WINSOURCE ELECTRONICS

# THE DATASHEET OF

16SVPC150M

# Surface Mount Type

Series : **SVPC**

OS-CON



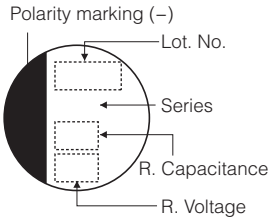
## Features

- Low ESR (9 mΩ to 30 mΩ)
- Large capacitance (2700 µF max.)
- RoHS compliance, Halogen free

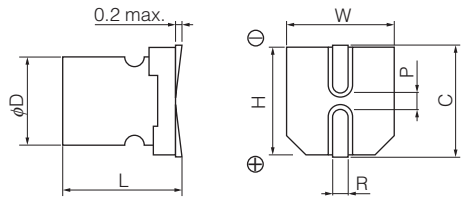
## Specifications

| Size code | B6 | C6 | E7 | E12 | F12 |
|---|---|---|---|---|---|
| Category temperature range | –55 °C to +105 °C | | | | |
| Rated voltage range | 2.5 V.DC to 16 V.DC | | | | 2.5 V.DC |
| Rated capacitance range | 39 µF to 180 µF | 68 µF to 560 µF | 120 µF to 680 µF | 270 µF to 1500 µF | 2700 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 | +105 °C, 2000 h, rated voltage applied | | | | |
| | Capacitance change | Within ±20 % of the initial value | | | |
| | tan $\delta$ | ≦ 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 $\delta$ | ≦ 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) φD | Case size (mm) L | Size code | Specifications Ripple *1 current (mAr.m.s.) | Specifications ESR 100 kHz/20 °C (mΩ max.) | Specifications ESR 300 kHz/20 °C (mΩ max.) | Specifications tan δ *2 | Specifications LC *3 (μA) | Standard (Reel size : φ380) Part number | Standard (Reel size : φ380) Min. Packaging Q'ty (pcs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVPC | 2.5 | 180 | 5.0 | 5.9 | B6 | 1970 | 30 | 26 | 0.12 | 300 | 2R5SVPC180M | 1500 |
| | | | 5.0 | 5.9 | | 2200 | 24 | 20 | 0.12 | 300 | 2R5SVPC180MY | 1500 |
| | | | 5.0 | 5.9 | | 2800 | 19 | 16 | 0.12 | 300 | 2R5SVPC180MV | 1500 |
| | | 390 | 6.3 | 5.9 | C6 | 2410 | 25 | 22 | 0.12 | 300 | 2R5SVPC390M | 1000 |
| | | | 6.3 | 5.9 | | 3160 | 15 | 13 | 0.12 | 300 | 2R5SVPC390MV | 1000 |
| | | 560 | 6.3 | 5.9 | | 3500 | 16 | 14 | 0.12 | 300 | 2R5SVPC560M | 1000 |
| | | 680 | 8.0 | 6.9 | E7 | 3370 | 20 | 17 | 0.12 | 500 | 2R5SVPC680M | 1000 |
| | | 820 | 8.0 | 11.9 | E12 | 5380 | 9 | 8 | 0.15 | 500 | 2R5SVPC820M | 400 |
| | | 1500 | 8.0 | 11.9 | | 5150 | 10 | 9 | 0.15 | 750 | 2R5SVPC1500M | 400 |
| | | 2700 | 10.0 | 12.6 | F12 | 5070 | 12 | 10 | 0.15 | 1350 | 2R5SVPC2700M | 400 |
| | 4.0 | 150 | 5.0 | 5.9 | B6 | 1970 | 30 | 26 | 0.12 | 300 | 4SVPC150M | 1500 |
| | | | 5.0 | 5.9 | | 2240 | 23 | 20 | 0.12 | 300 | 4SVPC150MY | 1500 |
| | | | 5.0 | 5.9 | | 2730 | 20 | 17 | 0.12 | 300 | 4SVPC150MV | 1500 |
| | | 330 | 6.3 | 5.9 | C6 | 2320 | 27 | 23 | 0.12 | 300 | 4SVPC330M | 1000 |
| | | | 6.3 | 5.9 | | 2630 | 21 | 18 | 0.12 | 300 | 4SVPC330MY | 1000 |
| | | | 6.3 | 5.9 | | 3160 | 15 | 13 | 0.12 | 300 | 4SVPC330MV | 1000 |
| | | 560 | 8.0 | 6.9 | E7 | 3220 | 22 | 19 | 0.12 | 500 | 4SVPC560M | 1000 |
| | | | 8.0 | 11.9 | E12 | 5380 | 9 | 8 | 0.15 | 500 | 4SVPC560MX | 400 |
| | | 1200 | 8.0 | 11.9 | | 4700 | 12 | 10 | 0.15 | 960 | 4SVPC1200M | 400 |
| | | 1500 | 8.0 | 11.9 | | 4700 | 12 | 10 | 0.15 | 1200 | 4SVPC1500M | 400 |
| | 6.3 | 100 | 5.0 | 5.9 | B6 | 1970 | 30 | 26 | 0.12 | 300 | 6SVPC100M | 1500 |
| | | | 5.0 | 5.9 | | 2150 | 25 | 21 | 0.12 | 300 | 6SVPC100MY | 1500 |
| | | 120 | 5.0 | 5.9 | | 2660 | 21 | 18 | 0.12 | 300 | 6SVPC120MV | 1500 |
| | | 220 | 6.3 | 5.9 | C6 | 2320 | 27 | 23 | 0.12 | 300 | 6SVPC220M | 1000 |
| | | | 6.3 | 5.9 | | 3160 | 15 | 13 | 0.12 | 300 | 6SVPC220MV | 1000 |
| | | 330 | 6.3 | 5.9 | | 3390 | 17 | 15 | 0.12 | 415 | 6SVPC330M | 1000 |
| | | 390 | 8.0 | 6.9 | E7 | 3220 | 22 | 19 | 0.12 | 491 | 6SVPC390M | 1000 |
| | | 820 | 8.0 | 11.9 | E12 | 4700 | 12 | 10 | 0.15 | 1033 | 6SVPC820M | 400 |
| | 10 | 68 | 5.0 | 5.9 | B6 | 1970 | 30 | 26 | 0.12 | 300 | 10SVPC68M | 1500 |
| | | | 5.0 | 5.9 | | 2540 | 23 | 20 | 0.12 | 300 | 10SVPC68MV | 1500 |
| | | 120 | 6.3 | 5.9 | C6 | 2320 | 27 | 23 | 0.12 | 300 | 10SVPC120M | 1000 |
| | | | 6.3 | 5.9 | | 2600 | 22 | 19 | 0.12 | 300 | 10SVPC120MV | 1000 |
| | | 270 | 8.0 | 6.9 | E7 | 3220 | 22 | 19 | 0.12 | 500 | 10SVPC270M | 1000 |
| | | 330 | 8.0 | 6.9 | | 3460 | 19 | 17 | 0.12 | 660 | 10SVPC330M | 1000 |
| | 16 | 39 | 5.0 | 5.9 | B6 | 1820 | 35 | 30 | 0.12 | 300 | 16SVPC39M | 1500 |
| | | | 5.0 | 5.9 | | 2350 | 27 | 23 | 0.12 | 300 | 16SVPC39MV | 1500 |
| | | 68 | 6.3 | 5.9 | C6 | 2200 | 30 | 26 | 0.12 | 300 | 16SVPC68M | 1000 |
| | | | 6.3 | 5.9 | | 2440 | 25 | 22 | 0.12 | 300 | 16SVPC68MV | 1000 |
| | | 100 | 6.3 | 5.9 | | 2490 | 24 | 23 | 0.12 | 300 | 16SVPC100M | 1000 |
| | | 120 | 8.0 | 6.9 | E7 | 2900 | 27 | 23 | 0.12 | 500 | 16SVPC120M | 1000 |
| | | 150 | 8.0 | 6.9 | | 3220 | 22 | 21 | 0.12 | 500 | 16SVPC150M | 1000 |
| | | 270 | 8.0 | 11.9 | E12 | 4070 | 16 | 14 | 0.15 | 864 | 16SVPC270M | 400 |

✻1 Ripple current (100 kHz/ +105 °C ), ✻2 tan δ (120 Hz/+20 °C) ✻3 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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