br>typ.<br>(pF) | C <sub>oss</sub><br>typ.<br>(pF) | Q <sub>g</sub><br>typ.<br>(nC) | Series         | Internal<br>Conne-<br>ctions | Land Pattern<br>Examples<br>(mm)                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|-------------------------|-----------------------|-----------------------|----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------|------------------------------|------------------------------------------------------------------------------------------------|
|                                                                                                                                              |             | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) |                                                                |                                  |                                  |                                  |                                |                |                              |                                                                                                |
| <div><div>D2PAK</div><div></div><div>(mm)</div></div>        | TK16G60W    | 600                      | ±30                     | 15.8                  | 130                   | 0.19                                                           | 1350                             | 4                                | 35                               | 38                             | DTMOSIV        | (3A)                         | <div></div> |
|                                                                                                                                              | TK16G60W5   |                          | ±30                     | 15.8                  | 130                   | 0.23                                                           | 1350                             | 4                                | 35                               | 43                             | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK20G60W    |                          | ±30                     | 20                    | 165                   | 0.155                                                          | 1680                             | 7                                | 40                               | 48                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK14G65W    | 650                      | ±30                     | 13.7                  | 130                   | 0.25                                                           | 1300                             | 4                                | 35                               | 35                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK14G65W5   |                          | ±30                     | 13.7                  | 130                   | 0.3                                                            | 1300                             | 4                                | 35                               | 40                             | DTMOSIV(HSD)   |                              |                                                                                                |
| <div><div>IPAK</div><div></div><div>(mm)</div></div>        | TK5Q60W     | 600                      | ±30                     | 5.4                   | 60                    | 0.9                                                            | 380                              | 1.5                              | 10                               | 10.5                           | DTMOSIV        | (3A)                         |                                                                                                |
|                                                                                                                                              | TK6Q60W     |                          | ±30                     | 6.2                   | 60                    | 0.82                                                           | 390                              | 1.7                              | 12                               | 12                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK7Q60W     |                          | ±30                     | 7                     | 60                    | 0.6                                                            | 490                              | 1.7                              | 13                               | 15                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK8Q60W     |                          | ±30                     | 8                     | 80                    | 0.5                                                            | 570                              | 2.5                              | 16                               | 18.5                           | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK10Q60W    |                          | ±30                     | 9.7                   | 80                    | 0.43                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK12Q60W    |                          | ±30                     | 11.5                  | 100                   | 0.34                                                           | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK5Q65W     | 650                      | ±30                     | 5.2                   | 60                    | 1.22                                                           | 380                              | 1.5                              | 10                               | 10.5                           | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK6Q65W     |                          | ±30                     | 5.8                   | 60                    | 1.05                                                           | 390                              | 1.7                              | 12                               | 11                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK7Q65W     |                          | ±30                     | 6.8                   | 60                    | 0.8                                                            | 490                              | 1.7                              | 13                               | 15                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK8Q65W     |                          | ±30                     | 7.8                   | 80                    | 0.67                                                           | 570                              | 2.5                              | 16                               | 16                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK9Q65W     |                          | ±30                     | 9.3                   | 80                    | 0.56                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK11Q65W    |                          | ±30                     | 11.1                  | 100                   | 0.44                                                           | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                              |                                                                                                |
| <div><div>TO-220SIS</div><div></div><div>(mm)</div></div> | TK10A50W    | 500                      | ±30                     | 9.7                   | 30                    | 0.38                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        | (3A_I)                       |                                                                                                |
|                                                                                                                                              | TK12A50W    |                          | ±30                     | 11.5                  | 35                    | 0.3                                                            | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK19A50W    |                          | ±30                     | 18.5                  | 40                    | 0.19                                                           | 1350                             | 4                                | 35                               | 38                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK5A60W5    | 600                      | ±30                     | 4.5                   | 30                    | 0.95                                                           | 370                              | 1                                | 11                               | 11.5                           | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK5A60W     |                          | ±30                     | 5.4                   | 30                    | 0.9                                                            | 380                              | 1.5                              | 10                               | 10.5                           | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK6A60W     |                          | ±30                     | 6.2                   | 30                    | 0.75                                                           | 390                              | 1.7                              | 12                               | 12                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK560A60Y   |                          | ±30                     | 7                     | 30                    | 0.56                                                           | 380                              | 2.5                              | 18                               | 14.5                           | DTMOSV         |                              |                                                                                                |
|                                                                                                                                              | TK7A60W     |                          | ±30                     | 7                     | 30                    | 0.6                                                            | 490                              | 1.7                              | 13                               | 15                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK7A60W5    |                          | ±30                     | 7                     | 30                    | 0.65                                                           | 490                              | 1.7                              | 13                               | 16                             | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK8A60W     |                          | ±30                     | 8                     | 30                    | 0.5                                                            | 570                              | 2.5                              | 16                               | 18.5                           | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK8A60W5    |                          | ±30                     | 8                     | 30                    | 0.54                                                           | 590                              | 1.7                              | 16                               | 22                             | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK10A60W    |                          | ±30                     | 9.7                   | 30                    | 0.38                                                           | 700                              | 2.3                              | 20                               | 20                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK10A60W5   |                          | ±30                     | 9.7                   | 30                    | 0.45                                                           | 720                              | 2                                | 20                               | 25                             | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK380A60Y   |                          | ±30                     | 9.7                   | 30                    | 0.38                                                           | 590                              | 2.5                              | 23                               | 20                             | DTMOSV         |                              |                                                                                                |
|                                                                                                                                              | TK12A60W    |                          | ±30                     | 11.5                  | 35                    | 0.3                                                            | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK290A60Y   |                          | ±30                     | 11.5                  | 35                    | 0.29                                                           | 730                              | 2.5                              | 26                               | 25                             | DTMOSV         |                              |                                                                                                |
|                                                                                                                                              | TK16A60W    |                          | ±30                     | 15.8                  | 40                    | 0.19                                                           | 1350                             | 4                                | 35                               | 38                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK16A60W5   |                          | ±30                     | 15.8                  | 40                    | 0.23                                                           | 1350                             | 4                                | 35                               | 43                             | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK20A60W    |                          | ±30                     | 20                    | 45                    | 0.155                                                          | 1680                             | 7                                | 40                               | 48                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK20A60W5   |                          | ±30                     | 20                    | 45                    | 0.175                                                          | 1800                             | 5.5                              | 45                               | 55                             | DTMOSIV(HSD)   |                              |                                                                                                |
|                                                                                                                                              | TK25A60X    |                          | ±30                     | 25                    | 45                    | 0.125                                                          | 2400                             | 6                                | 60                               | 40                             | DTMOSIV-H      |                              |                                                                                                |
|                                                                                                                                              | TK25A60X5   |                          | ±30                     | 25                    | 45                    | 0.14                                                           | 2400                             | 6                                | 60                               | 60                             | DTMOSIV-H(HSD) |                              |                                                                                                |
|                                                                                                                                              | TK31A60W    |                          | ±30                     | 30.8                  | 45                    | 0.088                                                          | 3000                             | 9.5                              | 70                               | 86                             | DTMOSIV        |                              |                                                                                                |
|                                                                                                                                              | TK39A60W    |                          | ±30                     | 38.8                  | 50                    | 0.065                                                          | 4100                             | 10                               | 90                               | 110                            | DTMOSIV        |                              |                                                                                                |

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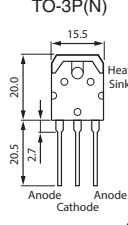
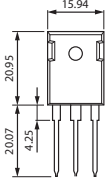
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

| Package                        | Part Number | Absolute Maximum Ratings |                  |              |              | $R_{DS(ON)}$<br>max ( $\Omega$ )<br>$ V_{GS}  = 10\text{ V}$ | $C_{iss}$<br>typ.<br>(pF) | $C_{rss}$<br>typ.<br>(pF) | $C_{oss}$<br>typ.<br>(pF) | $Q_g$<br>typ.<br>(nC) | Series         | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm) |
|--------------------------------|-------------|--------------------------|------------------|--------------|--------------|--------------------------------------------------------------|---------------------------|---------------------------|---------------------------|-----------------------|----------------|-----------------------------------|----------------------------------|
|                                |             | $V_{DSS}$<br>(V)         | $V_{GSS}$<br>(V) | $I_D$<br>(A) | $P_D$<br>(W) |                                                              |                           |                           |                           |                       |                |                                   |                                  |
| (Continued from previous page) | TK5A65W     | 650                      | $\pm 30$         | 5.2          | 30           | 1.2                                                          | 380                       | 1.5                       | 10                        | 10.5                  | DTMOSIV        | (3A_I)                            |                                  |
|                                | TK6A65W     |                          | $\pm 30$         | 5.8          | 30           | 1                                                            | 390                       | 1.7                       | 12                        | 11                    | DTMOSIV        |                                   |                                  |
|                                | TK7A65W     |                          | $\pm 30$         | 6.8          | 30           | 0.78                                                         | 490                       | 1.7                       | 13                        | 15                    | DTMOSIV        |                                   |                                  |
|                                | TK560A65Y   |                          | $\pm 30$         | 7            | 30           | 0.56                                                         | 380                       | 2.5                       | 18                        | 14.5                  | DTMOSV         |                                   |                                  |
|                                | TK8A65W     |                          | $\pm 30$         | 7.8          | 30           | 0.65                                                         | 570                       | 2.5                       | 16                        | 16                    | DTMOSIV        |                                   |                                  |
|                                | TK9A65W     |                          | $\pm 30$         | 9.3          | 30           | 0.5                                                          | 700                       | 2.3                       | 20                        | 20                    | DTMOSIV        |                                   |                                  |
|                                | TK380A65Y   |                          | $\pm 30$         | 9.7          | 30           | 0.38                                                         | 590                       | 2.5                       | 23                        | 20                    | DTMOSV         |                                   |                                  |
|                                | TK11A65W    |                          | $\pm 30$         | 11.1         | 35           | 0.39                                                         | 890                       | 2.8                       | 23                        | 25                    | DTMOSIV        |                                   |                                  |
|                                | TK290A65Y   |                          | $\pm 30$         | 11.5         | 35           | 0.29                                                         | 730                       | 2.5                       | 26                        | 25                    | DTMOSV         |                                   |                                  |
|                                | TK14A65W    |                          | $\pm 30$         | 13.7         | 40           | 0.25                                                         | 1300                      | 4                         | 35                        | 35                    | DTMOSIV        |                                   |                                  |
|                                | TK14A65W5   |                          | $\pm 30$         | 13.7         | 40           | 0.3                                                          | 1300                      | 4                         | 35                        | 40                    | DTMOSIV(HSD)   |                                   |                                  |
|                                | TK17A65W    |                          | $\pm 30$         | 17.3         | 45           | 0.2                                                          | 1800                      | 7                         | 40                        | 45                    | DTMOSIV        |                                   |                                  |
|                                | TK17A65W5   |                          | $\pm 30$         | 17.3         | 45           | 0.23                                                         | 1800                      | 5.5                       | 45                        | 50                    | DTMOSIV(HSD)   |                                   |                                  |
|                                | TK22A65X    |                          | $\pm 30$         | 22           | 45           | 0.15                                                         | 2400                      | 6                         | 60                        | 50                    | DTMOSIV-H      |                                   |                                  |
|                                | TK22A65X5   |                          | $\pm 30$         | 22           | 45           | 0.16                                                         | 2400                      | 6                         | 60                        | 50                    | DTMOSIV-H(HSD) |                                   |                                  |
|                                | TK28A65W    |                          | $\pm 30$         | 27.6         | 45           | 0.11                                                         | 3000                      | 8                         | 70                        | 75                    | DTMOSIV        |                                   |                                  |
|                                | TK35A65W    |                          | $\pm 30$         | 35           | 50           | 0.08                                                         | 4100                      | 9                         | 90                        | 100                   | DTMOSIV        |                                   |                                  |
|                                | TK35A65W5   |                          | $\pm 30$         | 35           | 50           | 0.095                                                        | 4100                      | 9                         | 90                        | 115                   | DTMOSIV(HSD)   |                                   |                                  |
|                                | TK7A80W     | 800                      | $\pm 20$         | 6.5          | 35           | 0.95                                                         | 700                       | 1.2                       | 20                        | 13                    | DTMOSIV        |                                   |                                  |
|                                | TK10A80W    |                          | $\pm 20$         | 9.5          | 40           | 0.55                                                         | 1150                      | 2                         | 27                        | 19                    | DTMOSIV        |                                   |                                  |
|                                | TK12A80W    |                          | $\pm 20$         | 11.5         | 45           | 0.45                                                         | 1400                      | 3                         | 29                        | 23                    | DTMOSIV        |                                   |                                  |
|                                | TK17A80W    |                          | $\pm 20$         | 17           | 45           | 0.29                                                         | 2050                      | 2                         | 42                        | 32                    | DTMOSIV        |                                   |                                  |
|                                | TK10E60W    |                          | $\pm 30$         | 9.7          | 100          | 0.38                                                         | 700                       | 2.3                       | 20                        | 20                    | DTMOSIV        |                                   |                                  |
|                                | TK12E60W    | 600                      | $\pm 30$         | 11.5         | 110          | 0.3                                                          | 890                       | 2.8                       | 23                        | 25                    | DTMOSIV        | (3A)                              |                                  |
|                                | TK16E60W    |                          | $\pm 30$         | 15.8         | 130          | 0.19                                                         | 1350                      | 4                         | 35                        | 38                    | DTMOSIV        |                                   |                                  |
|                                | TK16E60W5   |                          | $\pm 30$         | 15.8         | 130          | 0.23                                                         | 1350                      | 4                         | 35                        | 43                    | DTMOSIV(HSD)   |                                   |                                  |
|                                | TK20E60W    |                          | $\pm 30$         | 20           | 165          | 0.155                                                        | 1680                      | 7                         | 40                        | 48                    | DTMOSIV        |                                   |                                  |
|                                | TK20E60W5   |                          | $\pm 30$         | 20           | 165          | 0.175                                                        | 1800                      | 5.5                       | 45                        | 55                    | DTMOSIV(HSD)   |                                   |                                  |
|                                | TK25E60X    |                          | $\pm 30$         | 25           | 180          | 0.125                                                        | 2400                      | 6                         | 60                        | 40                    | DTMOSIV-H      |                                   |                                  |
|                                | TK25E60X5   |                          | $\pm 30$         | 25           | 180          | 0.14                                                         | 2400                      | 6                         | 60                        | 60                    | DTMOSIV-H(HSD) |                                   |                                  |
|                                | TK31E60W    |                          | $\pm 30$         | 30.8         | 230          | 0.088                                                        | 3000                      | 9.5                       | 70                        | 86                    | DTMOSIV        |                                   |                                  |
|                                | TK31E60X    |                          | $\pm 30$         | 30.8         | 230          | 0.088                                                        | 3000                      | 7                         | 70                        | 65                    | DTMOSIV-H      |                                   |                                  |
|                                | TK14E65W    | 650                      | $\pm 30$         | 13.7         | 130          | 0.25                                                         | 1300                      | 4                         | 35                        | 35                    | DTMOSIV        |                                   |                                  |
|                                | TK14E65W5   |                          | $\pm 30$         | 13.7         | 130          | 0.3                                                          | 1300                      | 4                         | 35                        | 40                    | DTMOSIV(HSD)   |                                   |                                  |
|                                | TK17E65W    |                          | $\pm 30$         | 17.3         | 165          | 0.2                                                          | 1800                      | 7                         | 40                        | 45                    | DTMOSIV        |                                   |                                  |
|                                | TK28E65W    |                          | $\pm 30$         | 27.6         | 230          | 0.11                                                         | 3000                      | 8                         | 70                        | 75                    | DTMOSIV        |                                   |                                  |
|                                | TK7E80W     | 800                      | $\pm 20$         | 6.5          | 110          | 0.95                                                         | 700                       | 1.2                       | 20                        | 13                    | DTMOSIV        |                                   |                                  |
|                                | TK10E80W    |                          | $\pm 20$         | 9.5          | 130          | 0.55                                                         | 1150                      | 2                         | 27                        | 19                    | DTMOSIV        |                                   |                                  |
|                                | TK12E80W    |                          | $\pm 20$         | 11.5         | 165          | 0.45                                                         | 1400                      | 3                         | 29                        | 23                    | DTMOSIV        |                                   |                                  |
|                                | TK17E80W    |                          | $\pm 20$         | 17           | 180          | 0.29                                                         | 2050                      | 2                         | 42                        | 32                    | DTMOSIV        |                                   |                                  |

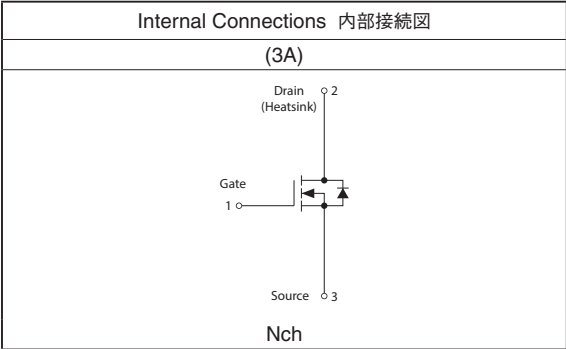


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。



| Package                                                                                                               | Part Number | Absolute Maximum Ratings |                         |                       |                       | R <sub>DS(ON)</sub><br>max (Ω)<br> V <sub>GS</sub>   =<br>10 V | C <sub>iss</sub><br>typ.<br>(pF) | C <sub>rss</sub><br>typ.<br>(pF) | C <sub>oss</sub><br>typ.<br>(pF) | Q <sub>g</sub><br>typ.<br>(nC) | Series         | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm) |
|-----------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|-------------------------|-----------------------|-----------------------|----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------|-----------------------------------|----------------------------------|
|                                                                                                                       |             | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) |                                                                |                                  |                                  |                                  |                                |                |                                   |                                  |
| <div>TO-3P(N)</div>  <div>(mm)</div> | TK12J60W    | 600                      | ±30                     | 11.5                  | 110                   | 0.3                                                            | 890                              | 2.8                              | 23                               | 25                             | DTMOSIV        | (3A)                              |                                  |
|                                                                                                                       | TK16J60W    |                          | ±30                     | 15.8                  | 130                   | 0.19                                                           | 1350                             | 4                                | 35                               | 38                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK16J60W5   |                          | ±30                     | 15.8                  | 130                   | 0.23                                                           | 1350                             | 4                                | 35                               | 43                             | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK20J60W    |                          | ±30                     | 20                    | 165                   | 0.155                                                          | 1680                             | 7                                | 40                               | 48                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK20J60W5   |                          | ±30                     | 20                    | 165                   | 0.175                                                          | 1800                             | 5.5                              | 45                               | 55                             | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK31J60W    |                          | ±30                     | 30.8                  | 230                   | 0.088                                                          | 3000                             | 9.5                              | 70                               | 86                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK31J60W5   |                          | ±30                     | 30.8                  | 230                   | 0.099                                                          | 3000                             | 9.5                              | 70                               | 105                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK39J60W    |                          | ±30                     | 38.8                  | 270                   | 0.065                                                          | 4100                             | 10                               | 90                               | 110                            | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK39J60W5   |                          | ±30                     | 38.8                  | 270                   | 0.074                                                          | 4100                             | 10                               | 90                               | 135                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK62J60W    |                          | ±30                     | 61.8                  | 400                   | 0.04                                                           | 6500                             | 20                               | 140                              | 180                            | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK62J60W5   |                          | ±30                     | 61.8                  | 400                   | 0.045                                                          | 6500                             | 16                               | 140                              | 205                            | DTMOSIV(HSD)   |                                   |                                  |
| <div>TO-247</div>  <div>(mm)</div>  | TK16N60W    | 600                      | ±30                     | 15.8                  | 130                   | 0.19                                                           | 1350                             | 4                                | 35                               | 38                             | DTMOSIV        | (3A)                              |                                  |
|                                                                                                                       | TK16N60W5   |                          | ±30                     | 15.8                  | 130                   | 0.23                                                           | 1350                             | 4                                | 35                               | 43                             | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK20N60W    |                          | ±30                     | 20                    | 165                   | 0.155                                                          | 1680                             | 7                                | 40                               | 48                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK20N60W5   |                          | ±30                     | 20                    | 165                   | 0.175                                                          | 1800                             | 5.5                              | 45                               | 55                             | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK25N60X    |                          | ±30                     | 25                    | 180                   | 0.125                                                          | 2400                             | 6                                | 60                               | 40                             | DTMOSIV-H      |                                   |                                  |
|                                                                                                                       | TK25N60X5   |                          | ±30                     | 25                    | 180                   | 0.14                                                           | 2400                             | 6                                | 60                               | 60                             | DTMOSIV-H(HSD) |                                   |                                  |
|                                                                                                                       | TK31N60W    |                          | ±30                     | 30.8                  | 230                   | 0.088                                                          | 3000                             | 9.5                              | 70                               | 86                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK31N60W5   |                          | ±30                     | 30.8                  | 230                   | 0.099                                                          | 3000                             | 9.5                              | 70                               | 105                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK31N60X    |                          | ±30                     | 30.8                  | 230                   | 0.088                                                          | 3000                             | 7                                | 70                               | 65                             | DTMOSIV-H      |                                   |                                  |
|                                                                                                                       | TK39N60W    |                          | ±30                     | 38.8                  | 270                   | 0.065                                                          | 4100                             | 10                               | 90                               | 110                            | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK39N60W5   |                          | ±30                     | 38.8                  | 270                   | 0.074                                                          | 4100                             | 10                               | 90                               | 135                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK39N60X    |                          | ±30                     | 38.8                  | 270                   | 0.065                                                          | 4100                             | 8                                | 90                               | 85                             | DTMOSIV-H      |                                   |                                  |
|                                                                                                                       | TK62N60W    |                          | ±30                     | 61.8                  | 400                   | 0.04                                                           | 6500                             | 20                               | 140                              | 180                            | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK62N60W5   |                          | ±30                     | 61.8                  | 400                   | 0.045                                                          | 6500                             | 16                               | 140                              | 205                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK62N60X    |                          | ±30                     | 61.8                  | 400                   | 0.04                                                           | 6500                             | 15                               | 140                              | 135                            | DTMOSIV-H      |                                   |                                  |
|                                                                                                                       | TK14N65W    | 650                      | ±30                     | 13.7                  | 130                   | 0.25                                                           | 1300                             | 4                                | 35                               | 35                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK14N65W5   |                          | ±30                     | 13.7                  | 130                   | 0.3                                                            | 1300                             | 4                                | 35                               | 40                             | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK17N65W    |                          | ±30                     | 17.3                  | 165                   | 0.2                                                            | 1800                             | 7                                | 40                               | 45                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK28N65W    |                          | ±30                     | 27.6                  | 230                   | 0.11                                                           | 3000                             | 8                                | 70                               | 75                             | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK28N65W5   |                          | ±30                     | 27.6                  | 230                   | 0.13                                                           | 3000                             | 8                                | 70                               | 90                             | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK35N65W    |                          | ±30                     | 35                    | 270                   | 0.08                                                           | 4100                             | 9                                | 90                               | 100                            | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK35N65W5   |                          | ±30                     | 35                    | 270                   | 0.095                                                          | 4100                             | 9                                | 90                               | 115                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK49N65W    |                          | ±30                     | 49.2                  | 400                   | 0.055                                                          | 6500                             | 15                               | 140                              | 160                            | DTMOSIV        |                                   |                                  |
|                                                                                                                       | TK49N65W5   |                          | ±30                     | 49.2                  | 400                   | 0.057                                                          | 6500                             | 15                               | 140                              | 185                            | DTMOSIV(HSD)   |                                   |                                  |
|                                                                                                                       | TK040N65Z   |                          | ±30                     | 57                    | 360                   | 0.04                                                           | 6250                             | 4                                | 140                              | 105                            | DTMOSVI        |                                   |                                  |
|                                                                                                                       |             | *                        |                         |                       |                       |                                                                |                                  |                                  |                                  |                                |                |                                   |                                  |

\*: New Product / 新製品

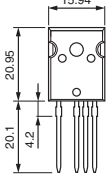
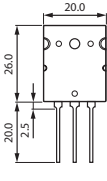


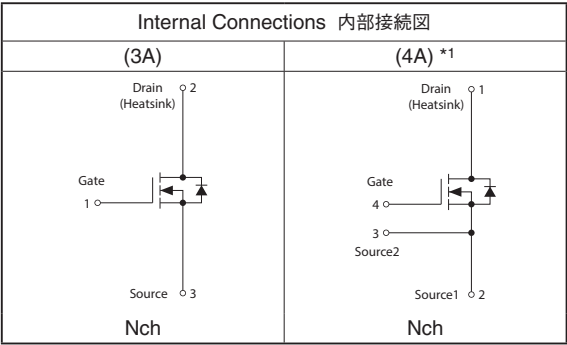
- The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

(Single N-Channel) / (シングルNチャネル)

(5/5)

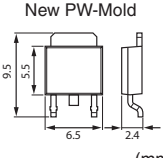
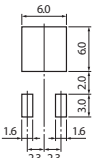
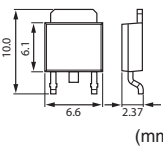
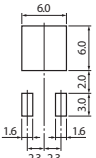
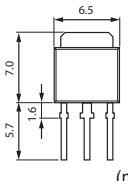
| Package                                                                                                                           | Part Number | Absolute Maximum Ratings |                  |              |              | $R_{DS(ON)}$<br>max ( $\Omega$ )<br>$ V_{GS}  = 10\text{ V}$ | $C_{iss}$<br>typ.<br>(pF) | $C_{rss}$<br>typ.<br>(pF) | $C_{oss}$<br>typ.<br>(pF) | $Q_g$<br>typ.<br>(nC) | Series    | Internal<br>Connections | Land Pattern<br>Examples<br>(mm) |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|------------------|--------------|--------------|--------------------------------------------------------------|---------------------------|---------------------------|---------------------------|-----------------------|-----------|-------------------------|----------------------------------|
|                                                                                                                                   |             | $V_{DSS}$<br>(V)         | $V_{GSS}$<br>(V) | $I_D$<br>(A) | $P_D$<br>(W) |                                                              |                           |                           |                           |                       |           |                         |                                  |
| <div>TO-247-4L</div> <div></div> <div>(mm)</div> | TK25Z60X    | 600                      | $\pm 30$         | 25           | 180          | 0.125                                                        | 2400                      | 6                         | 60                        | 40                    | DTMOSIV-H | (4A)                    |                                  |
|                                                                                                                                   | TK31Z60X    |                          | $\pm 30$         | 30.8         | 230          | 0.088                                                        | 3000                      | 7                         | 70                        | 65                    | DTMOSIV-H |                         |                                  |
|                                                                                                                                   | TK39Z60X    |                          | $\pm 30$         | 38.8         | 270          | 0.065                                                        | 4100                      | 8                         | 90                        | 85                    | DTMOSIV-H |                         |                                  |
|                                                                                                                                   | TK62Z60X    |                          | $\pm 30$         | 61.8         | 400          | 0.04                                                         | 6500                      | 15                        | 140                       | 135                   | DTMOSIV-H |                         |                                  |
| <div>TO-3P(L)</div> <div></div> <div>(mm)</div>  | TK100L60W   | 600                      | $\pm 30$         | 100          | 797          | 0.018                                                        | 15000                     | 50                        | 320                       | 360                   | DTMOSIV   | (3A)                    |                                  |

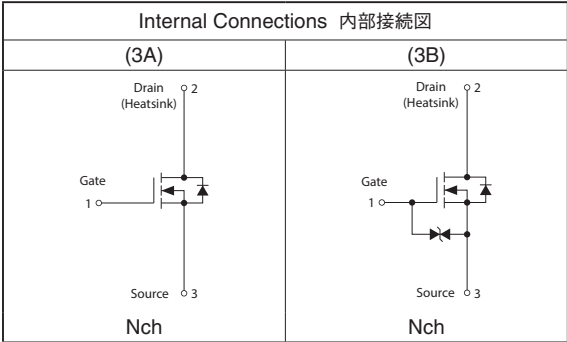


- (\*1) Notice : Please use the source1 pin for gate input signal return. Make sure that the main current flows into the source2 pins.
- (\*1) ご注意：ソース1はゲート入力信号のリターン用として使用してください。主電流はソース2を流すように配線パターンを設計してください。
- ・ The internal connection diagrams only show the general configurations of the circuits.
  - ・ 内部接続図はイメージ図です。

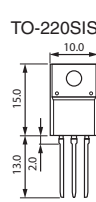
π-MOS Series / π-MOSシリーズ  
 (Single N-Channel) / (シングルNチャネル)

(1/4)

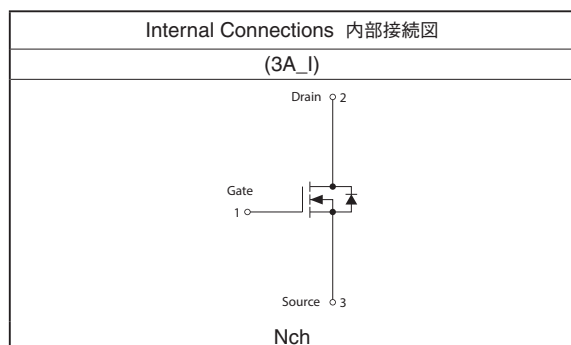
| Package                                                                                     | Part Number | Absolute Maximum Ratings |                         |                       |                       | R <sub>DS(ON)</sub><br>max (Ω)<br> V <sub>GSS</sub>   =<br>10 V | C <sub>iss</sub><br>typ.<br>(pF) | C <sub>rss</sub><br>typ.<br>(pF) | C <sub>oss</sub><br>typ.<br>(pF) | Q <sub>g</sub><br>typ.<br>(nC) | Series         | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm)                                                    |
|---------------------------------------------------------------------------------------------|-------------|--------------------------|-------------------------|-----------------------|-----------------------|-----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------|-----------------------------------|-------------------------------------------------------------------------------------|
|                                                                                             |             | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) |                                                                 |                                  |                                  |                                  |                                |                |                                   |                                                                                     |
| <br>(mm)    | TK5P50D5    | 500                      | ±30                     | 5                     | 80                    | 1.85                                                            | 490                              | 3                                | 55                               | 12                             | π-MOSVII (HSD) | (3A)                              |  |
|                                                                                             | TK2P60D     | 600                      | ±30                     | 2                     | 60                    | 4.3                                                             | 280                              | 1.5                              | 30                               | 7                              | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK1P90A     | 900                      | ±30                     | 1                     | 20                    | 9                                                               | 320                              | 10                               | 35                               | 13                             | π-MOSIV        | (3B)                              |                                                                                     |
| <br>(mm)    | TK3P50D     | 500                      | ±30                     | 3                     | 60                    | 3                                                               | 280                              | 1.5                              | 30                               | 7                              | π-MOSVII       | (3A)                              |  |
|                                                                                             | TK4P50D     |                          | ±30                     | 4                     | 80                    | 2                                                               | 380                              | 3                                | 45                               | 9                              | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK5P50D     |                          | ±30                     | 5                     | 80                    | 1.5                                                             | 490                              | 3                                | 55                               | 11                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK7P50D     |                          | ±30                     | 7                     | 100                   | 1.22                                                            | 600                              | 4                                | 70                               | 12                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK5P53D     | 525                      | ±30                     | 5                     | 80                    | 1.5                                                             | 540                              | 3                                | 60                               | 11                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK6P53D     |                          | ±30                     | 6                     | 100                   | 1.3                                                             | 600                              | 4                                | 70                               | 12                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK4P55DA    | 550                      | ±30                     | 3.5                   | 80                    | 2.45                                                            | 380                              | 2.5                              | 45                               | 9                              | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK4P55D     |                          | ±30                     | 4                     | 80                    | 1.88                                                            | 490                              | 3                                | 55                               | 11                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK4P60DA    | 600                      | ±30                     | 3.5                   | 80                    | 2.2                                                             | 490                              | 3                                | 55                               | 11                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK4P60DB    |                          | ±30                     | 3.7                   | 80                    | 2                                                               | 540                              | 3                                | 60                               | 11                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK4P60D     |                          | ±30                     | 4                     | 100                   | 1.7                                                             | 600                              | 4                                | 70                               | 12                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK3P80E     | 800                      | ±30                     | 3                     | 80                    | 4.9                                                             | 500                              | 4                                | 40                               | 12                             | π-MOSVIII      |                                   |                                                                                     |
|                                                                                             | TK2P90E     | 900                      | ±30                     | 2                     | 80                    | 5.9                                                             | 500                              | 4                                | 40                               | 12                             | π-MOSVIII      |                                   |                                                                                     |
| <br>(mm) | TK2Q60D     | 600                      | ±30                     | 2                     | 60                    | 4.3                                                             | 280                              | 1.5                              | 30                               | 7                              | π-MOSVII       | (3A)                              |                                                                                     |
|                                                                                             | TK4Q60DA    |                          | ±30                     | 3.5                   | 80                    | 2.2                                                             | 490                              | 3                                | 55                               | 11                             | π-MOSVII       |                                   |                                                                                     |
|                                                                                             | TK1Q90A     | 900                      | ±30                     | 1                     | 20                    | 9                                                               | 320                              | 10                               | 35                               | 13                             | π-MOSIV        | (3B)                              |                                                                                     |



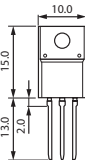
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

| Package                                                                                                                                                                         | Part Number | Absolute Maximum Ratings |                  |              |              | $R_{DS(ON)}$<br>max ( $\Omega$ )<br>$ V_{GSI}  = 10\text{ V}$ | Ciss<br>typ.<br>(pF) | Crss<br>typ.<br>(pF) | Coss<br>typ.<br>(pF) | Qg<br>typ.<br>(nC) | Series              | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|------------------|--------------|--------------|---------------------------------------------------------------|----------------------|----------------------|----------------------|--------------------|---------------------|-----------------------------------|----------------------------------|
|                                                                                                                                                                                 |             | $V_{DSS}$<br>(V)         | $V_{GSS}$<br>(V) | $I_D$<br>(A) | $P_D$<br>(W) |                                                               |                      |                      |                      |                    |                     |                                   |                                  |
| <div><div>TO-220SIS</div><div></div><div>(mm)</div></div> <div>(Continued on next page)</div> | TK5A45DA    | 450                      | $\pm 30$         | 4.5          | 30           | 1.75                                                          | 380                  | 2.5                  | 45                   | 9                  | $\pi$ -MOSVII       | (3A_I)                            |                                  |
|                                                                                                                                                                                 | TK6A45DA    |                          | $\pm 30$         | 5.5          | 35           | 1.35                                                          | 490                  | 3                    | 55                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK7A45DA    |                          | $\pm 30$         | 6.5          | 35           | 1.2                                                           | 540                  | 3                    | 60                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK8A45D     |                          | $\pm 30$         | 8            | 35           | 0.9                                                           | 700                  | 4                    | 80                   | 16                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK9A45D     |                          | $\pm 30$         | 9            | 40           | 0.77                                                          | 800                  | 4                    | 100                  | 16                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK11A45D    |                          | $\pm 30$         | 11           | 40           | 0.62                                                          | 1050                 | 5                    | 100                  | 20                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK12A45D    |                          | $\pm 30$         | 12           | 45           | 0.52                                                          | 1200                 | 6                    | 120                  | 24                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK13A45D    |                          | $\pm 30$         | 13           | 45           | 0.46                                                          | 1350                 | 6                    | 135                  | 25                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK19A45D    |                          | $\pm 30$         | 19           | 50           | 0.25                                                          | 2600                 | 11                   | 280                  | 45                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK4A50D     | 500                      | $\pm 30$         | 4            | 30           | 2                                                             | 380                  | 2.5                  | 45                   | 9                  | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK5A50D     |                          | $\pm 30$         | 5            | 35           | 1.5                                                           | 490                  | 3                    | 55                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK5A50D5    |                          | $\pm 30$         | 5            | 35           | 2.1                                                           | 490                  | 3                    | 55                   | 11                 | $\pi$ -MOSVII (HSD) |                                   |                                  |
|                                                                                                                                                                                 | TK6A50D     |                          | $\pm 30$         | 6            | 35           | 1.4                                                           | 540                  | 3                    | 60                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK7A50D     |                          | $\pm 30$         | 7            | 35           | 1.22                                                          | 600                  | 4                    | 70                   | 12                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK7A50D5    |                          | $\pm 30$         | 7            | 35           | 1.68                                                          | 600                  | 4                    | 70                   | 12                 | $\pi$ -MOSVII (HSD) |                                   |                                  |
|                                                                                                                                                                                 | TK8A50DA    |                          | $\pm 30$         | 7.5          | 35           | 1.04                                                          | 700                  | 4                    | 80                   | 16                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK8A50D     |                          | $\pm 30$         | 8            | 40           | 0.85                                                          | 800                  | 4                    | 100                  | 16                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK10A50D    |                          | $\pm 30$         | 10           | 45           | 0.72                                                          | 1050                 | 5                    | 100                  | 20                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK11A50D    |                          | $\pm 30$         | 11           | 45           | 0.6                                                           | 1200                 | 6                    | 120                  | 24                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK12A50D    |                          | $\pm 30$         | 12           | 45           | 0.52                                                          | 1350                 | 6                    | 135                  | 25                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK12A50D5   |                          | $\pm 30$         | 12           | 45           | 0.78                                                          | 1200                 | 12                   | 160                  | 30                 | $\pi$ -MOSVII (HSD) |                                   |                                  |
|                                                                                                                                                                                 | TK13A50DA   |                          | $\pm 30$         | 12.5         | 45           | 0.47                                                          | 1550                 | 7                    | 165                  | 28                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK13A50D    |                          | $\pm 30$         | 13           | 45           | 0.4                                                           | 1800                 | 9                    | 190                  | 38                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK15A50D    |                          | $\pm 30$         | 15           | 50           | 0.3                                                           | 2300                 | 10                   | 250                  | 40                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK18A50D    |                          | $\pm 30$         | 18           | 50           | 0.27                                                          | 2600                 | 11                   | 280                  | 45                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK4A53D     | 525                      | $\pm 30$         | 4            | 35           | 1.7                                                           | 490                  | 3                    | 55                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK5A53D     |                          | $\pm 30$         | 5            | 35           | 1.5                                                           | 540                  | 3                    | 60                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK6A53D     |                          | $\pm 30$         | 6            | 35           | 1.3                                                           | 600                  | 4                    | 70                   | 12                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK12A53D    |                          | $\pm 30$         | 12           | 45           | 0.58                                                          | 1350                 | 6                    | 135                  | 25                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK4A55DA    | 550                      | $\pm 30$         | 3.5          | 30           | 2.45                                                          | 380                  | 2.5                  | 45                   | 9                  | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK4A55D     |                          | $\pm 30$         | 4            | 35           | 1.88                                                          | 490                  | 3                    | 55                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK5A55D     |                          | $\pm 30$         | 5            | 35           | 1.7                                                           | 540                  | 3                    | 60                   | 11                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK6A55DA    |                          | $\pm 30$         | 5.5          | 35           | 1.48                                                          | 600                  | 4                    | 70                   | 12                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK7A55D     |                          | $\pm 30$         | 7            | 35           | 1.25                                                          | 700                  | 4                    | 80                   | 16                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK8A55DA    |                          | $\pm 30$         | 7.5          | 40           | 1.07                                                          | 800                  | 4                    | 100                  | 16                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK9A55DA    |                          | $\pm 30$         | 8.5          | 40           | 0.86                                                          | 1050                 | 5                    | 100                  | 20                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK10A55D    |                          | $\pm 30$         | 10           | 45           | 0.72                                                          | 1200                 | 6                    | 120                  | 24                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK11A55D    |                          | $\pm 30$         | 11           | 45           | 0.63                                                          | 1350                 | 6                    | 135                  | 25                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK12A55D    |                          | $\pm 30$         | 12           | 45           | 0.57                                                          | 1550                 | 7                    | 165                  | 28                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK13A55DA   |                          | $\pm 30$         | 12.5         | 45           | 0.48                                                          | 1800                 | 9                    | 190                  | 38                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK14A55D    |                          | $\pm 30$         | 14           | 50           | 0.37                                                          | 2300                 | 10                   | 250                  | 40                 | $\pi$ -MOSVII       |                                   |                                  |
|                                                                                                                                                                                 | TK16A55D    |                          | $\pm 30$         | 16           | 50           | 0.33                                                          | 2600                 | 11                   | 280                  | 45                 | $\pi$ -MOSVII       |                                   |                                  |

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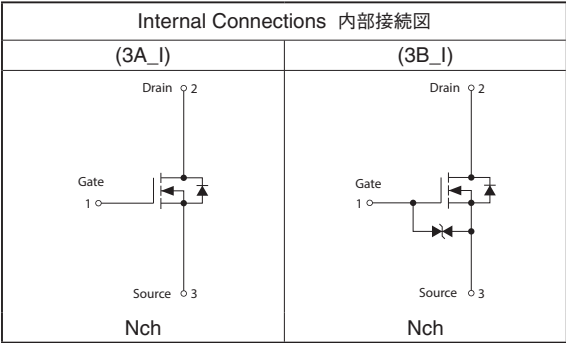


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

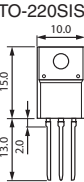
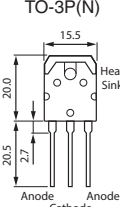
| Package                                                                                                                                                                                                                   | Part Number  | Absolute Maximum Ratings |                         |                       |                       | R <sub>DS(ON)</sub><br>max (Ω)<br> V <sub>GS</sub>   =<br>10 V | C <sub>iss</sub><br>typ.<br>(pF) | C <sub>rss</sub><br>typ.<br>(pF) | C <sub>oss</sub><br>typ.<br>(pF) | Q <sub>g</sub><br>typ.<br>(nC) | Series         | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|-------------------------|-----------------------|-----------------------|----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------|-----------------------------------|----------------------------------|
|                                                                                                                                                                                                                           |              | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) |                                                                |                                  |                                  |                                  |                                |                |                                   |                                  |
| <div>(Continued from previous page)</div> <div><div>TO-220SIS</div><div></div><div>(mm)</div></div> <div>(Continued on next page)</div> | TK4K1A60F ** | 600                      | ±30                     | 2                     | 30                    | 4.1                                                            | 270                              | 2.5                              | 11                               | 8                              | π-MOSIX        | (3A_I)                            |                                  |
|                                                                                                                                                                                                                           | TK3A60DA     |                          | ±30                     | 2.5                   | 30                    | 2.8                                                            | 380                              | 2.5                              | 45                               | 9                              | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK4A60DA     |                          | ±30                     | 3.5                   | 35                    | 2.2                                                            | 490                              | 3                                | 55                               | 11                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK2K2A60F ** |                          | ±30                     | 3.5                   | 30                    | 2.2                                                            | 450                              | 3.6                              | 16                               | 13                             | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK4A60DB     |                          | ±30                     | 3.7                   | 35                    | 2                                                              | 540                              | 3                                | 60                               | 11                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK1K9A60F *  |                          | ±30                     | 3.7                   | 30                    | 1.9                                                            | 490                              | 5.2                              | 20                               | 14                             | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK4A60D      |                          | ±30                     | 4                     | 35                    | 1.7                                                            | 600                              | 4                                | 70                               | 12                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK1K7A60F ** |                          | ±30                     | 4                     | 35                    | 1.7                                                            | 560                              | 5                                | 20                               | 16                             | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK5A60D      |                          | ±30                     | 5                     | 35                    | 1.43                                                           | 700                              | 4                                | 80                               | 16                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK6A60D      |                          | ±30                     | 6                     | 40                    | 1.25                                                           | 800                              | 4                                | 100                              | 16                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK1K2A60F *  |                          | ±30                     | 6                     | 35                    | 1.2                                                            | 740                              | 6.8                              | 29                               | 20.5                           | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK8A60DA     |                          | ±30                     | 7.5                   | 45                    | 1                                                              | 1050                             | 5                                | 100                              | 20                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK1K0A60F ** |                          | ±30                     | 7.5                   | 40                    | 1                                                              | 890                              | 8.3                              | 33                               | 24                             | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK9A60D      |                          | ±30                     | 9                     | 45                    | 0.83                                                           | 1200                             | 6                                | 120                              | 24                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK10A60D     |                          | ±30                     | 10                    | 45                    | 0.75                                                           | 1350                             | 6                                | 135                              | 25                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK10A60D5    |                          | ±30                     | 10                    | 45                    | 1.05                                                           | 1350                             | 15                               | 135                              | 25                             | π-MOSVII (HSD) |                                   |                                  |
|                                                                                                                                                                                                                           | TK750A60F *  |                          | ±30                     | 10                    | 40                    | 0.75                                                           | 1130                             | 8.5                              | 40                               | 30                             | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK11A60D     |                          | ±30                     | 11                    | 45                    | 0.65                                                           | 1550                             | 7                                | 165                              | 28                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK650A60F *  |                          | ±30                     | 11                    | 45                    | 0.65                                                           | 1320                             | 10                               | 47                               | 34                             | π-MOSIX        |                                   |                                  |
|                                                                                                                                                                                                                           | TK12A60D     |                          | ±30                     | 12                    | 45                    | 0.55                                                           | 1800                             | 9                                | 190                              | 38                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK13A60D     |                          | ±30                     | 13                    | 50                    | 0.43                                                           | 2300                             | 10                               | 250                              | 40                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK15A60D     |                          | ±30                     | 15                    | 50                    | 0.37                                                           | 2600                             | 11                               | 280                              | 45                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK2A65D      | 650                      | ±30                     | 2                     | 30                    | 3.26                                                           | 380                              | 2.5                              | 45                               | 9                              | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK3A65DA     |                          | ±30                     | 2.5                   | 35                    | 2.51                                                           | 490                              | 3                                | 55                               | 11                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK3A65D      |                          | ±30                     | 3                     | 35                    | 2.25                                                           | 540                              | 3                                | 60                               | 11                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK4A65DA     |                          | ±30                     | 3.5                   | 35                    | 1.9                                                            | 600                              | 4                                | 70                               | 12                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK5A65DA     |                          | ±30                     | 4.5                   | 35                    | 1.67                                                           | 700                              | 4                                | 70                               | 16                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK5A65D      |                          | ±30                     | 5                     | 40                    | 1.43                                                           | 800                              | 4                                | 100                              | 16                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK6A65D      |                          | ±30                     | 6                     | 45                    | 1.11                                                           | 1050                             | 5                                | 100                              | 20                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK7A65D      |                          | ±30                     | 7                     | 45                    | 0.98                                                           | 1200                             | 6                                | 120                              | 24                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK8A65D      |                          | ±30                     | 8                     | 45                    | 0.84                                                           | 1350                             | 6                                | 135                              | 25                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK11A65D     |                          | ±30                     | 11                    | 45                    | 0.7                                                            | 1700                             | 8                                | 157                              | 30                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK12A65D     | 800                      | ±30                     | 12                    | 50                    | 0.54                                                           | 2300                             | 10                               | 200                              | 40                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK13A65D     |                          | ±30                     | 13                    | 50                    | 0.47                                                           | 2600                             | 11                               | 280                              | 45                             | π-MOSVII       |                                   |                                  |
|                                                                                                                                                                                                                           | TK4A80E      |                          | ±30                     | 4                     | 35                    | 3.5                                                            | 650                              | 6                                | 55                               | 15                             | π-MOSVIII      |                                   |                                  |
|                                                                                                                                                                                                                           | TK5A80E      |                          | ±30                     | 5                     | 40                    | 2.4                                                            | 950                              | 8                                | 75                               | 20                             | π-MOSVIII      |                                   |                                  |
|                                                                                                                                                                                                                           | 2SK4013      |                          | ±30                     | 6                     | 45                    | 1.7                                                            | 1400                             | 30                               | 130                              | 45                             | π-MOSIV        |                                   |                                  |
|                                                                                                                                                                                                                           | TK6A80E      |                          | ±30                     | 6                     | 45                    | 1.7                                                            | 1350                             | 10                               | 110                              | 32                             | π-MOSVIII      |                                   |                                  |
| TK10A80E                                                                                                                                                                                                                  |              | ±30                      | 10                      | 50                    | 1                     | 2000                                                           | 15                               | 150                              | 46                               | π-MOSVIII                      | (3A_I)         |                                   |                                  |

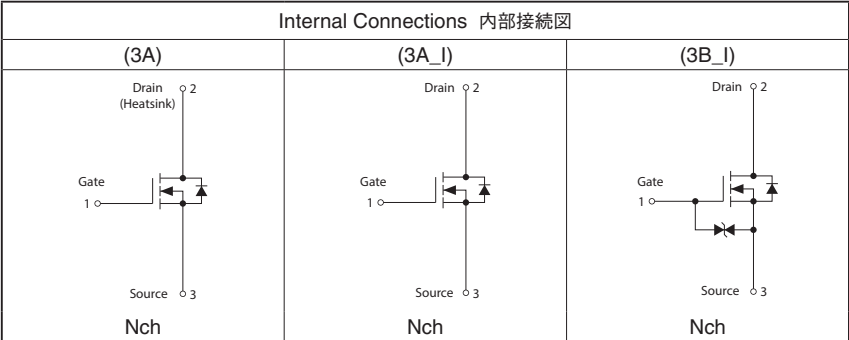
\*: New Product / 新製品

\*\*\*: Under Development / 開発中



- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

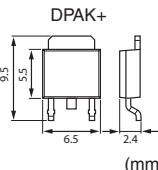
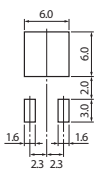
| Package                                                                                                                                                | Part Number | Absolute Maximum Ratings |                         |                       |                       | R <sub>DS(ON)</sub><br>max (Ω)<br> V <sub>GS</sub>   =<br>10 V | C <sub>iss</sub><br>typ.<br>(pF) | C <sub>rss</sub><br>typ.<br>(pF) | C <sub>oss</sub><br>typ.<br>(pF) | Q <sub>g</sub><br>typ.<br>(nC) | Series    | Internal<br>Con-<br>nec-<br>tions | Land Pattern<br>Examples<br>(mm) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|-------------------------|-----------------------|-----------------------|----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|-----------|-----------------------------------|----------------------------------|
|                                                                                                                                                        |             | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) |                                                                |                                  |                                  |                                  |                                |           |                                   |                                  |
| <div>(Continued from previous page)</div> <div></div> <div>(mm)</div> | 2SK3566     | 900                      | ±30                     | 2.5                   | 40                    | 6.4                                                            | 470                              | 10                               | 50                               | 12                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | TK3A90E     |                          | ±30                     | 2.5                   | 35                    | 4.6                                                            | 650                              | 6                                | 55                               | 15                             | π-MOSVIII | (3A_I)                            |                                  |
|                                                                                                                                                        | 2SK3564     |                          | ±30                     | 3                     | 40                    | 4.3                                                            | 700                              | 15                               | 75                               | 17                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | 2SK3798     |                          | ±30                     | 4                     | 40                    | 3.5                                                            | 800                              | 20                               | 85                               | 26                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | TK5A90E     |                          | ±30                     | 4.5                   | 40                    | 3.1                                                            | 950                              | 8                                | 75                               | 20                             | π-MOSVIII | (3A_I)                            |                                  |
|                                                                                                                                                        | 2SK3565     |                          | ±30                     | 5                     | 45                    | 2.5                                                            | 1150                             | 20                               | 100                              | 28                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | 2SK3742     |                          | ±30                     | 5                     | 45                    | 2.5                                                            | 1150                             | 20                               | 110                              | 25                             | π-MOSIV   |                                   |                                  |
|                                                                                                                                                        | 2SK4014     |                          | ±30                     | 6                     | 45                    | 2                                                              | 1400                             | 30                               | 130                              | 45                             | π-MOSIV   |                                   |                                  |
|                                                                                                                                                        | TK7A90E     |                          | ±30                     | 7                     | 45                    | 2                                                              | 1350                             | 10                               | 110                              | 32                             | π-MOSVIII | (3A_I)                            |                                  |
|                                                                                                                                                        | 2SK3799     |                          | ±30                     | 8                     | 50                    | 1.3                                                            | 2200                             | 45                               | 190                              | 60                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | TK9A90E     |                          | ±30                     | 9                     | 50                    | 1.3                                                            | 2000                             | 15                               | 150                              | 46                             | π-MOSVIII | (3A_I)                            |                                  |
| <div></div> <div>(mm)</div>                                           | TK15J50D    | 500                      | ±30                     | 15                    | 210                   | 0.4                                                            | 1800                             | 9                                | 190                              | 38                             | π-MOSVII  | (3A)                              |                                  |
|                                                                                                                                                        | TK20J50D    |                          | ±30                     | 20                    | 280                   | 0.27                                                           | 2600                             | 11                               | 280                              | 45                             | π-MOSVII  |                                   |                                  |
|                                                                                                                                                        | TK12J55D    | 550                      | ±30                     | 12                    | 190                   | 0.57                                                           | 1550                             | 7                                | 165                              | 28                             | π-MOSVII  |                                   |                                  |
|                                                                                                                                                        | TK16J55D    |                          | ±30                     | 16                    | 250                   | 0.37                                                           | 2300                             | 10                               | 250                              | 40                             | π-MOSVII  |                                   |                                  |
|                                                                                                                                                        | TK19J55D    |                          | ±30                     | 19                    | 280                   | 0.33                                                           | 2600                             | 11                               | 280                              | 45                             | π-MOSVII  |                                   |                                  |
|                                                                                                                                                        | 2SK3633     | 800                      | ±30                     | 7                     | 150                   | 1.7                                                            | 1500                             | 25                               | 140                              | 35                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | TK10J80E    |                          | ±30                     | 10                    | 250                   | 1                                                              | 2000                             | 15                               | 150                              | 46                             | π-MOSVIII | (3A)                              |                                  |
|                                                                                                                                                        | 2SK3700     | 900                      | ±30                     | 5                     | 150                   | 2.5                                                            | 1150                             | 20                               | 100                              | 28                             | π-MOSIV   | (3B_I)                            |                                  |
|                                                                                                                                                        | 2SK4115     |                          | ±30                     | 7                     | 150                   | 2                                                              | 1650                             | 30                               | 140                              | 45                             | π-MOSIV   |                                   |                                  |
|                                                                                                                                                        | TK7J90E     |                          | ±30                     | 7                     | 200                   | 2                                                              | 1350                             | 10                               | 110                              | 32                             | π-MOSVIII | (3A)                              |                                  |
|                                                                                                                                                        | TK9J90E     |                          | ±30                     | 9                     | 250                   | 1.3                                                            | 2000                             | 15                               | 150                              | 46                             | π-MOSVIII |                                   |                                  |
|                                                                                                                                                        | 2SK4207     |                          | ±30                     | 13                    | 150                   | 0.95                                                           | 2790                             | 25                               | 300                              | 45                             | π-MOSIV   | (3B_I)                            |                                  |



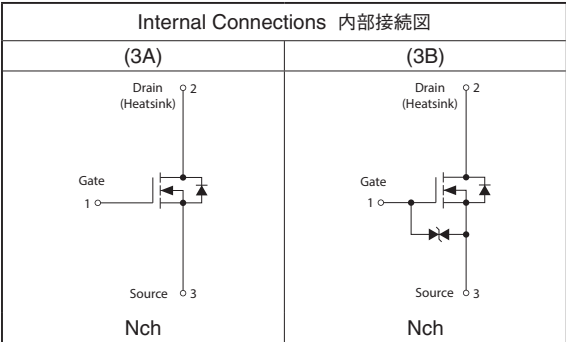
- ・ The internal connection diagrams only show the general configurations of the circuits.
- ・ 内部接続図はイメージ図です。

Automotive MOSFETs / 車載 MOSFET

Automotive Power MOSFETs / 車載パワー MOSFET  
(Single N-Channel) / (シングル N チャンネル)

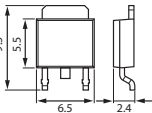
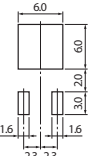
| Package                                                                                  | Part Number  | Absolute Maximum Ratings |                         |                       |                       |                         | R <sub>DS(ON)</sub> max<br>(mΩ) |                            |                              | Ciss<br>typ.<br>(pF) | Crss<br>typ.<br>(pF) | Coss<br>typ.<br>(pF) | Qg<br>typ.<br>(nC) | Series      | Internal<br>Conne-<br>ctions | Land Pattern<br>Examples<br>(mm)                                                    |
|------------------------------------------------------------------------------------------|--------------|--------------------------|-------------------------|-----------------------|-----------------------|-------------------------|---------------------------------|----------------------------|------------------------------|----------------------|----------------------|----------------------|--------------------|-------------|------------------------------|-------------------------------------------------------------------------------------|
|                                                                                          |              | V <sub>DSS</sub><br>(V)  | V <sub>GSS</sub><br>(V) | I <sub>D</sub><br>(A) | P <sub>D</sub><br>(W) | T <sub>ch</sub><br>(°C) | V <sub>GS</sub>   =<br>10 V     | V <sub>GS</sub>   =<br>6 V | V <sub>GS</sub>   =<br>4.5 V |                      |                      |                      |                    |             |                              |                                                                                     |
| <br>(mm) | TK15S04N1L   | 40                       | ±20                     | 15                    | 46                    | 175                     | 17.8                            | —                          | 37                           | 610                  | 50                   | 390                  | 10                 | U-MOSVIII-H | (3B)                         |  |
|                                                                                          | TK35S04K3L   |                          | ±20                     | 35                    | 58                    | 175                     | 10.3                            | 15                         | —                            | 1370                 | 180                  | 320                  | 28                 | U-MOSIV     |                              |                                                                                     |
|                                                                                          | TK65S04N1L   |                          | ±20                     | 65                    | 107                   | 175                     | 4.3                             | —                          | 7.8                          | 2550                 | 130                  | 1430                 | 39                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK100S04N1L  |                          | ±20                     | 100                   | 180                   | 175                     | 2.3                             | —                          | 4.5                          | 5490                 | 220                  | 3000                 | 76                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK1R4S04PB   |                          | ±20                     | 120                   | 180                   | 175                     | 1.35                            | 1.9                        | —                            | 5500                 | 490                  | 3400                 | 103                | U-MOSIX-H   |                              |                                                                                     |
|                                                                                          | TK8S06K3L    | 60                       | ±20                     | 8                     | 25                    | 175                     | 54                              | 80                         | —                            | 400                  | 40                   | 80                   | 10                 | U-MOSIV     | (3B)                         |                                                                                     |
|                                                                                          | TK20S06K3L   |                          | ±20                     | 20                    | 38                    | 175                     | 29                              | 40                         | —                            | 780                  | 75                   | 136                  | 18                 | U-MOSIV     |                              |                                                                                     |
|                                                                                          | TK25S06N1L   |                          | ±20                     | 25                    | 57                    | 175                     | 18.5                            | —                          | 36.8                         | 855                  | 69                   | 490                  | 15                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK30S06K3L   |                          | ±20                     | 30                    | 58                    | 175                     | 18                              | 30                         | —                            | 1350                 | 130                  | 230                  | 28                 | U-MOSIV     |                              |                                                                                     |
|                                                                                          | TK40S06N1L   |                          | ±20                     | 40                    | 88.2                  | 175                     | 10.5                            | —                          | 18                           | 1650                 | 107                  | 835                  | 26                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK60S06K3L   |                          | ±20                     | 60                    | 88                    | 175                     | 8                               | 12.3                       | —                            | 2900                 | 280                  | 460                  | 60                 | U-MOSIV     |                              |                                                                                     |
|                                                                                          | TK90S06N1L   |                          | ±20                     | 90                    | 157                   | 175                     | 3.3                             | —                          | 5.2                          | 5400                 | 350                  | 2630                 | 81                 | U-MOSVIII-H | (3A)                         |                                                                                     |
|                                                                                          | TK7S10N1Z    | 100                      | ±20                     | 7                     | 50                    | 175                     | 48                              | —                          | —                            | 470                  | 36                   | 260                  | 7.1                | U-MOSVIII-H | (3B)                         |                                                                                     |
|                                                                                          | TK11S10N1L * |                          | ±20                     | 11                    | 65                    | 175                     | 28                              | —                          | 50                           | 850                  | 67                   | 370                  | 15                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK33S10N1L   |                          | ±20                     | 33                    | 125                   | 175                     | 9.7                             | —                          | 16.2                         | 2250                 | 145                  | 1010                 | 33                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK33S10N1Z   |                          | ±20                     | 33                    | 125                   | 175                     | 9.7                             | —                          | —                            | 2050                 | 140                  | 1070                 | 28                 | U-MOSVIII-H |                              |                                                                                     |
|                                                                                          | TK55S10N1    |                          | ±20                     | 55                    | 157                   | 175                     | 6.5                             | —                          | —                            | 3280                 | 210                  | 1520                 | 49                 | U-MOSVIII-H | (3A)                         |                                                                                     |
|                                                                                          | TK60S10N1L   |                          | ±20                     | 60                    | 180                   | 175                     | 6.11                            | 9.25                       | —                            | 4320                 | 220                  | 1480                 | 60                 | U-MOSVIII-H |                              |                                                                                     |

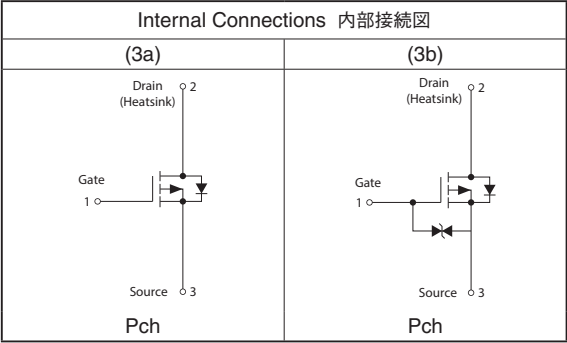
\*: New Product / 新製品



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(Single P-Channel) / (シングルPチャンネル)

| Package                                                                                   | Part Number | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ) |                         |                           | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                          |
|-------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|----------------------|------------------------------|-------------------------|---------------------------|----------------|----------------|----------------|--------------|---------|----------------------|-------------------------------------------------------------------------------------|
|                                                                                           |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 6 V | V <sub>GS</sub>   = 4.5 V |                |                |                |              |         |                      |                                                                                     |
| <br>(mm) | TJ10S04M3L  | -40                      | +10/-20              | -10                | 27                 | 175                  | 44                           | 62                      | —                         | 930            | 90             | 140            | 19           | U-MOSVI | (3b)                 |  |
|                                                                                           | TJ20S04M3L  |                          | +10/-20              | -20                | 41                 | 175                  | 22.2                         | 32                      | —                         | 1850           | 180            | 250            | 37           | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ40S04M3L  |                          | +10/-20              | -40                | 68                 | 175                  | 9.1                          | 13                      | —                         | 4140           | 410            | 510            | 83           | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ60S04M3L  |                          | +10/-20              | -60                | 90                 | 175                  | 6.3                          | 9.4                     | —                         | 6510           | 570            | 780            | 125          | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ80S04M3L  |                          | +10/-20              | -80                | 100                | 175                  | 5.2                          | 7.9                     | —                         | 7770           | 740            | 970            | 158          | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ90S04M3L  |                          | +10/-20              | -90                | 180                | 175                  | 4.3                          | —                       | 6.0                       | 7700           | 825            | 990            | 172          | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ8S06M3L   | -60                      | +10/-20              | -8                 | 27                 | 175                  | 104                          | 130                     | —                         | 890            | 60             | 100            | 19           | U-MOSVI | (3b)                 |                                                                                     |
|                                                                                           | TJ15S06M3L  |                          | +10/-20              | -15                | 41                 | 175                  | 50                           | 63                      | —                         | 1770           | 130            | 180            | 36           | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ30S06M3L  |                          | +10/-20              | -30                | 68                 | 175                  | 21.8                         | 28                      | —                         | 3950           | 270            | 360            | 80           | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ50S06M3L  |                          | +10/-20              | -50                | 90                 | 175                  | 13.8                         | 17.4                    | —                         | 6290           | 410            | 560            | 124          | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ60S06M3L  |                          | +10/-20              | -60                | 100                | 175                  | 11.2                         | 14.5                    | —                         | 7760           | 530            | 690            | 156          | U-MOSVI |                      |                                                                                     |
|                                                                                           | TJ15S10M3   |                          | -100                 | +10/-20            | -15                | 75                   | 175                          | 130                     | —                         | —              | 3200           | 135            | 190          | 69      |                      |                                                                                     |

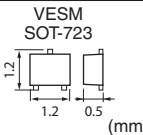
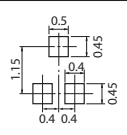
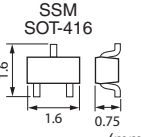
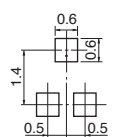
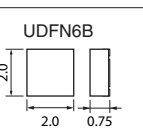
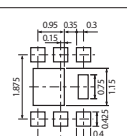
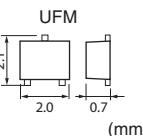
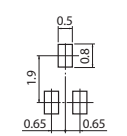
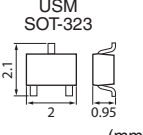
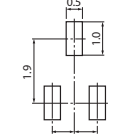
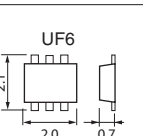
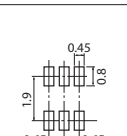


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

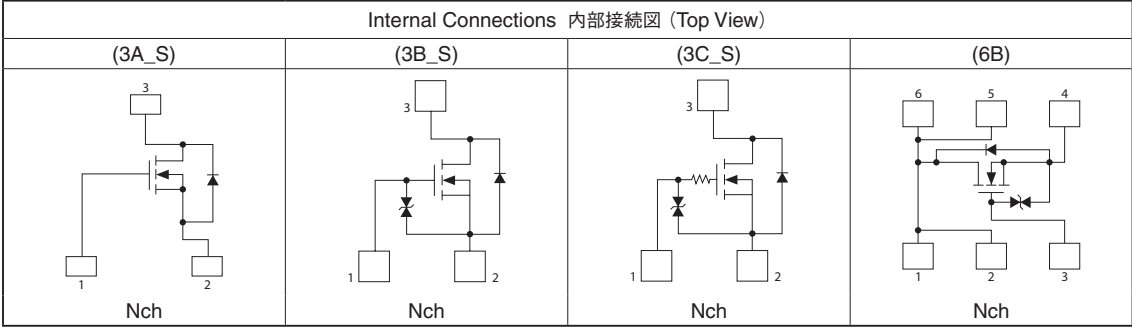


Automotive Small-Package Series / 車載小型パッケージシリーズ  
(Single N-Channel) / (シングルNチャンネル)

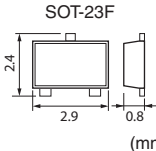
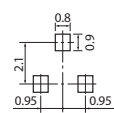
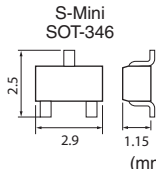
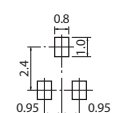
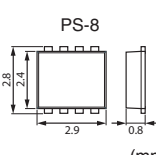
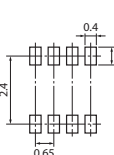
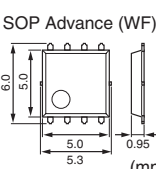
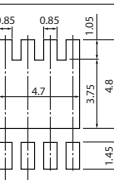
(1/2)

| Package                                                                                     | Part Number    | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ)       |                                   |                                     |                                   |                                     |                                     | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series      | Internal Connections | Land Pattern Examples (mm) |                                                                                       |        |
|---------------------------------------------------------------------------------------------|----------------|--------------------------|----------------------|--------------------|--------------------|----------------------|------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|----------------|----------------|----------------|--------------|-------------|----------------------|----------------------------|---------------------------------------------------------------------------------------|--------|
|                                                                                             |                | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>B</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | I <sub>V<sub>GS</sub></sub> = 10 V | I <sub>V<sub>GS</sub></sub> = 6 V | I <sub>V<sub>GS</sub></sub> = 4.5 V | I <sub>V<sub>GS</sub></sub> = 4 V | I <sub>V<sub>GS</sub></sub> = 2.5 V | I <sub>V<sub>GS</sub></sub> = 1.8 V |                |                |                |              |             |                      |                            | I <sub>V<sub>GS</sub></sub> = 1.5 V                                                   |        |
| <br>(mm)   | SSM3K35MFV     | 20                       | ±10                  | 0.18               | 0.15               | 150                  | —                                  | —                                 | —                                   | 3000                              | 4000                                | —                                   | 8000           | 9.5            | 4.1            | 9.5          | —           | π-MOSVI              | (3C_S)                     |    |        |
|                                                                                             | SSM3K56MFV     |                          | ±8                   | 0.8                | 0.15               | 150                  | —                                  | —                                 | 235                                 | —                                 | 300                                 | 480                                 | 840            | 55             | 6              | 16           | 1           | U-MOSVII-H           | (3B_S)                     |                                                                                       |        |
|                                                                                             | SSM3K44MFV     | 30                       | ±20                  | 0.1                | 0.15               | 150                  | —                                  | —                                 | —                                   | 4000                              | 7000                                | —                                   | —              | 8.5            | 5.3            | 9.4          | —           | π-MOSVI              | (3C_S)                     |                                                                                       |        |
| <br>(mm)   | SSM3K35FS      | 20                       | ±10                  | 0.18               | 0.1                | 150                  | —                                  | —                                 | —                                   | 3000                              | 4000                                | —                                   | 8000           | 9.5            | 4.1            | 9.5          | —           | π-MOSVI              | (3C_S)                     |    |        |
|                                                                                             | SSM3K56FS      |                          | ±8                   | 0.8                | 0.15               | 150                  | —                                  | —                                 | 235                                 | —                                 | 300                                 | 480                                 | 840            | 55             | 6              | 16           | 1           | U-MOSVII-H           | (3B_S)                     |                                                                                       |        |
|                                                                                             | SSM3K44FS      | 30                       | ±20                  | 0.1                | 0.15               | 150                  | —                                  | —                                 | —                                   | 4000                              | 7000                                | —                                   | —              | 8.5            | 5.3            | 9.4          | —           | π-MOSVI              | (3C_S)                     |                                                                                       |        |
|                                                                                             | SSM3K72KFS *   | 60                       | ±20                  | 0.3                | 0.15               | 150                  | 1500                               | —                                 | 1750                                | —                                 | —                                   | —                                   | —              | 26             | 1.3            | 5.5          | 0.39        | U-MOSVII-H           | (3C_S)                     |                                                                                       |        |
| <br>(mm)   | SSM6K504NU     | 30                       | ±20                  | 9                  | 1.25               | 150                  | 19.5                               | —                                 | 26                                  | —                                 | —                                   | —                                   | —              | 620            | 42             | 110          | 4.8         | U-MOSVII-H           | (6B)                       |    |        |
| <br>(mm) | SSM3K62TU *    | 20                       | ±8                   | 0.8                | 0.5                | 150                  | —                                  | —                                 | 57                                  | —                                 | 68                                  | 89                                  | 139            | 177            | 17             | 52           | 2           | U-MOSVII-H           | (3C_S)                     |  |        |
|                                                                                             | SSM3K122TU     |                          | ±10                  | 2                  | 0.5                | 150                  | —                                  | —                                 | —                                   | 123                               | 161                                 | 211                                 | 304            | 195            | 29             | 35           | 3.4         | U-MOSIII             | (3B_S)                     |                                                                                       |        |
|                                                                                             | SSM3K121TU     |                          | ±10                  | 3.2                | 0.5                | 150                  | —                                  | —                                 | —                                   | 48                                | 63                                  | 93                                  | 140            | 400            | 60             | 68           | 5.9         | U-MOSIII             |                            |                                                                                       |        |
|                                                                                             | SSM3K123TU     |                          | ±10                  | 4.2                | 0.5                | 150                  | —                                  | —                                 | —                                   | 28                                | 32                                  | 43                                  | 66             | 1010           | 150            | 162          | 13.6        | U-MOSIII             |                            |                                                                                       |        |
|                                                                                             | SSM3K127TU     | 30                       | ±12                  | 2                  | 0.5                | 150                  | —                                  | —                                 | —                                   | 123                               | 167                                 | 286                                 | —              | 123            | 18             | 43           | 1.5         | U-MOSIII             | (3A_S)                     |                                                                                       |        |
|                                                                                             | SSM3K116TU     |                          | ±12                  | 2.2                | 0.5                | 150                  | —                                  | —                                 | 100                                 | —                                 | 135                                 | —                                   | —              | 245            | 33             | 41           | —           | U-MOSIII             |                            |                                                                                       |        |
|                                                                                             | SSM3K131TU     |                          | ±20                  | 6                  | 0.5                | 150                  | 27.6                               | —                                 | 41.5                                | —                                 | —                                   | —                                   | —              | 450            | 77             | 120          | 10.1        | U-MOSIV              |                            |                                                                                       |        |
|                                                                                             | SSM3K2615TU *  | 60                       | ±20                  | 2                  | 0.8                | 150                  | 300                                | —                                 | —                                   | 440                               | —                                   | —                                   | —              | 150            | 25             | 70           | 6           | π-MOSV               | (3C_S)                     |                                                                                       | (3B_S) |
|                                                                                             | SSM3K341TU *   |                          | ±20                  | 6                  | 1                  | 175                  | 36                                 | —                                 | 51                                  | 69                                | —                                   | —                                   | —              | 550            | 35             | 300          | 9.3         | U-MOSVIII-H          |                            |                                                                                       |        |
| SSM3K361TU *                                                                                | 100            | ±20                      | 3.5                  | 1                  | 175                | 69                   | —                                  | 92                                | —                                   | —                                 | —                                   | —                                   | 430            | 22             | 160            | 3.2          | U-MOSVIII-H | (3B_S)               |                            |                                                                                       |        |
| <br>(mm) | SSM3K15FU      | 30                       | ±20                  | 0.1                | 0.15               | 150                  | —                                  | —                                 | —                                   | 4000                              | 7000                                | —                                   | —              | 7.8            | 3.6            | 8.8          | —           | π-MOSVI              | (3C_S)                     |  |        |
|                                                                                             | SSM3K7002KFU * | 60                       | ±20                  | 0.4                | 0.15               | 150                  | 1500                               | —                                 | 1750                                | —                                 | —                                   | —                                   | —              | 26             | 1.3            | 5.5          | 0.39        | U-MOSVII-H           |                            |                                                                                       |        |
| <br>(mm) | SSM6K404TU     | 20                       | ±10                  | 3                  | 0.5                | 150                  | —                                  | —                                 | —                                   | 55                                | 70                                  | 100                                 | 147            | 400            | 60             | 68           | 5.9         | U-MOSIII             | (6B)                       |  |        |
|                                                                                             | SSM6K403TU     |                          | ±10                  | 4.2                | 0.5                | 150                  | —                                  | —                                 | —                                   | 28                                | 32                                  | 43                                  | 66             | 1050           | 160            | 175          | 16.8        | U-MOSIII             |                            |                                                                                       |        |
|                                                                                             | SSM6K406TU     | 30                       | ±20                  | 4.4                | 0.5                | 150                  | 25                                 | —                                 | 38.5                                | —                                 | —                                   | —                                   | —              | 490            | 105            | 143          | 12.4        | U-MOSIV              |                            |                                                                                       |        |
|                                                                                             | SSM6K407TU     | 60                       | ±20                  | 2                  | 0.5                | 150                  | 300                                | —                                 | —                                   | 440                               | —                                   | —                                   | —              | 150            | 25             | 70           | 6           | π-MOSV               |                            |                                                                                       |        |

∗: New Product / 新製品

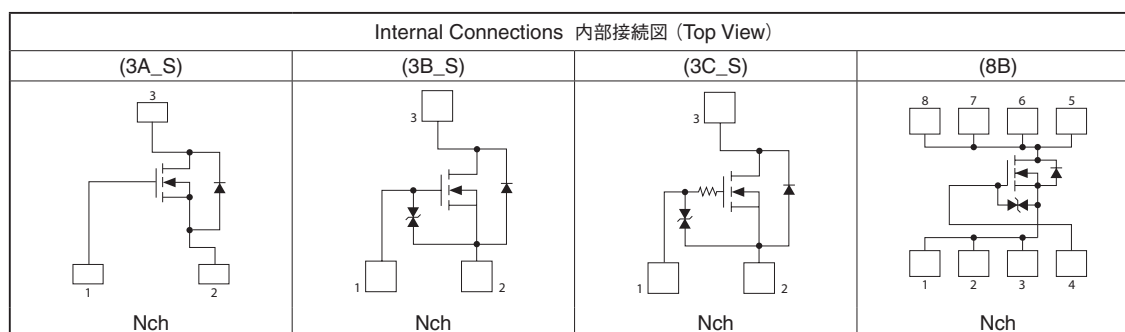


・ The internal connection diagrams only show the general configurations of the circuits.  
・ 内部接続図はイメージ図です。

| Package                                                                                                         | Part Number   | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                         |                           |                           | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series     | Internal Connections | Land Pattern Examples (mm)                                                          |                                                                                       |
|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------------|----------------------|--------------------|--------------------|----------------------|------------------------------|-------------------------|---------------------------|-------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------------------|------------|----------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                 |               | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | V <sub>GS</sub>   = 10 V     | V <sub>GS</sub>   = 6 V | V <sub>GS</sub>   = 4.5 V | V <sub>GS</sub>   = 4 V | V <sub>GS</sub>   = 2.5 V | V <sub>GS</sub>   = 1.8 V |                            |                            |                            |                          |            |                      |                                                                                     | V <sub>GS</sub>   = 1.5 V                                                             |
| <br>SOT-23F<br>(mm)            | SSM3K336R *   | 30                       | ±20                  | 3                  | 1                  | 150                  | 95                           | —                       | 140                       | —                       | —                         | —                         | 126                        | 8                          | 26                         | 1.7                      | U-MOSVII-H | (3B_S)               |  |                                                                                       |
|                                                                                                                 | SSM3K329R     |                          | ±12                  | 3.5                | 1                  | 150                  | —                            | —                       | —                         | 126                     | 170                       | 289                       | —                          | 123                        | 18                         | 43                       | 1.5        |                      |                                                                                     | U-MOSIII                                                                              |
|                                                                                                                 | SSM3K376R     |                          | +12/-8               | 4                  | 1                  | 150                  | —                            | —                       | 56                        | —                       | 72                        | 109                       | —                          | 200                        | 13                         | 40                       | 2.2        |                      |                                                                                     | U-MOSVII-H                                                                            |
|                                                                                                                 | SSM3K333R     |                          | ±20                  | 6                  | 1                  | 150                  | 28                           | —                       | 42                        | —                       | —                         | —                         | —                          | 436                        | 28                         | 77                       | 3.4        | U-MOSVII-H           |                                                                                     | (3A_S)                                                                                |
|                                                                                                                 | SSM3K335R     |                          | ±20                  | 6                  | 1                  | 150                  | 38                           | —                       | 56                        | —                       | —                         | —                         | —                          | 340                        | 20                         | 60                       | 2.7        | U-MOSVII-H           |                                                                                     | (3B_S)                                                                                |
|                                                                                                                 | SSM3K2615R    | 60                       | ±20                  | 2                  | 1                  | 150                  | 300                          | —                       | —                         | 440                     | —                         | —                         | —                          | 150                        | 25                         | 70                       | 6          | π-MOSV               |                                                                                     | (3C_S)                                                                                |
|                                                                                                                 | SSM3K318R     |                          | ±20                  | 2.5                | 1                  | 150                  | 107                          | —                       | 145                       | —                       | —                         | —                         | —                          | 235                        | 23                         | 31                       | 7          | U-MOSIV              |                                                                                     | (3B_S)                                                                                |
|                                                                                                                 | SSM3K341R *   |                          | ±20                  | 6                  | 1.2                | 175                  | 36                           | —                       | 51                        | 69                      | —                         | —                         | —                          | 550                        | 35                         | 300                      | 9.3        | U-MOSVIII-H          |                                                                                     | (3B_S)                                                                                |
|                                                                                                                 | SSM3K361R *   | 100                      | ±20                  | 3.5                | 1.2                | 175                  | 69                           | —                       | 92                        | —                       | —                         | —                         | —                          | 430                        | 22                         | 160                      | 3.2        | U-MOSVIII-H          |                                                                                     | (3C_S)                                                                                |
| <br>S-Mini SOT-346<br>(mm)     | SSM3K15F      | 30                       | ±20                  | 0.1                | 0.2                | 150                  | —                            | —                       | —                         | 4000                    | 7000                      | —                         | —                          | 7.8                        | 3.6                        | 8.8                      | —          | π-MOSVI              | (3C_S)                                                                              |    |
|                                                                                                                 | SSM3K7002KF * | 60                       | ±20                  | 0.4                | 0.27               | 150                  | 1500                         | —                       | 1750                      | —                       | —                         | —                         | —                          | 26                         | 1.3                        | 5.5                      | 0.39       | U-MOSVII-H           |                                                                                     |                                                                                       |
| <br>PS-8<br>(mm)              | TPCP8011      | 40                       | ±20                  | 5                  | 1.96 (1)           | 175                  | 31.8                         | 51.2                    | —                         | —                       | —                         | —                         | —                          | 505                        | 66                         | 115                      | 11.8       | U-MOSIV              | (8B)                                                                                |   |
|                                                                                                                 | TPCP8010      |                          | ±20                  | 6                  | 1.96 (1)           | 175                  | 23.8                         | 38.4                    | —                         | —                       | —                         | —                         | —                          | 600                        | 75                         | 132                      | 13.1       | U-MOSIV              |                                                                                     |                                                                                       |
|                                                                                                                 | TPCP8009      |                          | ±20                  | 10                 | 2.01 (1)           | 175                  | 11.8                         | 19.5                    | —                         | —                       | —                         | —                         | —                          | 1250                       | 165                        | 265                      | 25.1       | U-MOSIV              |                                                                                     |                                                                                       |
|                                                                                                                 | TPCP8013      | 60                       | ±20                  | 4                  | 1.96 (1)           | 175                  | 51.8                         | 77.9                    | —                         | —                       | —                         | —                         | —                          | 515                        | 48                         | 86                       | 12         | U-MOSIV              |                                                                                     |                                                                                       |
|                                                                                                                 | TPCP8012      |                          | ±20                  | 8                  | 2.01 (1)           | 175                  | 20.2                         | 29.1                    | —                         | —                       | —                         | —                         | —                          | 1160                       | 120                        | 200                      | 26.6       | U-MOSIV              |                                                                                     |                                                                                       |
| <br>SOP Advance (WF)<br>(mm) | TPH4R304NC    | 40                       | ±20                  | 40                 | 55                 | 175                  | 4.3                          | —                       | 8.8                       | —                       | —                         | —                         | —                          | 2450                       | 145                        | 1380                     | 35         | U-MOSVIII-H          | (8B)                                                                                |  |
|                                                                                                                 | TPH1R104PB *  |                          | ±20                  | 120                | 132                | 175                  | 1.14                         | 1.95                    | —                         | —                       | —                         | —                         | —                          | 4560                       | 320                        | 2940                     | 55         | U-MOSIX-H            |                                                                                     |                                                                                       |
|                                                                                                                 | TPHR7904PB *  |                          | ±20                  | 150                | 170                | 175                  | 0.79                         | 1.3                     | —                         | —                       | —                         | —                         | —                          | —                          | 6340                       | 490                      | 4300       | 85                   |                                                                                     |                                                                                       |

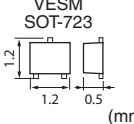
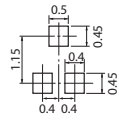
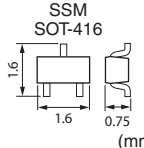
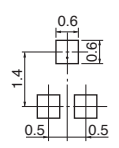
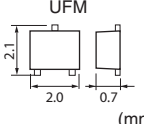
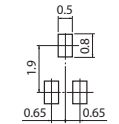
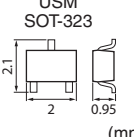
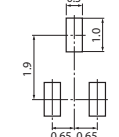
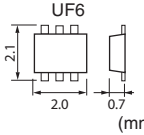
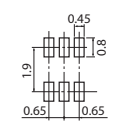
Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。

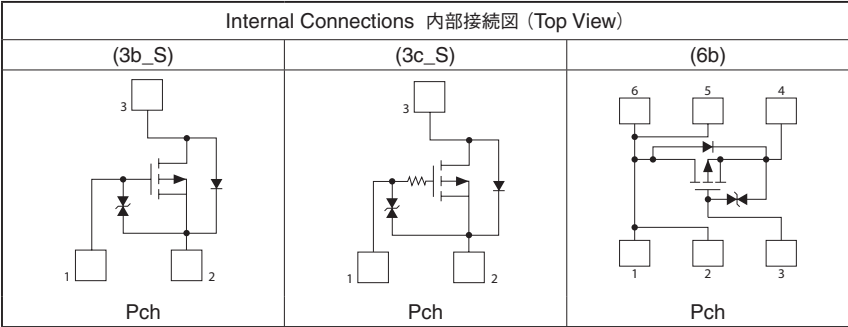
\*: New Product / 新製品



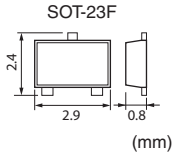
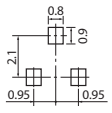
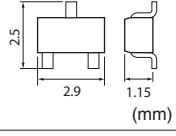
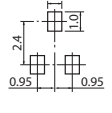
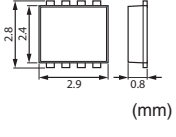
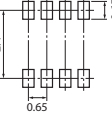
• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

| Package                                                                                                        | Part Number | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                          |                            |                            | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series | Internal Connections | Land Pattern Examples (mm) |                                                                                       |
|----------------------------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|--------------------|----------------------|------------------------------|--------------------------|----------------------------|--------------------------|----------------------------|----------------------------|----------------|----------------|----------------|--------------|--------|----------------------|----------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | I <sub>V</sub> gs1 = 10 V    | I <sub>V</sub> gs1 = 6 V | I <sub>V</sub> gs1 = 4.5 V | I <sub>V</sub> gs1 = 4 V | I <sub>V</sub> gs1 = 2.5 V | I <sub>V</sub> gs1 = 1.8 V |                |                |                |              |        |                      |                            | I <sub>V</sub> gs1 = 1.5 V                                                            |
| <div>VESM<br/>SOT-723</div>   | SSM3J35MFV  | -20                      | ±10                  | -0.1               | 0.15               | 150                  | —                            | —                        | —                          | 8000                     | 11000                      | —                          | 22000          | 12.2           | 6.5            | 10.4         | —      | π-MOSVI              | (3c_S)                     |    |
|                                                                                                                | SSM3J66MFV  |                          | +6/-8                | -0.8               | 0.5                | 150                  | —                            | —                        | 390                        | —                        | 480                        | 660                        | 900            | 100            | 10             | 16           | 1.6    | U-MOSVI              | (3b_S)                     |                                                                                       |
|                                                                                                                | SSM3J36MFV  |                          | ±8                   | -0.33              | 0.15               | 150                  | —                            | —                        | 1310                       | —                        | —                          | 2700                       | 3600           | 43             | 6.1            | 10.3         | 1.2    | U-MOSIII             | (3c_S)                     |                                                                                       |
|                                                                                                                | SSM3J15FV   | -30                      | ±20                  | -0.1               | 0.15               | 150                  | —                            | —                        | —                          | 12000                    | 32000                      | —                          | —              | 9.1            | 3.5            | 8.6          | —      | π-MOSVI              | (3c_S)                     |                                                                                       |
| <div>SSM<br/>SOT-416</div>    | SSM3J35FS   | -20                      | ±10                  | -0.1               | 0.1                | 150                  | —                            | —                        | —                          | 8000                     | 11000                      | —                          | 22000          | 12.2           | 6.5            | 10.4         | —      | π-MOSVI              | (3c_S)                     |    |
|                                                                                                                | SSM3J36FS   |                          | ±8                   | -0.33              | 0.15               | 150                  | —                            | —                        | 1310                       | —                        | —                          | 2700                       | 3600           | 43             | 6.1            | 10.3         | 1.2    | U-MOSIII             |                            |                                                                                       |
|                                                                                                                | SSM3J15FS   | -30                      | ±20                  | -0.1               | 0.1                | 150                  | —                            | —                        | —                          | 12000                    | 32000                      | —                          | —              | 9.1            | 3.5            | 8.6          | —      | π-MOSVI              |                            |                                                                                       |
| <div>UFM</div>               | SSM3J145TU  | -20                      | +6/-8                | -3.0               | 0.5                | 150                  | —                            | —                        | 103                        | —                        | 132                        | 180                        | 260            | 270            | 32             | 40           | 4.6    | U-MOSVI              | (3b_S)                     |   |
|                                                                                                                | SSM3J144TU  |                          | +6/-8                | -3.2               | 0.5                | 150                  | —                            | —                        | 93                         | —                        | 123                        | 168                        | 240            | 290            | 32             | 44           | 4.7    | U-MOSVI              |                            |                                                                                       |
|                                                                                                                | SSM3J140TU  |                          | +6/-8                | -4.4               | 0.5                | 150                  | —                            | —                        | 25.8                       | —                        | 31                         | 41.1                       | 63.2           | 1800           | 190            | 205          | 24.8   | U-MOSVI              |                            |                                                                                       |
|                                                                                                                | SSM3J143TU  |                          | +6/-8                | -5.5               | 0.5                | 150                  | —                            | —                        | 29.8                       | —                        | 39.7                       | 56                         | 88.4           | 840            | 99             | 118          | 12.8   | U-MOSVI              |                            |                                                                                       |
|                                                                                                                | SSM3J112TU  | -30                      | ±20                  | -1.1               | 0.5                | 150                  | 390                          | —                        | —                          | 790                      | —                          | —                          | —              | 86             | 14             | 25           | —      | U-MOSII              |                            |                                                                                       |
|                                                                                                                | SSM3J118TU  |                          | ±20                  | -1.4               | 0.5                | 150                  | 240                          | —                        | —                          | 480                      | —                          | —                          | —              | 137            | 20             | 39           | —      | U-MOSII              |                            |                                                                                       |
|                                                                                                                | SSM3J117TU  |                          | ±20                  | -2                 | 0.5                | 150                  | 117                          | —                        | —                          | 225                      | —                          | —                          | —              | 280            | 45             | 80           | —      | U-MOSII              |                            |                                                                                       |
| <div>USM<br/>SOT-323</div>  | SSM3J36TU   | -20                      | ±8                   | -0.33              | 0.5                | 150                  | —                            | —                        | 1310                       | —                        | —                          | 2700                       | 3600           | 43             | 6.1            | 10.3         | 1.2    | U-MOSIII             | (3c_S)                     |  |
|                                                                                                                | SSM3J15FU   | -30                      | ±20                  | -0.1               | 0.15               | 150                  | —                            | —                        | —                          | 12000                    | 32000                      | —                          | —              | 9.1            | 3.5            | 8.6          | —      | π-MOSVI              |                            |                                                                                       |
| <div>UF6</div>              | SSM6J50TU   | -20                      | ±10                  | -2.5               | 0.5                | 150                  | —                            | —                        | 64                         | —                        | 100                        | —                          | —              | 800            | 120            | 160          | —      | U-MOSIV              | (6b)                       |  |
|                                                                                                                | SSM6J424TU  |                          | +6/-8                | -6.0               | 1                  | 150                  | —                            | —                        | 22.5                       | —                        | 26                         | 36                         | 54             | 1650           | 90             | 220          | 23.1   | U-MOSVI              |                            |                                                                                       |
|                                                                                                                | SSM6J422TU  |                          | +6/-8                | -4.0               | 1                  | 150                  | —                            | —                        | 42.7                       | —                        | 51.4                       | 67.8                       | 99.6           | 840            | 99             | 118          | 12.8   | U-MOSVI              |                            |                                                                                       |
|                                                                                                                | SSM6J402TU  | -30                      | ±20                  | -2                 | 0.5                | 150                  | 117                          | —                        | —                          | 225                      | —                          | —                          | —              | 280            | 45             | 80           | 5.3    | U-MOSII              |                            |                                                                                       |
|                                                                                                                | SSM6J410TU  |                          | ±20                  | -2.1               | 0.5                | 150                  | 216                          | —                        | —                          | 393                      | —                          | —                          | —              | 120            | 21             | 32           | 2.9    | U-MOSIII             |                            |                                                                                       |
|                                                                                                                | SSM6J401TU  |                          | ±20                  | -2.5               | 0.5                | 150                  | 73                           | —                        | —                          | 145                      | —                          | —                          | —              | 730            | 90             | 110          | 16     | U-MOSIII             |                            |                                                                                       |

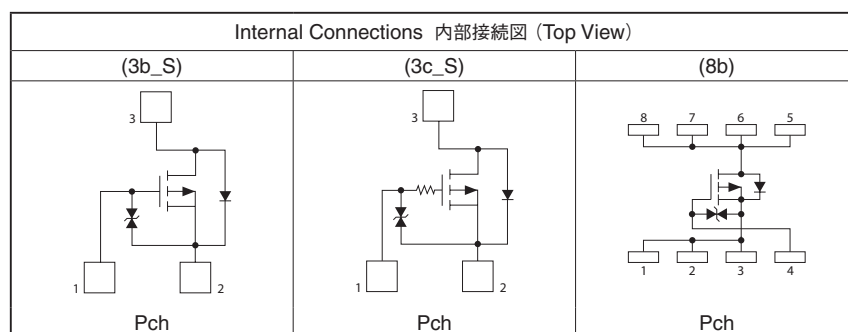


- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

| Package                                                                                                     | Part Number | Absolute Maximum Ratings |                      |                    |                     |                      | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                          |                            |                            |                            | C <sub>iss</sub> typ. (pF) | C <sub>rss</sub> typ. (pF) | C <sub>oss</sub> typ. (pF) | Q <sub>g</sub> typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                            |
|-------------------------------------------------------------------------------------------------------------|-------------|--------------------------|----------------------|--------------------|---------------------|----------------------|------------------------------|--------------------------|----------------------------|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|---------|----------------------|---------------------------------------------------------------------------------------|
|                                                                                                             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W)  | T <sub>ch</sub> (°C) | V <sub>GSL</sub>   = 10 V    | V <sub>GSL</sub>   = 6 V | V <sub>GSL</sub>   = 4.5 V | V <sub>GSL</sub>   = 4 V | V <sub>GSL</sub>   = 2.5 V | V <sub>GSL</sub>   = 1.8 V | V <sub>GSL</sub>   = 1.5 V |                            |                            |                            |                          |         |                      |                                                                                       |
| <br>SOT-23F<br>(mm)        | SSM3J377R   | -20                      | +6/-8                | -3.9               | 1                   | 150                  | —                            | —                        | 93                         | —                        | 123                        | 168                        | 240                        | 290                        | 32                         | 44                         | 4.6                      | U-MOSVI | (3b_S)               |    |
|                                                                                                             | SSM3J371R   |                          | +6/-8                | -4.0               | 1                   | 150                  | —                            | —                        | 55                         | —                        | 75                         | 100                        | 150                        | 630                        | 60                         | 75                         | 10.4                     | U-MOSVI |                      |                                                                                       |
|                                                                                                             | SSM3J378R   |                          | +6/-8                | -6.0               | 1                   | 150                  | —                            | —                        | 29.8                       | —                        | 39.7                       | 56                         | 88.4                       | 840                        | 99                         | 118                        | 12.8                     | U-MOSVI |                      |                                                                                       |
|                                                                                                             | SSM3J374R   | -30                      | +10/-20              | -4.0               | 1                   | 150                  | 71                           | —                        | 105                        | 136                      | —                          | —                          | —                          | 280                        | 40                         | 55                         | 5.9                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | SSM3J372R   |                          | +6/-12               | -6.0               | 1                   | 150                  | 42                           | —                        | 50                         | —                        | 72                         | 144                        | —                          | 560                        | 65                         | 80                         | 8.2                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | SSM3J356R * |                          | +10/-20              | -2                 | 1                   | 150                  | 300                          | —                        | 360                        | 400                      | —                          | —                          | —                          | 330                        | 25                         | 40                         | 8.3                      | U-MOSVI |                      |                                                                                       |
|                                                                                                             | SSM3J351R * | -60                      | +10/-20              | -3.5               | 1                   | 150                  | 134                          | —                        | 164                        | 184                      | —                          | —                          | —                          | 660                        | 50                         | 70                         | 15.1                     | U-MOSVI |                      |                                                                                       |
| <br>S-Mini SOT-346<br>(mm) | SSM3J375F   | -20                      | +6/-8                | -2                 | 0.6                 | 150                  | —                            | —                        | 150                        | —                        | 179                        | 231                        | 311                        | 270                        | 32                         | 40                         | 4.6                      | U-MOSVI | (3b_S)               |    |
|                                                                                                             | SSM3J15F    | -30                      | ±20                  | -0.1               | 0.2                 | 150                  | —                            | —                        | —                          | 12000                    | 32000                      | —                          | —                          | 9.1                        | 3.5                        | 8.6                        | —                        | π-MOSVI | (3c_S)               |                                                                                       |
|                                                                                                             | SSM3J168F * | -60                      | +10/-20              | -0.4               | 0.6                 | 150                  | 1550                         | —                        | 1900                       | 2000                     | —                          | —                          | —                          | 82                         | 5.5                        | 13                         | 3                        | U-MOSVI | (3b_S)               |                                                                                       |
| <br>PS-8<br>(mm)         | TPCP8109    | -40                      | +10/-20              | -4.5               | 1.96 <sup>(1)</sup> | 175                  | 52.3                         | 76.8                     | —                          | —                        | —                          | —                          | —                          | 810                        | 85                         | 130                        | 18                       | U-MOSVI | (8b)                 |  |
|                                                                                                             | TPCP8107    |                          | +10/-20              | -8                 | 2.01 <sup>(1)</sup> | 175                  | 18                           | 26.8                     | —                          | —                        | —                          | —                          | —                          | 2160                       | 238                        | 292                        | 44.6                     | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPCP8111    | -60                      | +10/-20              | -3                 | 1.96 <sup>(1)</sup> | 175                  | 117                          | 158.4                    | —                          | —                        | —                          | —                          | —                          | 760                        | 60                         | 90                         | 17                       | U-MOSVI |                      |                                                                                       |
|                                                                                                             | TPCP8110    |                          | +10/-20              | -5                 | 2.01 <sup>(1)</sup> | 175                  | 39.5                         | 53.2                     | —                          | —                        | —                          | —                          | —                          | 2075                       | 150                        | 205                        | 45                       | U-MOSVI |                      |                                                                                       |

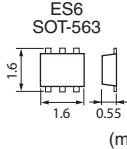
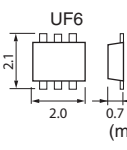
Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。

\*: New Product / 新製品



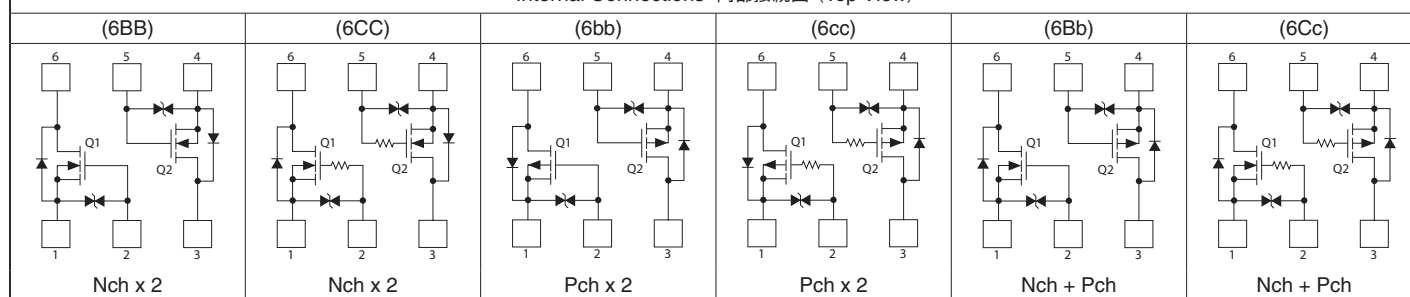
• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

| Package                                                                                    | Polarity    | Part Number | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ) |                          |                            |                          |                            |                            | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series | Internal Connections | Land Pattern Examples (mm) |                                                                                     |
|--------------------------------------------------------------------------------------------|-------------|-------------|--------------------------|----------------------|--------------------|--------------------|----------------------|------------------------------|--------------------------|----------------------------|--------------------------|----------------------------|----------------------------|----------------|----------------|----------------|--------------|--------|----------------------|----------------------------|-------------------------------------------------------------------------------------|
|                                                                                            |             |             | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | I <sub>V</sub> gs1 = 10 V    | I <sub>V</sub> gs1 = 6 V | I <sub>V</sub> gs1 = 4.5 V | I <sub>V</sub> gs1 = 4 V | I <sub>V</sub> gs1 = 2.5 V | I <sub>V</sub> gs1 = 1.8 V |                |                |                |              |        |                      |                            | I <sub>V</sub> gs1 = 1.5 V                                                          |
| <br>(mm)   | N-ch x 2    | SSM6N35FE   | 20                       | ±10                  | 0.18               | 0.15               | 150                  | —                            | —                        | —                          | 3000                     | 4000                       | —                          | 8000           | 9.5            | 4.1            | 9.5          | —      | π-MOSVI              | (6CC)                      |  |
|                                                                                            |             | SSM6N56FE   |                          | ±8                   | 0.8                | 0.25               | 150                  | —                            | —                        | 235                        | —                        | 300                        | 480                        | 840            | 55             | 6              | 16           | 1      | U-MOSVII-H           | (6BB)                      |                                                                                     |
|                                                                                            |             | SSM6N44FE   | 30                       | ±20                  | 0.1                | 0.15               | 150                  | —                            | —                        | —                          | 4000                     | 7000                       | —                          | —              | 8.5            | 5.3            | 9.4          | —      | π-MOSVI              | (6CC)                      |                                                                                     |
|                                                                                            | P-ch x 2    | SSM6P35FE   | −20                      | ±10                  | −0.1               | 0.15               | 150                  | —                            | —                        | —                          | 8000                     | 11000                      | —                          | 22000          | 12.2           | 6.5            | 10.4         | —      | π-MOSVI              | (6cc)                      |                                                                                     |
|                                                                                            |             | SSM6P36FE   |                          | ±8                   | −0.33              | 0.15               | 150                  | —                            | —                        | 1310                       | —                        | —                          | 2700                       | 3600           | 43             | 6.1            | 10.3         | 1.2    | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6P15FE   | −30                      | ±20                  | −0.1               | 0.15               | 150                  | —                            | —                        | —                          | 12000                    | 32000                      | —                          | —              | 9.1            | 3.5            | 8.6          | —      | π-MOSVI              |                            |                                                                                     |
|                                                                                            | N-ch + P-ch | SSM6L35FE   | 20                       | ±10                  | 0.18               | 0.15               | 150                  | —                            | —                        | —                          | 3000                     | 4000                       | —                          | 8000           | 9.5            | 4.1            | 9.5          | —      | π-MOSVI              | (6Cc)                      |                                                                                     |
|                                                                                            |             | SSM6L35FE   | −20                      | ±10                  | −0.1               | 0.15               | 150                  | —                            | —                        | —                          | 8000                     | 11000                      | —                          | 22000          | 12.2           | 6.5            | 10.4         | —      | π-MOSVI              |                            |                                                                                     |
|                                                                                            |             | SSM6L36FE   | 20                       | ±10                  | 0.5                | 0.15               | 150                  | —                            | —                        | 660                        | —                        | 850                        | 1140                       | 1520           | 46             | 7.3            | 10.8         | 1.23   | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6L36FE   | −20                      | ±8                   | −0.33              | 0.15               | 150                  | —                            | —                        | 1310                       | —                        | —                          | 2700                       | 3600           | 43             | 6.1            | 10.3         | 1.2    | U-MOSIII             |                            |                                                                                     |
| <br>(mm)   | N-ch x 2    | SSM6N61NU * | 20                       | ±8                   | 4                  | 1                  | 150                  | —                            | —                        | 33                         | —                        | 45                         | 74                         | 108            | 410            | 40             | 85           | 3.6    | U-MOSVII-H           | (6BB)                      |                                                                                     |
|                                                                                            |             | SSM6N55NU   | 30                       | ±20                  | 4                  | 1                  | 150                  | 46                           | —                        | 64                         | —                        | —                          | —                          | —              | 280            | 20             | 53           | 2.5    | U-MOSVII-H           |                            |                                                                                     |
|                                                                                            |             | SSM6N67NU   |                          | +12/−8               | 4                  | 1                  | 150                  | —                            | —                        | 39.1                       | —                        | 53                         | 82                         | —              | 310            | 20             | 52           | 3.2    | U-MOSVII-H           |                            |                                                                                     |
|                                                                                            |             | SSM6N68NU   |                          | +12/−8               | 4                  | 1                  | 150                  | —                            | —                        | 84                         | —                        | 117                        | 180                        | —              | 129            | 13             | 34           | 1.8    | U-MOSVII-H           |                            |                                                                                     |
|                                                                                            | P-ch x 2    | SSM6P69NU   | −20                      | +6/−12               | −4                 | 1                  | 150                  | 45                           | —                        | 56                         | —                        | 76                         | 157                        | —              | 480            | 76             | 90           | 6.74   | U-MOSVI              | (6bb)                      |                                                                                     |
| <br>(mm) | N-ch x 2    | SSM6N62TU   | 20                       | ±8                   | 0.8                | 0.5                | 150                  | —                            | —                        | 85                         | —                        | 98                         | 120                        | 173            | 177            | 17             | 52           | 2      | U-MOSVII-H           | (6BB)                      |                                                                                     |
|                                                                                            |             | SSM6N39TU   |                          | ±10                  | 1.6                | 0.5                | 150                  | —                            | —                        | —                          | 119                      | 139                        | 190                        | 247            | 260            | 37             | 45           | 7.5    | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6N24TU   | 30                       | ±12                  | 0.5                | 0.5                | 150                  | —                            | —                        | 145                        | —                        | 180                        | —                          | —              | 245            | 33             | 41           | —      | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6N40TU   |                          | ±20                  | 1.6                | 0.5                | 150                  | 122                          | —                        | —                          | 182                      | —                          | —                          | —              | 180            | 27             | 34           | 5.1    | U-MOSIII             |                            |                                                                                     |
|                                                                                            | P-ch x 2    | SSM6P54TU   | −20                      | ±8                   | −1.2               | 0.5                | 150                  | —                            | —                        | —                          | —                        | 228                        | 350                        | 555            | 331            | 39             | 48           | 7.7    | U-MOSIV              | (6bb)                      |                                                                                     |
|                                                                                            |             | SSM6P39TU   |                          | ±8                   | −1.5               | 0.5                | 150                  | —                            | —                        | —                          | 213                      | 294                        | 430                        | —              | 250            | 35             | 43           | 6.4    | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6P40TU   | −30                      | ±20                  | −1.4               | 0.5                | 150                  | 226                          | —                        | —                          | 403                      | —                          | —                          | —              | 120            | 21             | 32           | 2.9    | U-MOSIII             |                            |                                                                                     |
|                                                                                            | N-ch + P-ch | SSM6L12TU   | 30                       | ±12                  | 0.5                | 0.5                | 150                  | —                            | —                        | 145                        | —                        | 180                        | —                          | —              | 245            | 33             | 41           | —      | U-MOSIII             | (6Cc)                      |                                                                                     |
|                                                                                            |             | SSM6L12TU   | −20                      | ±12                  | −0.5               | 0.5                | 150                  | —                            | —                        | —                          | 260                      | 430                        | —                          | —              | 218            | 42             | 52           | —      | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6L39TU   | 20                       | ±10                  | 1.6                | 0.5                | 150                  | —                            | —                        | —                          | 119                      | 139                        | 190                        | 247            | 260            | 37             | 45           | 7.5    | U-MOSIII             | (6Bb)                      |                                                                                     |
|                                                                                            |             | SSM6L39TU   | −20                      | ±8                   | −1.5               | 0.5                | 150                  | —                            | —                        | —                          | 213                      | 294                        | 430                        | —              | 250            | 35             | 43           | 6.4    | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6L40TU   | 30                       | ±20                  | 1.6                | 0.5                | 150                  | 122                          | —                        | —                          | 182                      | —                          | —                          | —              | 180            | 27             | 34           | 5.1    | U-MOSIII             |                            |                                                                                     |
|                                                                                            |             | SSM6L40TU   | −30                      | ±20                  | −1.4               | 0.5                | 150                  | 226                          | —                        | —                          | 403                      | —                          | —                          | —              | 120            | 21             | 32           | 2.9    | U-MOSIII             |                            |                                                                                     |

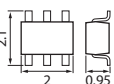
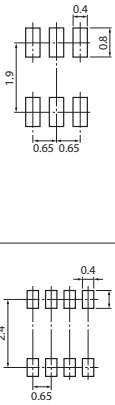
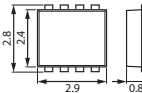
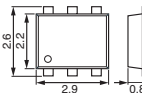
\*: New Product / 新製品

Internal Connections 内部接続図 (Top View)



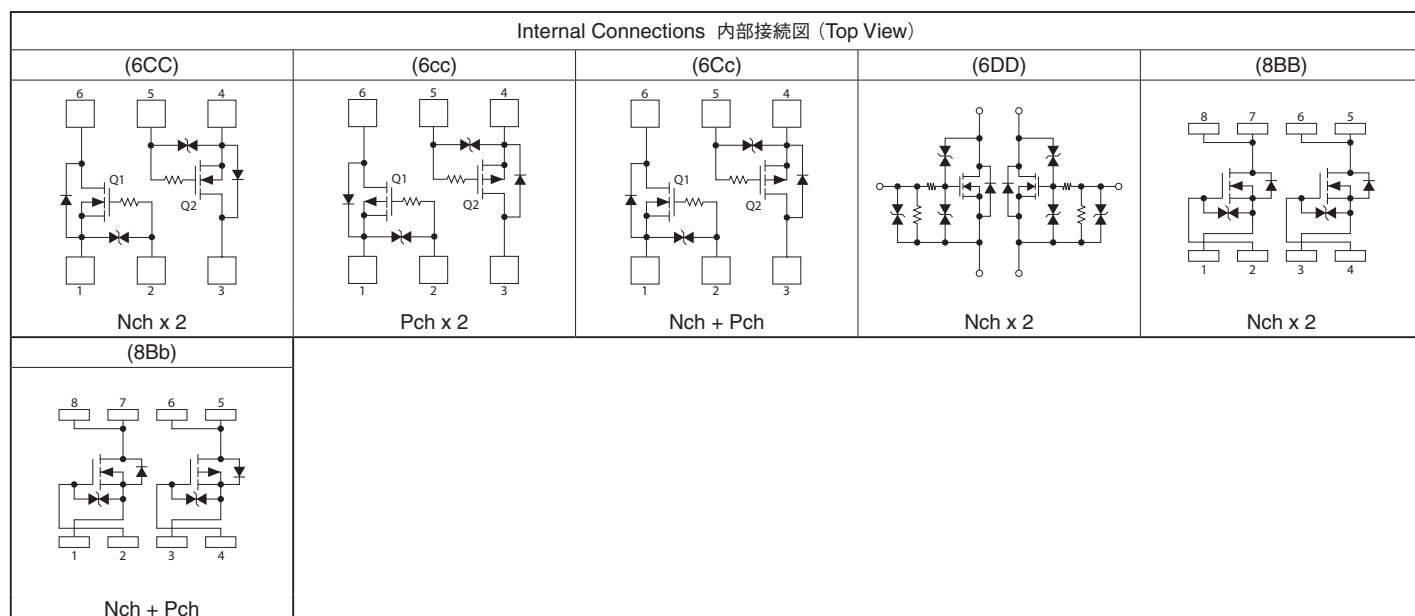
• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

| Package                                                                                                                      | Polarity    | Part Number    | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ) |                         |                           |                         |                           |                           | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series   | Internal Connections | Land Pattern Examples (mm) |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|--------------------------|----------------------|--------------------|--------------------|----------------------|------------------------------|-------------------------|---------------------------|-------------------------|---------------------------|---------------------------|----------------|----------------|----------------|--------------|----------|----------------------|----------------------------|-------------------------------------------------------------------------------------|
|                                                                                                                              |             |                | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | I <sub>VGS1</sub> = 10 V     | I <sub>VGS1</sub> = 6 V | I <sub>VGS1</sub> = 4.5 V | I <sub>VGS1</sub> = 4 V | I <sub>VGS1</sub> = 2.5 V | I <sub>VGS1</sub> = 1.8 V |                |                |                |              |          |                      |                            | I <sub>VGS1</sub> = 1.5 V                                                           |
| <div>US6<br/>SOT-363</div>  <div>(mm)</div> | N-ch x 2    | SSM6N35FU      | 20                       | ±10                  | 0.18               | 0.2                | 150                  | —                            | —                       | —                         | 3000                    | 4000                      | —                         | 8000           | 9.5            | 4.1            | 9.5          | —        | π-MOSVI              | (6CC)                      |  |
|                                                                                                                              |             | SSM6N43FU      | 20                       | ±10                  | 0.5                | 0.2                | 150                  | —                            | —                       | 660                       | —                       | 850                       | 1140                      | 1520           | 46             | 7.3            | 10.8         | 1.23     | π-MOSVI              |                            |                                                                                     |
|                                                                                                                              |             | SSM6N44FU      | 30                       | ±20                  | 0.1                | 0.2                | 150                  | —                            | —                       | —                         | 4000                    | 7000                      | —                         | —              | 8.5            | 5.3            | 9.4          | —        | π-MOSVI              |                            |                                                                                     |
|                                                                                                                              |             | SSM6N7002KFU * | 60                       | ±20                  | 0.3                | 0.5                | 150                  | 1500                         | —                       | 1750                      | —                       | —                         | —                         | —              | 26             | 1.3            | 5.5          | 0.39     | U-MOSVII-H           |                            |                                                                                     |
|                                                                                                                              | P-ch x 2    | SSM6P35FU      | -20                      | ±10                  | -0.1               | 0.2                | 150                  | —                            | —                       | —                         | 8000                    | 11000                     | —                         | 22000          | 12.2           | 6.5            | 10.4         | —        | π-MOSVI              | (6cc)                      |                                                                                     |
|                                                                                                                              |             | SSM6P36TU      | -20                      | ±8                   | -0.33              | 0.5                | 150                  | —                            | —                       | 1310                      | —                       | —                         | 2700                      | 3600           | 43             | 6.1            | 10.3         | 1.2      | U-MOSIII             |                            |                                                                                     |
|                                                                                                                              |             | SSM6P15FU      | -30                      | ±20                  | -0.1               | 0.2                | 150                  | —                            | —                       | —                         | 12000                   | 32000                     | —                         | —              | 9.1            | 3.5            | 8.6          | —        | π-MOSVI              |                            |                                                                                     |
|                                                                                                                              | N-ch + P-ch | SSM6L35FU      | 20                       | ±10                  | 0.18               | 0.2                | 150                  | —                            | —                       | —                         | 3000                    | 4000                      | —                         | 8000           | 9.5            | 4.1            | 9.5          | —        | π-MOSVI              | (6Cc)                      |                                                                                     |
|                                                                                                                              |             |                | -20                      | ±10                  | -0.1               | 0.2                | 150                  | —                            | —                       | —                         | 8000                    | 11000                     | —                         | 22000          | 12.2           | 6.5            | 10.4         | —        | π-MOSVI              |                            |                                                                                     |
|                                                                                                                              |             | SSM6L36TU      | 20                       | ±10                  | 0.5                | 0.5                | 150                  | —                            | —                       | 660                       | —                       | 850                       | 1140                      | 1520           | 46             | 7.3            | 10.8         | 1.23     | U-MOSIII             |                            |                                                                                     |
| -20                                                                                                                          |             |                | ±8                       | -0.33                | 0.5                | 150                | —                    | —                            | 660                     | —                         | 850                     | 1140                      | 1520                      | 46             | 7.3            | 10.8           | 1.23         | U-MOSIII |                      |                            |                                                                                     |
| <div>PS-8</div>  <div>(mm)</div>            | N-ch x 2    | TPCP8207       | 40                       | ±20                  | 5                  | 1.77<br>(1)        | 175                  | 36.3                         | 62.8                    | —                         | —                       | —                         | —                         | 505            | 66             | 115            | 11.8         | U-MOSIV  | (8BB)                |                            |                                                                                     |
|                                                                                                                              | N-ch + P-ch | TPCP8407       | 40                       | ±20                  | 5                  | 1.77<br>(1)        | 175                  | 36.3                         | 62.8                    | —                         | —                       | —                         | —                         | 505            | 66             | 115            | 11.8         | U-MOSIV  | (8Bb)                |                            |                                                                                     |
|                                                                                                                              |             |                | -40                      | +10/-20              | -4                 | 1.77<br>(1)        | 175                  | 56.8                         | 82.2                    | —                         | —                       | —                         | —                         | 810            | 85             | 130            | 18           | U-MOSVI  |                      |                            |                                                                                     |
| <div>TSOP6F</div>  <div>(mm)</div>        | N-ch x 2    | SSM6N357R *    | 60                       | ±12                  | 0.65               | 1                  | 150                  | —                            | —                       | —                         | —                       | —                         | —                         | 43             | 2.5            | 20             | 1.5          | π-MOSV   | (6DD)                |                            |                                                                                     |
|                                                                                                                              |             | SSM6N813R      | 100                      | ±20                  | 3.5                | 1.5                | 175                  | 112                          | —                       | 154                       | —                       | —                         | —                         | —              | 242            | 7              | 106          | 3.6      | U-MOSVIII-H          | (6CC)                      |                                                                                     |

Note (1): Device mounted on a glass board. t = 5 seconds. / ガラスエポキシ基板。t = 5 秒。

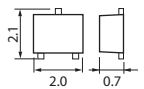
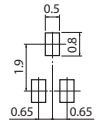
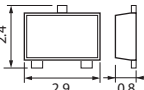
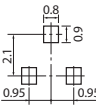
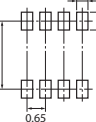
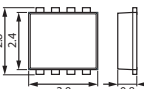
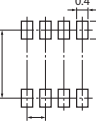
\*: New Product / 新製品



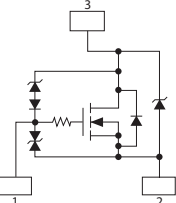
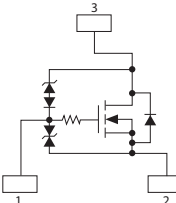
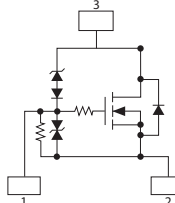
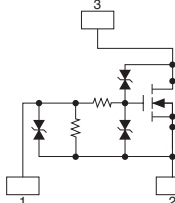
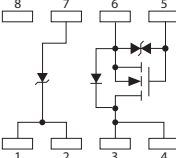
• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

(Semi-Power Type: Built-in Zener Diode) / (セミパワータイプ: ZD混載品)

| Package                                                                                                                      | Polarity     | Part Number  | Absolute Maximum Ratings |                      |                    |                    |                      | R <sub>DS(ON)</sub> max (mΩ)        |                                    |                                      |                                    |                                      |                                      |                                      | Ciss typ. (pF) | Crss typ. (pF) | Coss typ. (pF) | Qg typ. (nC) | Series  | Internal Connections | Land Pattern Examples (mm)                                                           |
|------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------------------|----------------------|--------------------|--------------------|----------------------|-------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|----------------|----------------|----------------|--------------|---------|----------------------|--------------------------------------------------------------------------------------|
|                                                                                                                              |              |              | V <sub>DSS</sub> (V)     | V <sub>GSS</sub> (V) | I <sub>D</sub> (A) | P <sub>D</sub> (W) | T <sub>ch</sub> (°C) | I <sub>V<sub>GS1</sub></sub> = 10 V | I <sub>V<sub>GS1</sub></sub> = 6 V | I <sub>V<sub>GS1</sub></sub> = 4.5 V | I <sub>V<sub>GS1</sub></sub> = 4 V | I <sub>V<sub>GS1</sub></sub> = 2.5 V | I <sub>V<sub>GS1</sub></sub> = 1.8 V | I <sub>V<sub>GS1</sub></sub> = 1.5 V |                |                |                |              |         |                      |                                                                                      |
| <div><div>UFM</div><div>(mm)</div></div>     | N-ch + Zener | SSM3H137TU * | 34                       | ±20                  | 2                  | 0.8                | 150                  | 240                                 | —                                  | 280                                  | 295                                | —                                    | —                                    | —                                    | 119            | 8              | 40             | 3            | U-MOSIV | (3ZC_1)              |   |
| <div><div>SOT-23F</div><div>(mm)</div></div> | N-ch + Zener | SSM3K337R *  | 38                       | ±20                  | 2                  | 1                  | 150                  | 150                                 | —                                  | 176                                  | 200                                | —                                    | —                                    | —                                    | 120            | 7.2            | 33             | 3            | U-MOSIV | (3ZC_2)              |   |
|                                                                                                                              |              | SSM3K347R *  |                          | ±20                  | 2                  | 1                  | 150                  | 340                                 | —                                  | 410                                  | 480                                | —                                    | —                                    | —                                    | 86             | 13             | 27             | 2.5          | U-MOSIV | (3ZC_3)              |                                                                                      |
|                                                                                                                              |              | SSM3K357R    | 60                       | ±12                  | 0.65               | 1                  | 150                  | —                                   | —                                  | —                                    | —                                  | —                                    | —                                    | —                                    | 43             | 2.5            | 20             | 1.5          | π-MOSV  | (3ZC_4)              |  |
| <div><div>PS-8</div><div>(mm)</div></div>   | N-ch + Zener | TPCP8R01     | 60                       | ±20                  | 2                  | 0.5                | 150                  | 300                                 | —                                  | —                                    | 440                                | —                                    | —                                    | —                                    | 140            | 20             | 65             | 5            | π-MOSV  | (8ZB)                |  |

\*: New Product / 新製品

| Internal Connections 内部接続図 (Top View)                                                           |                                                                                                 |                                                                                                 |                                                                                                  |                                                                                                   |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| (3ZC_1)                                                                                         | (3ZC_2)                                                                                         | (3ZC_3)                                                                                         | (3ZC_4)                                                                                          | (8ZB)                                                                                             |
| <br>Nch + ZD | <br>Nch + ZD | <br>Nch + ZD | <br>Nch + ZD | <br>Nch + ZD |

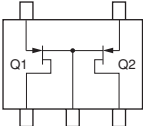
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

Junction FETs / 接合形FET

(Single Type) / (シングルタイプ)

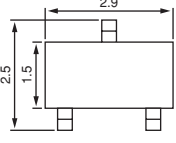
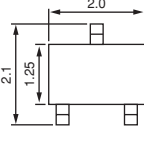
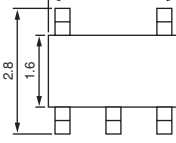
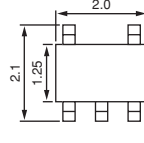
| Classification  | V <sub>GDS</sub> (V)<br>Max | I <sub>G</sub> (mA)<br>Max | I <sub>DSS</sub> (mA) | Y <sub>fs</sub>   (mS)<br>Min | S-MINI (SC-59) |     | USM (SC-70) |     |
|-----------------|-----------------------------|----------------------------|-----------------------|-------------------------------|----------------|-----|-------------|-----|
|                 |                             |                            |                       |                               | Nch            | Pch | Nch         | Pch |
| General-purpose | -50                         | 10                         | 0.3 to 6.5            | 1.2                           | 2SK208         |     | 2SK879      |     |
|                 | -50                         | 10                         | 1.2 to 14             | 4                             | 2SK209         | —   | 2SK880      | —   |

(Dual Type) / (デュアルタイプ)

| Classification  | V <sub>GDS</sub> (V) | I <sub>G</sub> (mA) | I <sub>DSS</sub> (mA) | Y <sub>fs</sub>   (mS)<br>Min | SMV     |         | USV     |         | Internal Connections                                                                |
|-----------------|----------------------|---------------------|-----------------------|-------------------------------|---------|---------|---------|---------|-------------------------------------------------------------------------------------|
|                 |                      |                     |                       |                               | Nch x 2 | Pch x 2 | Nch x 2 | Pch x 2 |                                                                                     |
| General-purpose | -50                  | 10                  | 1.2 to 14             | 4                             | 2SK2145 | —       | 2SK3320 | —       |  |

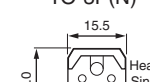
- The internal connection diagrams only show the general configurations of the circuits.
- 内部接続図はイメージ図です。

Package Lineup / パッケージラインアップ

| S-MINI (SC-59)                                                                             | USM (SC-70)                                                                                | SMV                                                                                        | USV                                                                                        |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <br>(mm) | <br>(mm) | <br>(mm) | <br>(mm) |

SiC MOSFETs / SiC MOSFET

SiC MOSFETs / SiC MOSFET

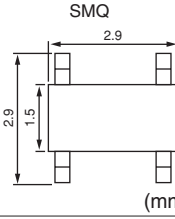
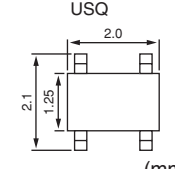
| Circuit Configuration |        | Absolute Maximum ratings |           | Electrical Characteristics<br>(Ta = 25°C) |            |           |         | <div><div>TO-3P(N)</div><div>(mm)</div></div> |
|-----------------------|--------|--------------------------|-----------|-------------------------------------------|------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------|
|                       |        | VDS<br>(V)               | ID<br>(A) | RDS(ON) (mΩ)                              |            |           | Qg (nC) |                                                                                                                                   |
|                       |        |                          |           | Typ.                                      | VGS<br>(V) | ID<br>(A) |         |                                                                                                                                   |
| Nch                   | Single | 1200                     | (36)      | 70                                        | (20)       | (36)      | (50)    | TW070J120B **                                                                                                                     |

\*\* : Under development / 開発中



## Radio-Frequency MOSFETs / 高周波 MOSFET

### Radio-Frequency Small-Signal MOSFETs / 高周波小信号 MOSFET

| Part Number | Package                                                                                   | Applications                      | Electrical Characteristics (Ta = 25°C) |                     |                     |                       |                             | Marking | Equivalent Product (Leaded Type) |
|-------------|-------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------|---------------------|---------------------|-----------------------|-----------------------------|---------|----------------------------------|
|             |                                                                                           |                                   | V <sub>DS</sub> (V)                    | I <sub>D</sub> (mA) | P <sub>D</sub> (mW) | I <sub>DSS</sub> (mA) | Y <sub>fs</sub>   (mS) Typ. |         |                                  |
| 3SK291      | <br>(mm) | UHF-band radio-frequency amps     | 12.5                                   | 30                  | 150                 | 0 to 0.1              | 26                          | UF      | —                                |
| 3SK292      |                                                                                           | VHF/UHF-band radio-frequency amps | 12.5                                   | 30                  | 150                 | 0 to 0.1              | 23.5                        | UV      | —                                |
| 3SK293      | <br>(mm) | UHF-band radio-frequency amps     | 12.5                                   | 30                  | 100                 | 0 to 0.1              | 26                          | UF      | —                                |
| 3SK294      |                                                                                           | VHF/UHF-band radio-frequency amps | 12.5                                   | 30                  | 100                 | 0 to 0.1              | 23.5                        | UV      | —                                |

### Radio-Frequency Power MOSFETs / 高周波パワー MOSFET

| Part Number | Package | Applications                | Absolute Maximum Ratings (Ta = 25°C) |                       |                       | Min   | Po (W)                 |            |                       |
|-------------|---------|-----------------------------|--------------------------------------|-----------------------|-----------------------|-------|------------------------|------------|-----------------------|
|             |         |                             | V <sub>DSS</sub><br>(V)              | P <sub>D</sub><br>(W) | I <sub>D</sub><br>(A) |       | Test Conditions        |            |                       |
|             |         |                             |                                      |                       |                       |       | V <sub>DS</sub><br>(V) | f<br>(MHz) | P <sub>i</sub><br>(W) |
| RFM08U9X    | PW-X    | UHF/VHF Professional radios | 36                                   | 20                    | 5                     | 7.5   | 9.6                    | 520        | 0.5                   |
| 2SK3075     | PW-X    |                             | 30                                   | 20                    | 5                     | 7.5   | 9.6                    | 520        | 0.5                   |
| 2SK3074     | PW-MINI |                             | 30                                   | 3                     | 1                     | 0.63  | 9.6                    | 520        | 0.02                  |
| RFM12U7X    | PW-X    |                             | 20                                   | 20                    | 4                     | 11.5  | 7.2                    | 520        | 1.0                   |
| RFM07U7X    | PW-X    |                             | 16                                   | 20                    | 3                     | 7.0   | 7.2                    | 450 to 530 | 0.5                   |
| RFM06U3X *  | PW-X    |                             | 16                                   | 20                    | 5                     | 5.0   | 3.6                    | 520        | 0.5                   |
| RFM01U7P    | PW-MINI |                             | 20                                   | 3                     | 1                     | 1.0   | 7.2                    | 520        | 0.1                   |
| 2SK3476     | PW-X    |                             | 20                                   | 20                    | 3                     | 7.0   | 7.2                    | 520        | 0.5                   |
| 2SK3475     | PW-MINI |                             | 20                                   | 3                     | 1                     | 0.63  | 7.2                    | 520        | 0.02                  |
| RFM04U6P    | PW-MINI | GMRS                        | 16                                   | 7                     | 2                     | 3.5   | 6.0                    | 470        | 0.2                   |
| 2SK4037     | PW-X    |                             | 12                                   | 20                    | 3                     | 3.55  | 6.0                    | 470        | 0.3                   |
| 2SK2854     | PW-MINI | UHF and VHF radio           | 10                                   | 0.5                   | 0.5                   | 0.2   | 6.0                    | 849        | 0.02                  |
| 2SK3079A    | PW-X    | FRS/GMRS                    | 10                                   | 20                    | 3                     | 2.24  | 4.5                    | 470        | 0.1                   |
| 2SK3756     | PW-MINI |                             | 7.5                                  | 3                     | 1                     | 1.26  | 4.5                    | 470        | 0.1                   |
| 2SK3078A    | PW-MINI |                             | 10                                   | 3                     | 0.5                   | 0.63  | 4.5                    | 470        | 0.1                   |
| 2SK3078     | PW-MINI |                             | 10                                   | 3                     | 0.5                   | 0.5   | 4.8                    | 915        | 0.02                  |
| 2SK3077     | USQ     | Driver                      | 10                                   | 0.25                  | 0.1                   | 0.032 | 4.8                    | 915        | 0.001                 |
| RFM03U3P    | PW-MINI | GMRS                        | 16                                   | 7                     | 2.5                   | 2.3   | 3.6                    | 470        | 0.1                   |
| RFM00U7U    | USQ     | Driver                      | 20                                   | 0.25                  | 0.1                   | 0.1   | 7.2                    | 520        | 0.01                  |

\*: New product / 新製品

# SEMICONDUCTOR GENERAL CATALOG

## 半導体製品総覧表

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