

Surface Mount Type TPF series





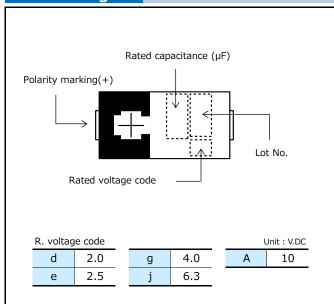


Features

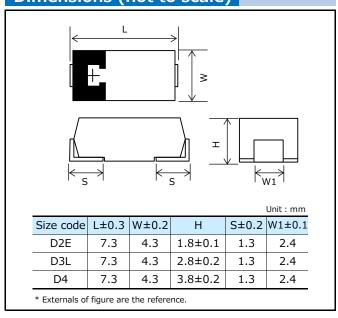
- Super low ESR (5 m Ω max.)
- Large capacitance (1000 µF max.)
- RoHS compliance, Halogen free

| Specifications | | | | | | | | | | | |
|-----------------------------------|--|---|----------------------|--|--|--|--|--|--|--|--|
| Size code | D2E | D3L | D4 | | | | | | | | |
| Category temp. range | -55 ℃ to +105 ℃ | | | | | | | | | | |
| Rated volt. range | 2.0 V.DC | 2.5 V.DC to 10 V.DC | 2.5 V.DC to 6.3 V.DC | | | | | | | | |
| Category volt. range | 2.0 V.DC | 2.5 V.DC to 10 V.DC | 2.5 V.DC to 6.3 V.DC | | | | | | | | |
| Rated cap. range | 220 μF to 330 μF | 150 μF to 680 μF | 470 μF to 1000 μF | | | | | | | | |
| Capacitance tolerance | ±20 % (120 Hz / +20 ℃) | | | | | | | | | | |
| 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 | | | | | | | | | | |
| | +105 $^{\circ}$ C 2000 h rated voltage applied | | | | | | | | | | |
| Endurance | Capacitance change | Within ±20 % of the initial value | | | | | | | | | |
| | Dissipation factor(tan δ) | ≤ 1.5 times of the initial limit | | | | | | | | | |
| | Leakage current | Within the initial limit | | | | | | | | | |
| | +60 ℃, 90 % to 95 %, 500 h, No-applied voltage | | | | | | | | | | |
| | | Within $+50 \%$, -20% of the initial value | | | | | | | | | |
| Damp heat | Capacitance change | (2TPF220M6, 2TPF330M6, ETPF1000M6H (5H)) | | | | | | | | | |
| (Steady State) | | Within +40 %, -20 % of the initial value (Except for above model) | | | | | | | | | |
| | Dissipation factor(tan δ) | | | | | | | | | | |
| | Leakage current | ≤ 3 times of the initial limit | | | | | | | | | |

Marking



Dimensions (not to scale)





Panasonic Conductive Polymer Tantalum Solid Capacitors

| Characteristics list | | | | | | | | | | | | | | | | |
|----------------------|-----------------|--------|----------------------|-----------------------|----------------|-----|-----|----------------|------------------------------------|--------------------------------|---------------------|--------------------------|--------------|------------------------------------|--------------------------|-------------------------|
| Rated volt. (V.DC) | Rated temp. (℃) | gory g | Cate- | | Case size (mm) | | | Specifications | | | Standard | | | Floor life level | | |
| | | | gory temp. (℃) | Rated cap. (µF) | L | W | Н | Size code | Ripple*1 current (mA r.m.s.) | ESR ^{*2} (mΩ max.) | tan δ ^{*3} | LC ^{*4} (μΑ) | Part number | Min. packaging q'ty (pcs) | Reflow temp ≤260°C | Reflow temp ≤250℃ |
| 2.0 | 105 | 2.0 | 105 | 220 | 7.3 | 4.3 | 1.8 | D2E | 4700 | 6 | 0.10 | 88.0 | 2TPF220M6 | 3000 | | |
| | 105 | 2.0 | 105 | 330 | 7.3 | 4.3 | 1.8 | | 4700 | 6 | 0.10 | 132.0 | 2TPF330M6 | 3000 | _ | |
| 2.5 | 105 | 2.5 | 105 | 330 | 7.3 | 4.3 | 2.8 | | 4400 | 7 | 0.10 | 82.5 | 2R5TPF330M7L | 2500 2500 | | |
| | 105 | 2.5 | 105 | | 7.3 | 4.3 | 2.8 | D3L | 4400 | 6 | 0.10 | 117.5 | 2R5TPF470M6L | | | |
| | 105 | 2.5 | 105 | 470 | 7.3 | 4.3 | 2.8 | | 4400 | 7 | 0.10 | 117.5 | 2R5TPF470M7L | 2500 | | |
| | 105 | 2.5 | 105 | 470 | 7.3 | 4.3 | 2.8 | | 4400 | 10 | 0.10 | 117.5 | 2R5TPF470ML | 2500 | | |
| | 105 | 2.5 | 105 | | 7.3 | 4.3 | 3.8 | | 6100 | 5 | 0.10 | 117.5 | ETPF470M5H | 2000 | | |
| | 105 | 2.5 | 105 | | 7.3 | 4.3 | 2.8 | D3L | 4400 | 6 | 0.10 | 170.0 | 2R5TPF680M6L | 2500 | | |
| | 105 | 2.5 | 105 | 680 | 7.3 | 4.3 | 2.8 | | 4400 | 7 | 0.10 | 170.0 | 2R5TPF680M7L | 2500 | | 2a |
| | 105 | 2.5 | 105 | | 7.3 | 4.3 | 2.8 | | 4400 | 10 | 0.10 | 170.0 | 2R5TPF680ML | 2500 | | |
| | 105 | 2.5 | 105 | | 7.3 | 4.3 | 3.8 | D4 | 6100 | 5 | 0.10 | 170.0 | ETPF680M5H | 2000 | | |
| | 105 | 2.5 | 105 | 1000 | 7.3 | 4.3 | 3.8 | | 6100 | 5 | 0.10 | 250.0 | ETPF1000M5H | 2000 | 3 | |
| | 105 | 2.5 | 105 | | 7.3 | 4.3 | 3.8 | | 5600 | 6 | 0.10 | 250.0 | ETPF1000M6H | 2000 | | |
| 4.0 | 105 | 4.0 | 105 | 330 | 7.3 | 4.3 | 2.8 | D3L | 4000 | 12 | 0.10 | 132.0 | 4TPF330ML | 2500 | | |
| | 105 | 4.0 | 105 | 470 | 7.3 | 4.3 | 2.8 | | 4400 | 10 | 0.10 | 188.0 | 4TPF470ML | 2500 | | |
| | 105 | 4.0 | 105 | 680 | 7.3 | 4.3 | 3.8 | D4 | 4400 | 10 | 0.10 | 272.0 | 4TPF680MAH | 2000 | | |
| 6.3 | 105 | 6.3 | 105 | 220 | 7.3 | 4.3 | 2.8 | D3L | 6100 | 5 | 0.10 | 138.6 | 6TPF220M5L | 2500 | | |
| | 105 | 6.3 | 105 | | 7.3 | 4.3 | 2.8 | | 4600 | 9 | 0.10 | 138.6 | 6TPF220M9L | 2500 | | |
| | 105 | 6.3 | 105 | | 7.3 | 4.3 | 2.8 | | 4000 | 12 | 0.10 | 138.6 | 6TPF220ML | 2500 | | |
| | 105 | 6.3 | 105 | 330 | 7.3 | 4.3 | 2.8 | | 3900 | 9 | 0.10 | 207.9 | 6TPF330M9L | 2500 | | |
| | 105 | 6.3 | 105 | 470 | 7.3 | 4.3 | 3.8 | D4 | 4400 | 10 | 0.10 | 296.1 | 6TPF470MAH | 2000 | | |
| 10 | 105 | 10 | 105 | 150 | 7.3 | 4.3 | 2.8 | D3L | 3600 | 15 | 0.10 | 150.0 | 10TPF150ML | 2500 | _ | |

^{*1:} Ripple current (100 kHz / +45 $^{\circ}$ C)

^{*2:} ESR (100 kHz / +20 $^{\circ}$ C)

^{*3:} tan δ (120 Hz / +20 $^{\circ}$ C)

^{*4:} After 5 minutes

[◆] Please refer to each page in this catarog for "Reflow conditions", "Taping specifications" and "Floor life level".

[◆] Small order quantity (500 pcs/reel) is available with TPF series. Please contact our sales representative if you prefer it.



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