# Surface Mount Type

Series : **SVF**

OS-CON



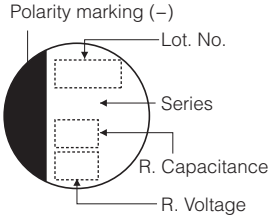
## Features

- High voltage (50 V.DC max.)
- Large capacitance (1000 µF max.)
- 125 °C 1000 h
- RoHS compliance, Halogen free

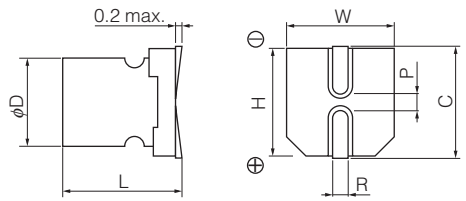
## Specifications

| Size code | B6 | C6 | E7 | E12 | F12 |
|---|---|---|---|---|---|
| Category temperature range | –55 °C to +125 °C | | | | |
| Rated voltage range | 16 V.DC to 25 V.DC | 16 V.DC to 50 V.DC | | | |
| Rated capacitance range | 27 µF to 82 µF | 10 µF to 180 µF | 18 µF to 270 µF | 39 µF to 560 µF | 68 µF to 1000 µF |
| 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 | +125 °C, 1000 h, rated voltage applied | | | | |
| | Capacitance change | Within ±20 % of the initial value | | | |
| | tan $\delta$ | ≦ 200 % 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 $\delta$ | ≦ 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 |

✻ Externals of figure are the reference.

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.

## 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 (mAr.m.s.) | Allowable *1 ripple current (mAr.m.s.) | ESR *2 (mΩ max.) | tan δ *3 | LC *4 (μA) | Part number | Min. Packaging Q'ty (pcs) |
| SVF | 16 | 82 | 5.0 | 5.9 | B6 | 940 | 3000 | 27 | 0.12 | 262 | 16SVF82M | 1500 |
| | | 180 | 6.3 | 5.9 | C6 | 1040 | 3300 | 22 | 0.12 | 576 | 16SVF180M | 1000 |
| | | 270 | 8.0 | 6.9 | E7 | 1040 | 3300 | 22 | 0.12 | 864 | 16SVF270M | 1000 |
| | | 560 | 8.0 | 11.9 | E12 | 1560 | 4950 | 14 | 0.12 | 1792 | 16SVF560M | 400 |
| | | 1000 | 10.0 | 12.6 | F12 | 1700 | 5400 | 12 | 0.12 | 3200 | 16SVF1000M | 400 |
| | 20 | 56 | 5.0 | 5.9 | B6 | 880 | 2800 | 30 | 0.12 | 224 | 20SVF56M | 1500 |
| | | 120 | 6.3 | 5.9 | C6 | 1010 | 3200 | 25 | 0.12 | 480 | 20SVF120M | 1000 |
| | | 180 | 8.0 | 6.9 | E7 | 1010 | 3200 | 25 | 0.12 | 720 | 20SVF180M | 1000 |
| | | 390 | 8.0 | 11.9 | E12 | 1560 | 4950 | 14 | 0.12 | 1560 | 20SVF390M | 400 |
| | | 560 | 10.0 | 12.6 | F12 | 1700 | 5400 | 12 | 0.12 | 2240 | 20SVF560M | 400 |
| | 25 | 27 | 5.0 | 5.9 | B6 | 770 | 2450 | 40 | 0.12 | 135 | 25SVF27M | 1500 |
| | | 47 | 6.3 | 5.9 | C6 | 880 | 2800 | 30 | 0.12 | 235 | 25SVF47M | 1000 |
| | | 56 | 6.3 | 5.9 | | 880 | 2800 | 30 | 0.12 | 280 | 25SVF56M | 1000 |
| | | 82 | 8.0 | 6.9 | E7 | 940 | 3000 | 28 | 0.12 | 410 | 25SVF82M | 1000 |
| | | 100 | 8.0 | 6.9 | | 1010 | 3200 | 24 | 0.12 | 500 | 25SVF100M | 1000 |
| | | 180 | 8.0 | 11.9 | E12 | 1470 | 4650 | 16 | 0.12 | 900 | 25SVF180M | 400 |
| | | 330 | 10.0 | 12.6 | F12 | 1580 | 5000 | 14 | 0.12 | 1650 | 25SVF330M | 400 |
| | 35 | 22 | 6.3 | 5.9 | C6 | 820 | 2600 | 35 | 0.12 | 154 | 35SVF22M | 1000 |
| | | 39 | 8.0 | 6.9 | E7 | 880 | 2800 | 30 | 0.12 | 273 | 35SVF39M | 1000 |
| | | 82 | 8.0 | 11.9 | E12 | 1260 | 4000 | 20 | 0.12 | 574 | 35SVF82M | 400 |
| | | 120 | 10.0 | 12.6 | F12 | 1390 | 4400 | 18 | 0.12 | 840 | 35SVF120M | 400 |
| | 50 | 10 | 6.3 | 5.9 | C6 | 790 | 2500 | 40 | 0.12 | 100 | 50SVF10M | 1000 |
| | | 18 | 8.0 | 6.9 | E7 | 850 | 2700 | 35 | 0.12 | 180 | 50SVF18M | 1000 |
| | | 39 | 8.0 | 11.9 | E12 | 1200 | 3800 | 25 | 0.12 | 390 | 50SVF39M | 400 |
| | | 68 | 10.0 | 12.6 | F12 | 1350 | 4300 | 20 | 0.12 | 680 | 50SVF68M | 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 °C)
✻3 tan δ (120 Hz/+20 °C) ✻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 | 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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