

| Series | Features                                                        | Small size/Low profile | Large capacitance | Low ESR | For automotive | High voltage | Category temperature range (°C) | Rated voltage (V.DC) | ESR (mΩ)   | Capacitance (μF) | Size code | Size (mm) |      |     |
|--------|-----------------------------------------------------------------|------------------------|-------------------|---------|----------------|--------------|---------------------------------|----------------------|------------|------------------|-----------|-----------|------|-----|
|        |                                                                 |                        |                   |         |                |              |                                 |                      |            |                  |           | L         | W    | H   |
| TPU    | Small size<br>Low profile<br>Face down terminal                 | ●                      |                   |         |                |              | -55 to 85                       | 2.5 to 10            | 150 to 300 | 4.7 to 100       | S09       | 2.0       | 1.25 | 0.9 |
|        |                                                                 |                        |                   |         |                |              | -55 to 85                       | 6.3                  | 100        | 150              | B09       | 3.5       | 2.8  | 0.9 |
| TPH    | Small size<br>Low profile<br>Face down terminal                 | ●                      |                   | ●       |                |              | -55 to 85                       | 6.3 to 10            | 100 to 150 | 33 to 100        | A09       | 3.2       | 1.6  | 0.9 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 2.5 to 6.3           | 150        | 47 to 100        | A09       | 3.2       | 1.6  | 0.9 |
|        |                                                                 |                        |                   |         |                |              | -55 to 85                       | 2.5 to 6.3           | 70         | 100 to 220       | A14       | 3.2       | 1.6  | 1.4 |
| TPG    | Small size<br>Low profile<br>Large capacitance                  | ●                      | ●                 |         |                |              | -55 to 105                      | 2.5 to 12.5          | 35 to 70   | 33 to 220        | B1G       | 3.5       | 2.8  | 1.1 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 2.5 to 6.3           | 30 to 70   | 150 to 220       | B15G      | 3.5       | 2.8  | 1.4 |
| TPSF   | Low ESR / Small size<br>Large capacitance<br>Face down terminal | ●                      | ●                 | ●       |                |              | -55 to 105                      | 2.0 to 2.5           | 6 to 9     | 270              | B2S       | 3.5       | 2.8  | 1.9 |
| TPE    | Low ESR                                                         |                        |                   | ●       |                |              | -55 to 105                      | 2.0 to 10            | 11 to 35   | 47 to 470        | B2        | 3.5       | 2.8  | 1.9 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 6.3                  | 35         | 470              | D15E      | 7.3       | 4.3  | 1.4 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 2.5 to 10            | 7 to 25    | 68 to 470        | D2E       | 7.3       | 4.3  | 1.8 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 2.5 to 10            | 9 to 25    | 220 to 680       | D3L       | 7.3       | 4.3  | 2.8 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 2.5 to 10            | 10 to 25   | 330 to 1500      | D4        | 7.3       | 4.3  | 3.8 |
| TPB    | Standard                                                        |                        |                   |         |                |              | -55 to 105                      | 4.0 to 10            | 70         | 33 to 68         | B2        | 3.5       | 2.8  | 1.9 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 4.0 to 10            | 40         | 150 to 330       | D3L       | 7.3       | 4.3  | 2.8 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 6.3 to 10            | 35 to 40   | 220 to 470       | D4        | 7.3       | 4.3  | 3.8 |
| TPC    | Low profile                                                     | ●                      |                   |         |                |              | -55 to 105                      | 6.3 to 12.5          | 55 to 80   | 10 to 47         | B1        | 3.5       | 2.8  | 1.1 |
|        |                                                                 |                        |                   |         |                |              | -55 to 105                      | 6.3 to 10            | 40 to 45   | 68 to 330        | D2        | 7.3       | 4.3  | 1.9 |

| Series | Features                                                              | Small size | Low profile | Large capacitance | Low ESR | For automotive | High voltage | Category temperature range (°C) | Rated voltage (V.DC) | ESR (mΩ)  | Capacitance (μF) | Size code | Size (mm) |     |      |
|--------|-----------------------------------------------------------------------|------------|-------------|-------------------|---------|----------------|--------------|---------------------------------|----------------------|-----------|------------------|-----------|-----------|-----|------|
|        |                                                                       |            |             |                   |         |                |              |                                 |                      |           |                  |           | L         | W   | H    |
| TPF    | Low ESR<br>Large capacitance                                          |            |             | ●                 | ●       |                |              | 55 to 105                       | 2.0                  | 6         | 220 to 330       | D2E       | 7.3       | 4.3 | 1.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 2.5 to 10            | 5 to 15   | 150 to 680       | D3L       | 7.3       | 4.3 | 2.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 2.5 to 6.3           | 5 to 10   | 470 to 1000      | D4        | 7.3       | 4.3 | 3.8  |
| TA     | High reliability<br>(for the car electronics)                         |            |             |                   |         | ●              |              | 55 to 105                       | 4.0 to 10            | 70        | 47 to 100        | B2        | 3.5       | 2.8 | 1.9  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 2.5 to 10            | 9 to 25   | 68 to 470        | D2E       | 7.3       | 4.3 | 1.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 2.5 to 10            | 15 to 25  | 150 to 680       | D3L       | 7.3       | 4.3 | 2.8  |
| TV     | High reliability<br>Guaranteed at 125 °C<br>(for the car electronics) |            |             |                   |         | ●              |              | 55 to 125                       | 6.3 to 10            | 25        | 68 to 150        | D2E       | 7.3       | 4.3 | 1.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 125                       | 10                   | 25        | 150              | D3L       | 7.3       | 4.3 | 2.8  |
| TQC    | High voltage                                                          |            |             |                   |         |                | ●            | 55 to 105                       | 35                   | 300       | 2.7              | B15       | 3.5       | 2.8 | 1.4  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 16 to 35             | 90 to 400 | 3.9 to 33        | B2        | 3.5       | 2.8 | 1.9  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 16                   | 40        | 33               | D12       | 7.3       | 4.3 | 1.15 |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 16 to 25             | 55 to 70  | 22 to 47         | D15       | 7.3       | 4.3 | 1.4  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 16 to 35             | 40 to 150 | 10 to 100        | D2        | 7.3       | 4.3 | 1.9  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 105                       | 16 to 25             | 50 to 70  | 68 to 150        | D3L       | 7.3       | 4.3 | 2.8  |
| TH     | Guaranteed at 125°C                                                   |            |             |                   |         |                |              | 55 to 125                       | 2.5 to 6.3           | 15 to 25  | 150 to 330       | D2E       | 7.3       | 4.3 | 1.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 125                       | 2.5 to 10            | 40 to 45  | 68 to 220        | D2        | 7.3       | 4.3 | 1.9  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 125                       | 4.0 to 6.3           | 40        | 220 to 330       | D3L       | 7.3       | 4.3 | 2.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 125                       | 6.3 to 10            | 35 to 40  | 220 to 470       | D4        | 7.3       | 4.3 | 3.8  |
| TC     | Guaranteed at 125°C                                                   |            |             |                   |         |                |              | 55 to 125                       | 4.0 to 6.3           | 15 to 25  | 100 to 330       | D2E       | 7.3       | 4.3 | 1.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 125                       | 2.5 to 10            | 5 to 25   | 150 to 680       | D3L       | 7.3       | 4.3 | 2.8  |
|        |                                                                       |            |             |                   |         |                |              | 55 to 125                       | 2.5 to 10            | 5 to 25   | 330 to 1000      | D4        | 7.3       | 4.3 | 3.8  |