

Surface Mount Type



Series : **SVP**



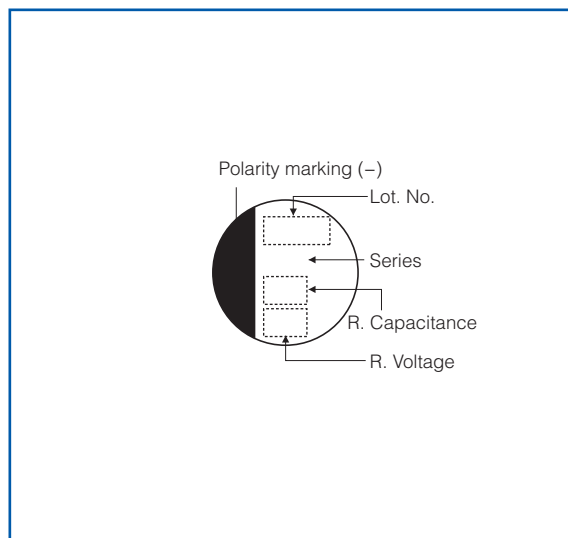
Features

- Standard
- Wealth models
- RoHS compliance, Halogen free

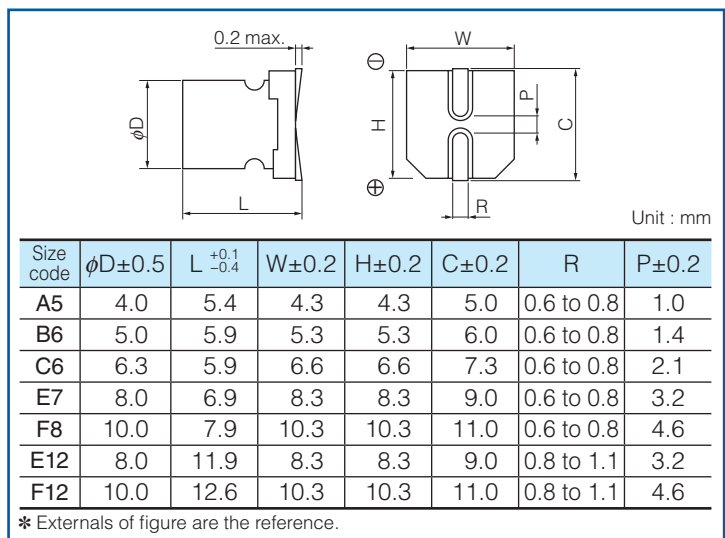
Specifications

| Size code | A5 | B6 | C6 | E7 | F8 | E12 | F12 |
|----------------------------|--|---|---------------------|-------------------|-----------------|---------------------|-------------------|
| Category temperature range | -55 °C to +105 °C | | | | | | |
| Rated voltage range | 4 V.DC to 16 V.DC | 4 V.DC to 20 V.DC | 2.5 V.DC to 20 V.DC | 4 V.DC to 20 V.DC | | 2.5 V.DC to 20 V.DC | |
| Rated capacitance range | 3.3 μF to 33 μF | 10 μF to 68 μF | 22 μF to 220 μF | 33 μF to 330 μF | 56 μF to 680 μF | 100 μF to 680 μF | 150 μF to 1500 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 | | | | | |
| | DC leakage current | Within 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)



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 (mAr.m.s.) | ESR* ² (mΩ max.) | tan δ* ³ | LC* ⁴ (μA) | Part number | Min. Packaging Qty (pcs) |
| SVP | 2.5 | 220 | 6.3 | 5.9 | C6 | 2390 | 23 | 0.12 | 110 | 2R5SVP220M | 1000 |
| | | 680 | 8.0 | 11.9 | E12 | 4520 | 13 | 0.15 | 340 | 2R5SVP680M | 400 |
| | | 1500 | 10.0 | 12.6 | F12 | 5440 | 12 | 0.18 | 750 | 2R5SVP1500M | 400 |
| | 4.0 | 33 | 4.0 | 5.4 | A5 | 740 | 200 | 0.15 | 66 | 4SVP33M | 2000 |
| | | 39 | 5.0 | 5.9 | B6 | 1100 | 70 | 0.12 | 78 | 4SVP39M | 1500 |
| | | 68 | 5.0 | 5.9 | | 1400 | 60 | 0.12 | 136 | 4SVP68M | 1500 |
| | | 150 | 6.3 | 5.9 | C6 | 1810 | 40 | 0.12 | 120 | 4SVP150MX | 1000 |
| | | 330 | 8.0 | 6.9 | E7 | 2560 | 35 | 0.12 | 264 | 4SVP330M | 1000 |
| | | 560 | 8.0 | 11.9 | E12 | 4520 | 13 | 0.15 | 448 | 4SVP560M | 400 |
| | | 680 | 10.0 | 7.9 | F8 | 3700 | 25 | 0.12 | 544 | 4SVP680M | 500 |
| | | 1200 | 10.0 | 12.6 | F12 | 5440 | 12 | 0.18 | 960 | 4SVP1200M | 400 |
| | 6.3 | 22 | 4.0 | 5.4 | A5 | 740 | 200 | 0.12 | 69.3 | 6SVP22M | 2000 |
| | | 47 | 5.0 | 5.9 | B6 | 1100 | 70 | 0.12 | 148 | 6SVP47M | 1500 |
| | | 82 | 6.3 | 5.9 | C6 | 1700 | 45 | 0.12 | 103 | 6SVP82M | 1000 |
| | | 100 | 6.3 | 5.9 | | 1810 | 40 | 0.12 | 126 | 6SVP100M | 1000 |
| | | 120 | 6.3 | 5.9 | | 2780 | 17 | 0.12 | 151 | 6SVP120MV | 1000 |
| | | 220 | 8.0 | 6.9 | E7 | 2560 | 35 | 0.12 | 277 | 6SVP220MX | 1000 |
| | | 330 | 10.0 | 7.9 | F8 | 3700 | 25 | 0.12 | 277 | 6SVP220M | 500 |
| | | | 10.0 | 7.9 | | 3700 | 25 | 0.12 | 416 | 6SVP330M | 500 |
| | | 470 | 10.0 | 7.9 | E12 | 3700 | 25 | 0.12 | 592 | 6SVP470MX | 500 |
| | | 8.0 | 11.9 | 4210 | | 15 | 0.15 | 592 | 6SVP470M | 400 | |
| | | 820 | 10.0 | 12.6 | F12 | 5440 | 12 | 0.15 | 775 | 6SVP820M | 400 |
| | | 10 | 4.7 | 4.0 | 5.4 | A5 | 670 | 240 | 0.08 | 23.5 | 10SVP4R7M |
| | 6.8 | | 4.0 | 5.4 | 670 | | 240 | 0.09 | 34 | 10SVP6R8M | 2000 |
| | 10 | | 4.0 | 5.4 | 700 | | 220 | 0.10 | 50 | 10SVP10M | 2000 |
| | 15 | | 4.0 | 5.4 | 740 | | 200 | 0.10 | 75 | 10SVP15M | 2000 |
| | 33 | | 5.0 | 5.9 | B6 | 1100 | 70 | 0.12 | 165 | 10SVP33M | 1500 |
| | 47 | | 6.3 | 5.9 | C6 | 1620 | 50 | 0.12 | 94 | 10SVP47M | 1000 |
| | 56 | | 6.3 | 5.9 | | 1700 | 45 | 0.12 | 112 | 10SVP56M | 1000 |
| | 120 | | 8.0 | 6.9 | E7 | 2560 | 35 | 0.12 | 240 | 10SVP120M | 1000 |
| | 150 | | 8.0 | 6.9 | F8 | 2560 | 35 | 0.12 | 300 | 10SVP150MX | 1000 |
| | | | 10.0 | 7.9 | | 3020 | 30 | 0.12 | 300 | 10SVP150M | 500 |
| | 270 | | 10.0 | 7.9 | E12 | 3700 | 25 | 0.12 | 540 | 10SVP270M | 500 |
| | 330 | | 10.0 | 7.9 | | 3700 | 25 | 0.12 | 660 | 10SVP330MX | 500 |
| | 8.0 | | 11.9 | 3950 | 17 | 0.15 | 660 | 10SVP330M | 400 | | |
| | 560 | | 10.0 | 12.6 | F12 | 5230 | 13 | 0.15 | 840 | 10SVP560M | 400 |
| | 16 | 3.3 | 4.0 | 5.4 | A5 | 660 | 260 | 0.07 | 26.4 | 16SVP3R3M | 2000 |
| | | 15 | 5.0 | 5.9 | B6 | 1020 | 120 | 0.10 | 120 | 16SVP15M | 1500 |
| | | 22 | 5.0 | 5.9 | | 1060 | 90 | 0.10 | 176 | 16SVP22M | 1500 |
| | | 39 | 6.3 | 5.9 | C6 | 1620 | 50 | 0.10 | 125 | 16SVP39M | 1000 |
| | | 56 | 8.0 | 6.9 | E7 | 1890 | 45 | 0.12 | 179 | 16SVP56M | 1000 |
| | | 82 | 8.0 | 6.9 | | 2120 | 40 | 0.12 | 262 | 16SVP82M | 1000 |
| 100 | | 10.0 | 7.9 | F8 | 2670 | 35 | 0.12 | 320 | 16SVP100M | 500 | |
| 150 | | 10.0 | 7.9 | | 3020 | 30 | 0.12 | 480 | 16SVP150M | 500 | |
| 180 | | 10.0 | 7.9 | E12 | 3020 | 30 | 0.12 | 576 | 16SVP180MX | 500 | |
| | | 8.0 | 11.9 | | 3640 | 20 | 0.15 | 576 | 16SVP180M | 400 | |
| 330 | | 10.0 | 12.6 | F12 | 4720 | 16 | 0.15 | 792 | 16SVP330M | 400 | |
| 20 | | 10 | 5.0 | 5.9 | B6 | 1020 | 120 | 0.10 | 100 | 20SVP10M | 1500 |
| | 22 | 6.3 | 5.9 | C6 | 1450 | 60 | 0.10 | 88 | 20SVP22M | 1000 | |
| | 27 | 6.3 | 5.9 | | 1450 | 60 | 0.10 | 108 | 20SVP27M | 1000 | |
| | 33 | 8.0 | 6.9 | E7 | 1890 | 45 | 0.12 | 132 | 20SVP33M | 1000 | |
| | 47 | 8.0 | 6.9 | | 1890 | 45 | 0.12 | 188 | 20SVP47M | 1000 | |
| | 56 | 10.0 | 7.9 | F8 | 2400 | 40 | 0.12 | 224 | 20SVP56M | 500 | |
| | 68 | 10.0 | 7.9 | | 2400 | 40 | 0.12 | 272 | 20SVP68M | 500 | |
| | 100 | 8.0 | 11.9 | E12 | 3320 | 24 | 0.15 | 400 | 20SVP100M | 400 | |
| 150 | 10.0 | 12.6 | F12 | 4320 | 20 | 0.15 | 600 | 20SVP150M | 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 |

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
 Should a safety concern arise regarding this product, please be sure to contact us immediately.