Surface mount type

# SVPG Series NEW

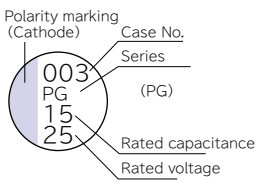
HS directive/Halogen-free compliant
Low ESR(8mΩ)
High rated ripple current(5,800mArms)

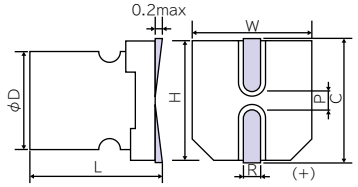
## Specifications

| Items | Condition | | Specifications | | |
|---|---|---|---|---|---|
| Rated voltage (V) | – | | 16 | 20 | 25 |
| Surge voltage (V) | Room temperature | | 18 | 23 | 29 |
| Category temperature range(℃) | – | | −55 to +105 | | |
| Capacitance tolerance (%) | 120Hz/20℃ | | M : ±20 | | |
| Dissipation Factor (DF) | 120Hz/20℃ | | Please see the attached characteristics list | | |
| Leakage current※1 | Rated voltage applied, after 2 minutes | | Please see the attached characteristics list | | |
| Equivalent series resistance (ESR) | 100kHz to 300kHz/20℃ | | Please see the attached characteristics list | | |
| Characteristics of impedance ratio at high temp. and low temp. | Based the value at 100kHz, +20℃ | −55℃ Z/Z20℃ | 0.75 to 1.25 | | |
| | | +105℃ Z/Z20℃ | 0.75 to 1.25 | | |
| Endurance | 105℃, 5,000h, Rated voltage applied | ΔC/C | Within ±20% of the initial value | | |
| | | DF | Within 1.5 times of the initial limit | | |
| | | ESR | Within 1.5 times of the initial limit | | |
| | | LC | Within the initial limit | | |
| Damp heat(Steady state) | 60℃, 90 to 95%RH, 1,000h, No applied voltage | ΔC/C | Within ±20% of the initial value | | |
| | | DF | Within 1.5 times of the initial limit | | |
| | | ESR | Within 1.5 times of the initial limit | | |
| | | LC | Within the initial limit (after voltage processing) | | |
| Resistance to soldering heat※2 | VPS (230℃ X 75s) | ΔC/C | Within ±10% of the initial value | | |
| | | DF | Within 1.3 times of the initial limit | | |
| | | ESR | Within 1.3 times of the initial limit | | |
| | | LC | Within the initial limit (after voltage processing) | | |

※1 In case of some problems for measured values, measure after applying rated voltage.
※2 Please refer to page 25 for reflow soldering conditions.

## Marking and dimensions




(unit : mm)

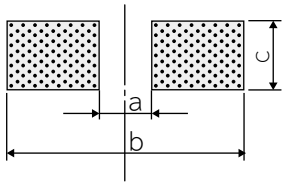
| Size code | ϕD ±0.5 | L +0.1 −0.4 | W ±0.2 | H ±0.2 | C ±0.2 | R | P ±0.2 |
|---|---|---|---|---|---|---|---|
| B45 | 5.0 | 4.4 | 5.3 | 5.3 | 6.0 | 0.6~0.8 | 1.4 |
| C10 | 6.3 | 9.9 | 6.6 | 6.6 | 7.3 | 0.6~0.8 | 2.1 |

## Size list

RV : Rated voltage

| μF \ RV | 16 | 20 | 25 |
|---|---|---|---|
| 15 | | | B45 |
| 33 | | B45 | |
| 47 | B45 | | |
| 270 | C10 | | |

## Recommended land pattern dimension of PWB




(unit : mm)

| Size code | a | b | c |
|---|---|---|---|
| B45 | 1.4 | 7.4 | 1.6 |
| C10 | 2.1 | 9.1 | 1.6 |

## SVPG series characteristics list

| Size code | Part number | Rated voltage (V) | Rated capacitance (μF) | ESR(mΩ) (max) 100kHz to 300kHz/20℃ | Rated ripple current 100kHz (mArms) at 105℃ | DF (% max) | Leakage current (μA)(max) After 2 minutes |
|---|---|---|---|---|---|---|---|
| B45 | 25SVPG15M | 25 | 15 | 30 | 2800 | 12 | 75 |
| | 20SVPG33M | 20 | 33 | 27 | 3000 | 12 | 132 |
| | 16SVPG47M | 16 | 47 | 25 | 3200 | 12 | 150 |
| C10 | 16SVPG270M | 16 | 270 | 8 | 5800 | 12 | 864 |

## Frequency coefficient for ripple current

| Frequency | 120Hz≦ f <1kHz | 1kHz≦ f <10kHz | 10kHz≦ f <100kHz | 100kHz≦ f ≦500kHz |
|---|---|---|---|---|
| Coefficient | 0.05 | 0.3 | 0.7 | 1 |