

Surface Mount Type



Series : **SVPA**



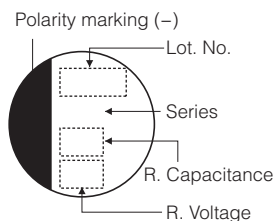
Features

- Low ESR (18 mΩ max.)
- High ripple (4240 mA.r.m.s.)
- RoHS compliance, Halogen free

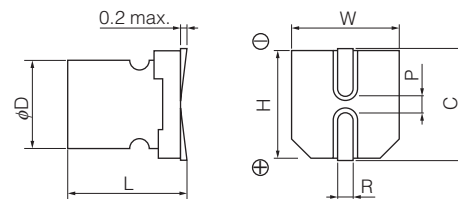
Specifications

| Size code | B6 | C6 | E7 | F8 |
|----------------------------|--|---|-----------------|---------------------|
| Category temperature range | -55 °C to +105 °C | | | |
| Rated voltage range | 2.5 V.DC to 20 V.DC | | | 2.5 V.DC to 16 V.DC |
| Rated capacitance range | 10 μF to 82 μF | 22 μF to 180 μF | 47 μF to 330 μF | 180 μF to 820 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 | | | |
| Endurance | +105 °C, 2000 h, rated voltage applied | | | |
| | Capacitance change | Within ±20 % of the initial value | | |
| | tan δ | ≤ 150 % of the initial limit | | |
| Damp heat (Steady State) | +60 °C, 90 % to 95 %, 1000 h, No-applied voltage | | | |
| | Capacitance change | Within ±20 % of the initial value | | |
| | tan δ | ≤ 150 % of the initial limit | | |
| | DC leakage current | Within the initial limit (after voltage processing) | | |

Marking



Dimensions (not to scale)



Unit : mm

| Size code | φD±0.5 | L ^{+0.1} _{-0.4} | W±0.2 | H±0.2 | C±0.2 | R | P±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 |
| F8 | 10.0 | 7.9 | 10.3 | 10.3 | 11.0 | 0.6 to 0.8 | 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 * ¹ current (mA r.m.s.) | ESR * ² (mΩ max.) | tan δ * ³ | LC * ⁴ (μA) | Part number | Min. Packaging Qty (pcs) |
| SVPA | 2.5 | 82 | 5.0 | 5.9 | B6 | 1970 | 30 | 0.12 | 300 | 2R5SVPA82MAA | 1500 |
| | | 180 | 6.3 | 5.9 | C6 | 2690 | 20 | 0.12 | 300 | 2R5SVPA180MAA | 1000 |
| | | 330 | 8.0 | 6.9 | E7 | 3370 | 20 | 0.12 | 500 | 2R5SVPA330MAA | 1000 |
| | | 820 | 10.0 | 7.9 | F8 | 4240 | 19 | 0.12 | 500 | 2R5SVPA820M | 500 |
| | 4.0 | 68 | 5.0 | 5.9 | B6 | 1970 | 30 | 0.12 | 300 | 4SVPA68MAA | 1500 |
| | | 150 | 6.3 | 5.9 | C6 | 2570 | 22 | 0.12 | 300 | 4SVPA150MAA | 1000 |
| | | 270 | 8.0 | 6.9 | E7 | 3220 | 22 | 0.12 | 500 | 4SVPA270MAA | 1000 |
| | | 680 | 10.0 | 7.9 | F8 | 4130 | 20 | 0.12 | 544 | 4SVPA680M | 500 |
| | 6.3 | 47 | 5.0 | 5.9 | B6 | 1970 | 30 | 0.12 | 300 | 6SVPA47MAA | 1500 |
| | | 120 | 6.3 | 5.9 | C6 | 2570 | 22 | 0.12 | 300 | 6SVPA120MAA | 1000 |
| | | 220 | 8.0 | 6.9 | E7 | 3220 | 22 | 0.12 | 500 | 6SVPA220MAA | 1000 |
| | | 470 | 10.0 | 7.9 | F8 | 4130 | 20 | 0.12 | 592 | 6SVPA470M | 500 |
| | 10 | 68 | 6.3 | 5.9 | C6 | 2200 | 30 | 0.12 | 300 | 10SVPA68MAA | 1000 |
| | | 150 | 8.0 | 6.9 | E7 | 2760 | 30 | 0.12 | 500 | 10SVPA150MAA | 1000 |
| | | 330 | 10.0 | 7.9 | F8 | 3770 | 24 | 0.12 | 660 | 10SVPA330M | 500 |
| | 16 | 39 | 6.3 | 5.9 | C6 | 2040 | 35 | 0.12 | 300 | 16SVPA39MAA | 1000 |
| | | | 6.3 | 5.9 | | 2460 | 24 | 0.12 | 300 | 16SVPA39MAAY | 1000 |
| | | 82 | 8.0 | 6.9 | E7 | 2760 | 30 | 0.12 | 262 | 16SVPA82MAA | 1000 |
| | | 180 | 10.0 | 7.9 | F8 | 3430 | 29 | 0.12 | 576 | 16SVPA180M | 500 |
| | 20 | 10 | 5.0 | 5.9 | B6 | 1700 | 40 | 0.12 | 80 | 20SVPA10M | 1500 |
| 22 | | 6.3 | 5.9 | C6 | 2040 | 35 | 0.12 | 88 | 20SVPA22M | 1000 | |
| 47 | | 8.0 | 6.9 | E7 | 2630 | 33 | 0.12 | 188 | 20SVPA47M | 1000 | |

*1 Ripple current (100 kHz/ +105 °C), *2 ESR (100 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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