

Surface
mount type

SVPS Series



- 105°C 5,000h
- RoHS compliance, Halogen free

Specifications

| Items | Specifications | | | | |
|------------------------------------|---|---|-------------------|-------------------|--------------------|
| Size code | A5 | B6 | C6 | E7 | F8 |
| Category temperature range | -55 to +105 °C | | | | |
| Rated voltage range | 4.0 to 25 V.DC | | | | |
| Rated capacitance range | 10 to 33 μ F | 22 to 68 μ F | 22 to 150 μ F | 10 to 270 μ F | 100 to 680 μ F |
| Capacitance tolerance | ± 20 (120 Hz/+20 °C) | | | | |
| Leakage current | Please see the attached characteristics list | | | | |
| Dissipation factor($\tan\delta$) | Please see the attached characteristics list | | | | |
| Endurance | 105 °C, 5,000 h, rated voltage applied | | | | |
| | $\Delta C/C$ | Within ± 20 % of the initial value | | | |
| | DF | ≤ 1.5 times of the initial limit | | | |
| | LC | Within the initial limit | | | |
| Damp heat (Steady State) | 60°C, 90 to 95%RH, 1,000h, No-applied voltage | | | | |
| | $\Delta C/C$ | Within ± 20 % of the initial value | | | |
| | DF | ≤ 1.5 times of the initial limit | | | |
| | LC | Within the initial limit (after voltage processing) | | | |

Marking and dimensions

(unit : mm)

| Size code | $\phi D \pm 0.5$ | $L \pm 0.1$ | $W \pm 0.2$ | $H \pm 0.2$ | $C \pm 0.2$ | R | $P \pm 0.2$ |
|-----------|------------------|-------------|-------------|-------------|-------------|---------|-------------|
| A5 | 4.0 | 5.4 | 4.3 | 4.3 | 5.0 | 0.6~0.8 | 1.0 |
| B6 | 5.0 | 5.9 | 5.3 | 5.3 | 6.0 | 0.6~0.8 | 1.4 |
| C6 | 6.3 | 5.9 | 6.6 | 6.6 | 7.3 | 0.6~0.8 | 2.1 |
| E7 | 8.0 | 6.9 | 8.3 | 8.3 | 9.0 | 0.6~0.8 | 3.2 |
| F8 | 10.0 | 7.9 | 10.3 | 10.3 | 11.0 | 0.6~0.8 | 4.6 |

Characteristics list

| Series | Rated voltage (V.DC) | Rated capacitance (μ F) | Case size (mm) | | Size code | Specifications | | | | Standard(Reel size : ϕ 380) | Min. Packaging Q'ty (pcs) |
|--------|-------------------------|---------------------------------|----------------|-----|-----------|---|---------------------------------------|--------------------------|-------------------------------|----------------------------------|------------------------------|
| | | | ϕD | L | | Rated ripple current (mA rms) $\ddagger 1$ | ESR $\ddagger 2$ (m Ω max.) | $\tan \delta \ddagger 3$ | LC $\ddagger 4$ (μ A) | | |
| SVPS | 4.0 | 33 | 4.0 | 5.4 | A5 | 740 | 200 | 0.15 | 66 | 4SVPS33M | 2000 |
| | | 68 | 5.0 | 5.9 | B6 | 1970 | 30 | 0.12 | 300 | 4SVPS68M | 1500 |
| | | 150 | 6.3 | 5.9 | C6 | 2570 | 22 | 0.12 | 300 | 4SVPS150M | 1000 |
| | | 270 | 8.0 | 6.9 | E7 | 3220 | 22 | 0.12 | 500 | 4SVPS270M | 1000 |
| | | 680 | 10.0 | 7.9 | F8 | 4130 | 20 | 0.12 | 544 | 4SVPS680M | 500 |
| | 6.3 | 22 | 4.0 | 5.4 | A5 | 740 | 200 | 0.12 | 69.3 | 6SVPS22M | 2000 |
| | | 47 | 5.0 | 5.9 | B6 | 1970 | 30 | 0.12 | 300 | 6SVPS47M | 1500 |
| | | 120 | 6.3 | 5.9 | C6 | 2570 | 22 | 0.12 | 300 | 6SVPS120M | 1000 |
| | | 220 | 8.0 | 6.9 | E7 | 3220 | 22 | 0.12 | 500 | 6SVPS220M | 1000 |
| | | 470 | 10.0 | 7.9 | F8 | 4130 | 20 | 0.12 | 592 | 6SVPS470M | 500 |
| | 10 | 10 | 4.0 | 5.4 | A5 | 700 | 220 | 0.10 | 50 | 10SVPS10M | 2000 |
| | | 15 | 4.0 | 5.4 | A5 | 740 | 200 | 0.10 | 75 | 10SVPS15M | 2000 |
| | | 33 | 5.0 | 5.9 | B6 | 1100 | 70 | 0.12 | 165 | 10SVPS33M | 1500 |
| | | 68 | 6.3 | 5.9 | C6 | 2200 | 30 | 0.12 | 300 | 10SVPS68M | 1000 |
| | | 150 | 8.0 | 6.9 | E7 | 2760 | 30 | 0.12 | 500 | 10SVPS150MX | 1000 |
| | 16 | 10.0 | 7.9 | F8 | | 3020 | 30 | 0.12 | 300 | 10SVPS150M | 500 |
| | | 330 | 10.0 | 7.9 | F8 | 3770 | 24 | 0.12 | 660 | 10SVPS330M | 500 |
| | | 22 | 5.0 | 5.9 | B6 | 1060 | 90 | 0.10 | 176 | 16SVPS22M | 1500 |
| | 20 | 39 | 6.3 | 5.9 | C6 | 2460 | 24 | 0.12 | 300 | 16SVPS39M | 1000 |
| | | 82 | 8.0 | 6.9 | E7 | 2760 | 30 | 0.12 | 262 | 16SVPS82M | 1000 |
| | | 100 | 10.0 | 7.9 | F8 | 2670 | 35 | 0.12 | 320 | 16SVPS100M | 500 |
| | | 180 | 10.0 | 7.9 | F8 | 3430 | 29 | 0.12 | 576 | 16SVPS180M | 500 |
| | 25 | 22 | 6.3 | 5.9 | C6 | 1450 | 60 | 0.10 | 88 | 20SVPS22M | 1000 |
| | | 47 | 8.0 | 6.9 | E7 | 1890 | 45 | 0.12 | 188 | 20SVPS47M | 1000 |
| | | 25 | 10 | 8.0 | E7 | 1500 | 60 | 0.10 | 125 | 25SVPS10M | 1000 |

$\ddagger 1$: Rated ripple current (100 kHz/ +105 °C)

: The surface temperature of aluminum case top must not exceed 105°C. A rise in temperature due to self-heating by ripple current should be factored in.

$\ddagger 2$: ESR (100 kHz~300 kHz/+20 °C) $\ddagger 3$: $\tan \delta$ (120 Hz/+20 °C) $\ddagger 4$: 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 \leq f < 1 kHz | 1 kHz \leq f < 10 kHz | 10 kHz \leq f < 100 kHz | 100 kHz \leq f \leq 500 kHz |
|-------------|-------------------------|-------------------------|---------------------------|---------------------------------|
| Coefficient | 0.05 | 0.3 | 0.7 | 1 |