# Surface Mount Type
Series: **SVPK**

OS-CON

**UP GRADE**

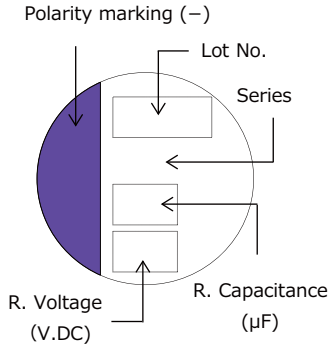
## Features

- High voltage (50 V.DC max.)
- 125 ℃ 1000 h
- RoHS compliance, Halogen free

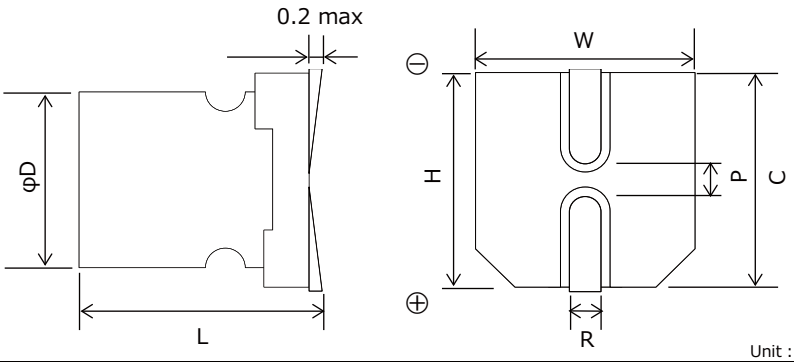
## Specifications

| Size code | B6 | C6 | E7 | E12 | F12 |
|---|---|---|---|---|---|
| Category temp. range | −55 ℃ to +125 ℃ | | | | |
| Rated vol. range | 16 V.DC to 50 V.DC | | | | |
| Rated cap. range | 10 μF to 100 μF | 22 μF to 220 μF | 33 μF to 330 μF | 68 μF to 680 μF | 120 μF to 1200 μF |
| Cap. tolerance | ±20 % (120 Hz/+20 ℃) | | | | |
| Leakage current | Please see the attached characteristics list | | | | |
| Dissipation factor (tanδ) | Please see the attached characteristics list | | | | |
| Endurance | +125 ℃, 1000 h, rated voltage applied | | | | |
| | Capacitance change | Within ±20 % of the initial value | | | |
| | Dissipation factor (tanδ) | ≦ 200 % of the initial limit | | | |
| | DC leakage current | Within the initial limit | | | |
| Damp heat (Steady State) | +60 ℃, 90 % to 95 %, 1000 h, No-applied voltage | | | | |
| | Capacitance change | Within ±20 % of the initial value | | | |
| | Dissipation factor (tanδ) | ≦ 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 |
| 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 |

## Characteristics list

| Rated vol. (V.DC) | Rated cap. (μF) | Case size (mm) φD | Case size (mm) L | Size code | Specifications: Ripple current *1 (mA r.m.s.) | Specifications: Allowable ripple current *1 (mA r.m.s.) | Specifications: ESR*2 (mΩ) | Specifications: tan δ*3 | Specifications: LC*4 (μA) | Standard (Reel size : φ380) Part number | Standard (Reel size : φ380) Min. Packaging Q'ty (pcs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NEW 16 | 100 | 5.0 | 5.9 | B6 | 940 | 3000 | 27 | 0.12 | 320 | 16SVPK100M | 1500 |
| | 220 | 6.3 | 5.9 | C6 | 1040 | 3300 | 22 | 0.12 | 704 | 16SVPK220M | 1000 |
| | 330 | 8.0 | 6.9 | E7 | 1040 | 3300 | 22 | 0.12 | 1056 | 16SVPK330M | 1000 |
| | 680 | 8.0 | 11.9 | E12 | 1560 | 4950 | 14 | 0.12 | 2176 | 16SVPK680M | 400 |
| | 1200 | 10.0 | 12.6 | F12 | 1700 | 5400 | 12 | 0.12 | 3840 | 16SVPK1200M | 400 |
| NEW 20 | 68 | 5.0 | 5.9 | B6 | 880 | 2800 | 30 | 0.12 | 272 | 20SVPK68M | 1500 |
| | 150 | 6.3 | 5.9 | C6 | 1010 | 3200 | 25 | 0.12 | 600 | 20SVPK150M | 1000 |
| | 220 | 8.0 | 6.9 | E7 | 1010 | 3200 | 25 | 0.12 | 880 | 20SVPK220M | 1000 |
| | 470 | 8.0 | 11.9 | E12 | 1560 | 4950 | 14 | 0.12 | 1880 | 20SVPK470M | 400 |
| | 680 | 10.0 | 12.6 | F12 | 1700 | 5400 | 12 | 0.12 | 2720 | 20SVPK680M | 400 |
| 25 | 33 | 5.0 | 5.9 | B6 | 820 | 2600 | 35 | 0.12 | 165 | 25SVPK33M | 1500 |
| | 82 | 6.3 | 5.9 | C6 | 960 | 3060 | 25 | 0.12 | 410 | 25SVPK82M | 1000 |
| | 90 | 6.3 | 5.9 | C6 | 960 | 3060 | 25 | 0.12 | 450 | 25SVPK90M | 1000 |
| | 120 | 8.0 | 6.9 | E7 | 1010 | 3200 | 24 | 0.12 | 600 | 25SVPK120M | 1000 |
| | 270 | 8.0 | 11.9 | E12 | 1470 | 4650 | 16 | 0.12 | 1350 | 25SVPK270M | 400 |
| | 470 | 10.0 | 12.6 | F12 | 1590 | 5000 | 14 | 0.12 | 2350 | 25SVPK470M | 400 |
| 35 | 22 | 5.0 | 5.9 | B6 | 820 | 2600 | 35 | 0.12 | 154 | 35SVPK22M | 1500 |
| | 47 | 6.3 | 5.9 | C6 | 930 | 2950 | 27 | 0.12 | 329 | 35SVPK47M | 1000 |
| | 82 | 8.0 | 6.9 | E7 | 960 | 3060 | 25 | 0.12 | 574 | 35SVPK82M | 1000 |
| | 180 | 8.0 | 11.9 | E12 | 1260 | 4000 | 20 | 0.12 | 1260 | 35SVPK180M | 400 |
| | 330 | 10.0 | 12.6 | F12 | 1390 | 4400 | 18 | 0.12 | 2310 | 35SVPK330M | 400 |
| 50 | 10 | 5.0 | 5.9 | B6 | 550 | 1750 | 80 | 0.12 | 100 | 50SVPK10M | 1500 |
| | 22 | 6.3 | 5.9 | C6 | 820 | 2600 | 35 | 0.12 | 220 | 50SVPK22M | 1000 |
| | 33 | 8.0 | 6.9 | E7 | 850 | 2700 | 35 | 0.12 | 330 | 50SVPK33M | 1000 |
| | 68 | 8.0 | 11.9 | E12 | 1200 | 3800 | 25 | 0.12 | 680 | 50SVPK68M | 400 |
| | 120 | 10.0 | 12.6 | F12 | 1350 | 4300 | 20 | 0.12 | 1200 | 50SVPK120M | 400 |

*1: Ripple current (100 kHz / +105 °C < Tx ≦ +125 °C) /Allowable ripple current (100 kHz / Tx ≦ +105 °C)
*2: ESR (100 kHz to 300 kHz / +20 ℃)
*3: tan δ (120 Hz / +20 ℃)
*4: After 2 minutes
・Please refer to each page in this catarog for “Reflow conditions” and “Taping specifications”.

## Frequency correction factor for ripple current

| Frequency (f) | 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 |