

Surface Mount Type



Series : **SVPF**



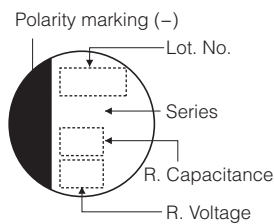
Features

- High voltage (50 V.DC max.)
- Large capacitance (1000 μ F max.)
- 105 °C 5000 h
- RoHS compliance, Halogen free

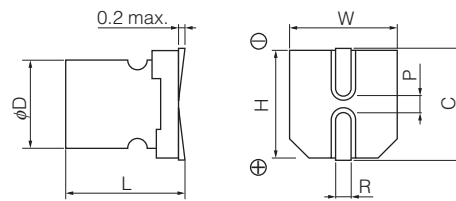
Specifications

| Size code | B6 | C6 | E7 | E10 | E12 | F12 |
|------------------------------------|--|---|---------------------------|-------------|---------------------------|----------------------------|
| Category temperature range | -55 °C to +105 °C | | | | | |
| Rated voltage range | 16 V.DC to 25 V.DC | 16 V.DC to 50 V.DC | | 16 V.DC | 16 V.DC to 50 V.DC | |
| Rated capacitance range | 27 μ F to 82 μ F | 10 μ F to 180 μ F | 18 μ F to 270 μ F | 560 μ F | 39 μ F to 560 μ F | 68 μ F to 1000 μ F |
| Capacitance tolerance | \pm 20 % (120 Hz / + 20 °C) | | | | | |
| Leakage current | Please see the attached characteristics list | | | | | |
| Dissipation factor (tan δ) | Please see the attached characteristics list | | | | | |
| Endurance | +105 °C, 5000 h, rated voltage applied | | | | | |
| | Capacitance change | Within \pm 20 % of the initial value | | | | |
| | tan δ | \leq 150 % of the initial limit | | | | |
| | DC leakage current | Within the initial limit | | | | |
| Damp heat (Steady State) | +60 °C, 90 % to 95 %, 1000 h, No-applied voltage | | | | | |
| | Capacitance change | Within \pm 20 % of the initial value | | | | |
| | tan δ | \leq 150 % of the initial limit | | | | |
| | DC leakage current | Within the initial limit (after voltage processing) | | | | |

Marking



Dimensions (not to scale)



Unit : mm

| Size code | ϕ D \pm 0.5 | L $^{+0.1}_{-0.4}$ | W \pm 0.2 | H \pm 0.2 | C \pm 0.2 | R | P \pm 0.2 |
|-----------|--------------------|--------------------|-------------|-------------|-------------|------------|-------------|
| B6 | 5.0 | 5.9 | 5.3 | 5.3 | 6.0 | 0.6 to 0.8 | 1.4 |
| C6 | 6.3 | 5.9 | 6.6 | 6.6 | 7.3 | 0.6 to 0.8 | 2.1 |
| E7 | 8.0 | 6.9 | 8.3 | 8.3 | 9.0 | 0.6 to 0.8 | 3.2 |
| E10 | 8.0 | 10.0 (\pm 0.5) | 8.3 | 8.3 | 9.0 | 0.8 to 1.1 | 3.2 |
| E12 | 8.0 | 11.9 | 8.3 | 8.3 | 9.0 | 0.8 to 1.1 | 3.2 |
| F12 | 10.0 | 12.6 | 10.3 | 10.3 | 11.0 | 0.8 to 1.1 | 4.6 |

* Externals of figure are the reference.

Characteristics list

| Series | Rated voltage (V.DC) | Rated capacitance (μF) | Case size (mm) | | Size code | Specifications | | | | Standard (Reel size : φ380) | |
|--------|----------------------|------------------------|----------------|------|-----------|--|-----------------------------|---------------------|-----------------------|-----------------------------|--------------------------|
| | | | φD | L | | Ripple current* ¹ (mA r.m.s.) | ESR* ² (mΩ max.) | tan δ* ³ | LC* ⁴ (μA) | Part number | Min. Packaging Qty (pcs) |
| SVPF | 16 | 82 | 5.0 | 5.9 | B6 | 3000 | 27 | 0.12 | 262 | 16SVPF82M | 1500 |
| | | 180 | 6.3 | 5.9 | C6 | 3300 | 22 | 0.12 | 576 | 16SVPF180M | 1000 |
| | | 270 | 8.0 | 6.9 | E7 | 3300 | 22 | 0.12 | 864 | 16SVPF270M | 1000 |
| | | 560 | 8.0 | 10.0 | E10 | 3900 | 18 | 0.12 | 1792 | 16SVPF560MX | 500 |
| | | | 8.0 | 11.9 | E12 | 4950 | 14 | 0.12 | 1792 | 16SVPF560M | 400 |
| | | 1000 | 10.0 | 12.6 | F12 | 5400 | 12 | 0.12 | 3200 | 16SVPF1000M | 400 |
| | 20 | 56 | 5.0 | 5.9 | B6 | 2800 | 30 | 0.12 | 224 | 20SVPF56MX | 1500 |
| | | 120 | 6.3 | 5.9 | C6 | 3200 | 25 | 0.12 | 480 | 20SVPF120M | 1000 |
| | | 180 | 8.0 | 6.9 | E7 | 3200 | 25 | 0.12 | 720 | 20SVPF180M | 1000 |
| | | 390 | 8.0 | 11.9 | E12 | 4950 | 14 | 0.12 | 1560 | 20SVPF390M | 400 |
| | | 560 | 10.0 | 12.6 | F12 | 5400 | 12 | 0.12 | 2240 | 20SVPF560M | 400 |
| | 25 | 27 | 5.0 | 5.9 | B6 | 2450 | 40 | 0.12 | 135 | 25SVPF27MX | 1500 |
| | | 47 | 6.3 | 5.9 | C6 | 2800 | 30 | 0.12 | 235 | 25SVPF47M | 1000 |
| | | 56 | 6.3 | 5.9 | | 2800 | 30 | 0.12 | 280 | 25SVPF56M | 1000 |
| | | 82 | 8.0 | 6.9 | E7 | 3000 | 28 | 0.12 | 410 | 25SVPF82M | 1000 |
| | | 100 | 8.0 | 6.9 | | 3200 | 24 | 0.12 | 500 | 25SVPF100M | 1000 |
| | | 180 | 8.0 | 11.9 | | E12 | 4650 | 16 | 0.12 | 900 | 25SVPF180M |
| | | 330 | 10.0 | 12.6 | F12 | 5000 | 14 | 0.12 | 1650 | 25SVPF330M | 400 |
| | 35 | 22 | 6.3 | 5.9 | C6 | 2600 | 35 | 0.12 | 154 | 35SVPF22M | 1000 |
| | | 39 | 8.0 | 6.9 | E7 | 2800 | 30 | 0.12 | 273 | 35SVPF39M | 1000 |
| | | 82 | 8.0 | 11.9 | E12 | 4000 | 20 | 0.12 | 574 | 35SVPF82M | 400 |
| | | 120 | 10.0 | 12.6 | F12 | 4400 | 18 | 0.12 | 840 | 35SVPF120M | 400 |
| | 50 | 10 | 6.3 | 5.9 | C6 | 2500 | 40 | 0.12 | 100 | 50SVPF10M | 1000 |
| | | 18 | 8.0 | 6.9 | E7 | 2700 | 35 | 0.12 | 180 | 50SVPF18M | 1000 |
| | | 39 | 8.0 | 11.9 | E12 | 3800 | 25 | 0.12 | 390 | 50SVPF39M | 400 |
| | | 68 | 10.0 | 12.6 | F12 | 4300 | 20 | 0.12 | 680 | 50SVPF68M | 400 |

*1 Ripple current (100 kHz/ +105 °C), *2 ESR (100 kHz to 300 kHz/+20 °C) *3 tan δ (120 Hz/+20 °C) *4 After 2 minutes
 ◆ Please refer to each page in this catalog for "Reflow conditions" and "Taping specifications".

Frequency correction factor for ripple current

| Frequency | 120 Hz ≤ f < 1 kHz | 1 kHz ≤ f < 10 kHz | 10 kHz ≤ f < 100 kHz | 100 kHz ≤ f < 500 kHz |
|-------------|--------------------|--------------------|----------------------|-----------------------|
| Coefficient | 0.05 | 0.3 | 0.7 | 1 |

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