

Surface Mount Type

POSCAP



Series : **TPE**

Size : **B**

Features

- Small size (L 3.5×W 2.8×H 1.9 mm)
- Low ESR (15 mΩ)
- RoHS compliance, Halogen free

Specifications

| | | |
|----------------------------|---|--|
| Size code | B2 | |
| Category temperature range | -55 °C to +105 °C | |
| Rated voltage range | 2.0 V.DC to 10 V.DC | |
| Category voltage range | 1.8 V.DC to 8.0 V.DC | |
| Rated capacitance range | 47 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, 1000 h rated voltage applied | |
| | * Rated temp, +85 °C Products : +85 °C, 1000 h, rated voltage applied | |
| | Capacitance change | Within ±20 % of the initial value |
| | tan δ | ≤ 1.5 times of the initial limit |
| Damp heat (Steady State) | DC leakage current | Within the initial limit |
| | +60 °C, 90 % to 95 %, 500 h, No-applied voltage | |
| | Capacitance change | Within +50 %, -20 % of the initial value (2R5TPE220MAZB (MAPB, MAFB), 2R5TPE330MAZB, 2TPE330MAFB (MADGB), 2TPE470MAJGB (MAFB), 2TPE330MFB) |
| | | Within +40 %, -20 % of the initial value (Except for above model) |
| | tan δ | ≤ 1.5 times of the initial limit |
| DC leakage current | ≤ 3 times of the initial limit | |

Marking

| | | | | | | | |
|-------------------|-----|-----|-----|-----|-----|------|-----|
| R. Voltage (V.DC) | 2.0 | 2.5 | 4.0 | 6.3 | 8.0 | 10.0 | |
| Code | d | e | g | j | k | A | |
| R. Cap. (μF) | 47 | 100 | 120 | 150 | 220 | 330 | 470 |
| Code | S7 | A8 | C8 | E8 | J8 | N8 | S8 |

Dimensions (not to scale)

Unit : mm

| | | | | | |
|-----------|-------|-------|-------|-------|--------|
| Size code | L±0.2 | W±0.2 | H±0.1 | S±0.2 | W1±0.1 |
| B2 | 3.5 | 2.8 | 1.9 | 0.8 | 2.2 |

* Externals of figure are the reference.

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 current* ¹ (mA r.m.s.) | ESR* ² (mΩ max.) | tan δ* ³ | LC* ⁴ (μA) | Part number | Min. Packaging Qty (pcs) |
| TPE | 2 | 105 | 2.0 | 105 | 330 | 3.5 | 2.8 | 1.9 | B2 | 2000 | 15 | 0.08 | 132.0 | 2TPE330MFB | 2000 |
| | | 85 | 1.8 | 105 | | 3.5 | 2.8 | 1.9 | | 2000 | 15 | 0.08 | 132.0 | 2TPE330MAFB | 2000 |
| | | 85 | 1.8 | 105 | | 470 | 3.5 | 2.8 | | 1.9 | 2000 | 13/300 kHz | 0.10 | 132.0 | 2TPE330MADGB |
| | | 85 | 1.8 | 105 | 3.5 | | 2.8 | 1.9 | | 2300 | 15 | 0.10 | 188.0 | 2TPE470MAFB | 2000 |
| | | 85 | 1.8 | 105 | 3.5 | 2.8 | 1.9 | 2300 | | 11/300 kHz | 0.08 | 188.0 | 2TPE470MAJGB | 2000 | |
| | 2.5 | 85 | 2.0 | 105 | 220 | 3.5 | 2.8 | 1.9 | | 2000 | 15 | 0.08 | 110.0 | 2R5TPE220MAFB | 2000 |
| | | 105 | 2.5 | 105 | | 3.5 | 2.8 | 1.9 | | 1800 | 15/300 kHz | 0.08 | 110.0 | 2R5TPE220MFGB | 2000 |
| | | 105 | 2.5 | 105 | | 3.5 | 2.8 | 1.9 | | 1700 | 21 | 0.08 | 55.0 | 2R5TPE220MLB | 2000 |
| | | 85 | 2.0 | 105 | | 3.5 | 2.8 | 1.9 | | 1600 | 25 | 0.08 | 55.0 | 2R5TPE220MAPB | 2000 |
| | | 105 | 2.5 | 105 | | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 55.0 | 2R5TPE220MZB | 2000 |
| | | 85 | 2.0 | 105 | | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 55.0 | 2R5TPE220MAZB | 2000 |
| | | 85 | 2.0 | 105 | 330 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 82.5 | 2R5TPE330MAZB | 2000 |
| | NEW 85 | 2.5 | 105 | 3.5 | | 2.8 | 1.9 | 3200 | | 9/300 kHz | 0.08 | 165.0 | ETPE330MA9GB | 2000 | |
| | 4 | 105 | 4.0 | 105 | 100 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 40.0 | 4TPE100MZB | 2000 |
| | | 85 | 3.2 | 105 | 150 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 60.0 | 4TPE150MAZB | 2000 |
| | | 85 | 3.2 | 105 | 220 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 88.0 | 4TPE220MAZB | 2000 |
| | 6.3 | 105 | 6.3 | 105 | 100 | 3.5 | 2.8 | 1.9 | | 1600 | 25 | 0.08 | 63.0 | 6TPE100MPB | 2000 |
| | | 85 | 5.0 | 105 | | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 63.0 | 6TPE100MAZB | 2000 |
| | | NEW 105 | 6.3 | 105 | | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 63.0 | 6TPE100MZB | 2000 |
| | | 85 | 5.0 | 105 | 150 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 75.6 | 6TPE120MAZB | 2000 |
| | | 85 | 5.0 | 105 | | 3.5 | 2.8 | 1.9 | | 1600 | 25 | 0.08 | 94.5 | 6TPE150MAPB | 2000 |
| | | 85 | 5.0 | 105 | | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 94.5 | 6TPE150MAZB | 2000 |
| | | 85 | 5.0 | 105 | | 220 | 3.5 | 2.8 | | 1.9 | 1400 | 35 | 0.10 | 138.6 | 6TPE220MAZB |
| | 8 | 85 | 6.3 | 105 | 100 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 80.0 | 8TPE100MAZB | 2000 |
| | 10 | 85 | 8.0 | 105 | 47 | 3.5 | 2.8 | 1.9 | | 1400 | 35 | 0.08 | 47.0 | 10TPE47MAZB | 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".

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