

Surface Mount Type **POSCAP**

Series : **TPB**



Features

- Standard
- RoHS compliance, Halogen free

Specifications

| Size code | B2 | D3L | D4 |
|----------------------------|--|--|---------------------|
| Category temperature range | -55 °C to +105 °C | | |
| Rated voltage range | 4 V.DC to 10 V.DC | | 6.3 V.DC to 10 V.DC |
| Category voltage range | 4 V.DC to 10 V.DC | | 6.3 V.DC to 10 V.DC |
| Rated capacitance range | 33 μF to 68 μF | 150 μF to 330 μF | 220 μF to 470 μF |
| Capacitance tolerance | ±20 % (120 Hz / + 20 °C) | | |
| Leakage current | Please see the attached characteristics list | | |
| Dissipation factor (tan δ) | Please see the attached characteristics list | | |
| Surge voltage (V.DC) | Rated voltage × 1.15 | | |
| Endurance | +105 °C 2000h, (B2 size : 1000h) rated voltage applied * Rated temp. +85 °C 1000h rated voltage applied | | |
| | Capacitance change | Within ±20 % of the initial value | |
| | tan δ | ≤ 1.5 times of the initial limit | |
| | DC leakage current | Within the initial limit | |
| Damp heat (Steady State) | +60 °C, 90 % to 95 %, 500 h, No-applied voltage | | |
| | Capacitance change | Within +40 %, -20 % of the initial value | |
| | tan δ | ≤ 1.5 times of the initial limit | |
| | DC leakage current | ≤ 3 times of the initial limit | |

Marking

B2 Size

D3L Size

D4 Size

| R. Voltage (V.DC) | 4.0 | 6.3 | 10.0 |
|-------------------|-----|-----|------|
| Code | g | j | A |

| R. Cap. (μF) | 33 | 47 | 68 |
|--------------|----|----|----|
| Code | N7 | S7 | W7 |

Dimensions (not to scale)

Unit : mm

| Size code | L±0.3*1 | W±0.2 | H±0.2*2 | S±0.2 | W1±0.1 |
|-----------|---------|-------|---------|-------|--------|
| B2 | 3.5 | 2.8 | 1.9 | 0.8 | 2.2 |
| D3L | 7.3 | 4.3 | 2.8 | 1.3 | 2.4 |
| D4 | 7.3 | 4.3 | 3.8 | 1.3 | 2.4 |

* Externals of figure are the reference.
* 1 ±0.2 : B2 * 2 ±0.1 : B2

Characteristics list

| Series | Rated voltage (V.DC) | Rated temp. (°C) | Category voltage (V.DC) | Category temp. (°C) | Rated capacitance (μF) | Case size (mm) | | | Size code | Specifications | | | | Standard | |
|--------|----------------------|------------------|-------------------------|---------------------|------------------------|----------------|-----|-----|-----------|---------------------|-----------------|---------|-----------|-------------|--------------------------|
| | | | | | | L | W | H | | Ripple*1 (mAr.m.s.) | ESR*2 (mΩ max.) | tan δ*3 | LC*4 (μA) | Part number | Min. Packaging Qty (pcs) |
| TPB | 4.0 | 105 | 4.0 | 105 | 68 | 3.5 | 2.8 | 1.9 | B2 | 1100 | 70 | 0.08 | 27.2 | 4TPB68M | 2000 |
| | | 105 | 4.0 | 105 | 330 | 7.3 | 4.3 | 2.8 | D3L | 2000 | 40 | 0.10 | 132.0 | 4TPB330ML | 2500 |
| | 6.3 | 105 | 6.3 | 105 | 68 | 3.5 | 2.8 | 1.9 | B2 | 1100 | 70 | 0.08 | 42.8 | 6TPB68M | 2000 |
| | | 105 | 6.3 | 105 | 220 | 7.3 | 4.3 | 2.8 | D3L | 2000 | 40 | 0.10 | 138.6 | 6TPB220ML | 2500 |
| | | 85 | 5.0 | 105 | | 7.3 | 4.3 | 2.8 | | 2000 | 40 | 0.10 | 207.9 | 6TPB330MAL | 2500 |
| | | 105 | 6.3 | 105 | 330 | 7.3 | 4.3 | 2.8 | D4 | 2000 | 40 | 0.10 | 207.9 | 6TPB330ML | 2500 |
| | | 105 | 6.3 | 105 | 470 | 7.3 | 4.3 | 3.8 | | 3000 | 40 | 0.10 | 207.9 | 6TPB330M | 2000 |
| | | 105 | 6.3 | 105 | 470 | 7.3 | 4.3 | 3.8 | 3000 | 35 | 0.15 | 296.1 | 6TPB470M | 2000 | |
| | 10 | 105 | 10.0 | 105 | 33 | 3.5 | 2.8 | 1.9 | B2 | 1100 | 70 | 0.08 | 33.0 | 10TPB33M | 2000 |
| | | 105 | 10.0 | 105 | 47 | 3.5 | 2.8 | 1.9 | | 1100 | 70 | 0.08 | 47.0 | 10TPB47M | 2000 |
| | | 105 | 10.0 | 105 | 150 | 7.3 | 4.3 | 2.8 | D3L | 2000 | 40 | 0.10 | 150.0 | 10TPB150ML | 2500 |
| | | 105 | 10.0 | 105 | 220 | 7.3 | 4.3 | 2.8 | | 2000 | 40 | 0.10 | 220.0 | 10TPB220ML | 2500 |
| | | 105 | 10.0 | 105 | 330 | 7.3 | 4.3 | 3.8 | D4 | 3000 | 40 | 0.10 | 220.0 | 10TPB220M | 2000 |
| | | 105 | 10.0 | 105 | 330 | 7.3 | 4.3 | 3.8 | | 3000 | 35 | 0.10 | 330.0 | 10TPB330M | 2000 |

*1 Ripple current (100 kHz/ +45 °C), *2 ESR (100 kHz/+20 °C) *3 tan δ (120 Hz/+20 °C) *4 After 5 minutes

◆ Please refer to each page in this catalog for "Reflow conditions" and "Taping specifications".