

III. SPECIFICATIONS FOR EACH SERIES

Conductive polymer type

Vertical Surface Mounting Capacitors
(125°C guarantee)

This series has advanced characteristics in resistance to heat compared with the SVP series. The SVQP series is best suited for devices that require enhanced reliability.

Following advantages of the improved heatproof characteristics, the SVQP series does not need derating on maximum ripple current. However, the series guarantees allowable ripple current differently in the temperature from 105°C to 125°C and in the temperature range lower than 105°C.

SVQP
Series



Marking: Polarity(⊖), Rated voltage (Purple) QP, Rated capacitance, Lot.No.

Specifications for each series

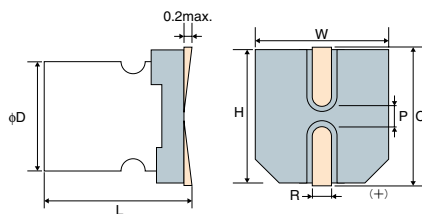
Specifications

| Items | Characteristics | | |
|---|---|---|--------------|
| 1. Category temperature range | -55°C to +125°C | | |
| 2. Tolerance on rated capacitance (120Hz) | M : ±20% | | |
| 3. Tangent of loss angle(tanδ) (120Hz) | Less than or equal to the value of Table5 | | |
| 4. Leakage current (μA/2min)(or less) ※1 | Less than or equal to the value of Table5 | | |
| 5. ESR (100k to 300kHz) | Less than or equal to the value of Table5 | | |
| 6. Characteristics at high temp. and low temp. Impedance ratio at 100kHz, +20°C | -55°C | Z / Z20°C | 0.75 to 1.25 |
| | +125°C | Z / Z20°C | 0.75 to 1.25 |
| 7. Endurance 125°C, 1,000h Rated voltage applied | ΔC/C | Within ±30% | |
| | tanδ | 2 or less times of an initial standard | |
| | ESR | 2 or less times of an initial standard | |
| | Leakage current | Below an initial standard | |
| 8. Damp heat (Steady state) (60°C, 90 to 95%RH, 1,000h no voltage) | ΔC/C | Within ±20% | |
| | tanδ | 1.5 or less times of an initial standard | |
| | ESR | 1.5 or less times of an initial standard | |
| | Leakage current | Below the initial standard of an after voltage processing | |
| 9. Solder heat resistance (VPS) ※2 (230°C X 75s) | ΔC/C | Within ±10% | |
| | tanδ | 1.3 or less times of an initial standard | |
| | ESR | 1.3 or less times of an initial standard | |
| | Leakage current | Below the initial standard of an after voltage processing | |

※1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 125°C.

※2 Refer to Page 44 for soldering recommendation.

Dimensions



(unit : mm)

| Size Code | φD±0.5 | Lmax. | W±0.2 | H±0.2 | C±0.2 | R | P±0.2 |
|-----------|--------|-------|-------|-------|-------|------------|-------|
| C6 | 6.3 | 6.0 | 6.6 | 6.6 | 7.3 | 0.5 to 0.8 | 2.1 |
| E7 | 8.0 | 7.0 | 8.3 | 8.3 | 9.0 | 0.5 to 0.8 | 3.2 |

Size List WV : Rated voltage (SV) : Surge (room temperature)

| μF | WV (SV) | 4 (5.2) | 6.3 (8.2) | 10 (11.5) | 16 (18.4) | 20 (23) |
|-----|---------|---------|-----------|-----------|-----------|---------|
| 22 | | | | | | C6 |
| 39 | | | | | C6 | |
| 47 | | | | | | E7 |
| 56 | | | | C6 | | |
| 82 | | | C6 | | E7 | |
| 100 | | | C6 | | | |
| 120 | | | | E7 | | |
| 150 | C6 | | E7 | E7 | | |
| 220 | E7 | | E7 | | | |

※For the minimum packing quantity, see page 43.

III. SPECIFICATIONS FOR EACH SERIES

Table5 SVQP Series Characteristics List

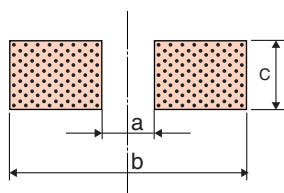
| Size Code | Part Number ※1 | Rated Voltage (V) | Rated Capacitance (μF) | ESR (100kHz to 300kHz) (mΩ) (max.) | Rated ripple current | Allowable ripple current | Tangent of loss angle (max.) | Leakage current (μA) (max.) ※2 |
|-----------|----------------|-------------------|------------------------|------------------------------------|----------------------|--------------------------|------------------------------|--------------------------------|
| | | | | | 100kHz (mArms) ※3 | | | |
| | | | | | 105°C < Tx ≤ 125°C | Tx ≤ 105°C | | |
| C6 | 20SVQP22M | 20 | 22 | 60 | 459 | 1450 | 0.10 | 220 |
| | 16SVQP39M | 16 | 39 | 50 | 512 | 1620 | 0.10 | 312 |
| | 10SVQP56M | 10 | 56 | 45 | 538 | 1700 | 0.12 | 280 |
| | 6SVQP82M | 6.3 | 82 | 45 | 538 | 1700 | 0.12 | 258 |
| | 6SVQP100M | 6.3 | 100 | 40 | 572 | 1810 | 0.12 | 315 |
| | 4SVQP150M | 4 | 150 | 40 | 572 | 1810 | 0.12 | 300 |
| E7 | 20SVQP47M | 20 | 47 | 45 | 598 | 1890 | 0.12 | 470 |
| | 16SVQP82M | 16 | 82 | 40 | 670 | 2120 | 0.12 | 656 |
| | 10SVQP120M | 10 | 120 | 35 | 810 | 2560 | 0.12 | 600 |
| | 10SVQP150M | 10 | 150 | 35 | 810 | 2560 | 0.12 | 750 |
| | 6SVQP150M | 6.3 | 150 | 35 | 810 | 2560 | 0.12 | 472 |
| | 6SVQP220M | 6.3 | 220 | 35 | 810 | 2560 | 0.12 | 693 |
| | 4SVQP220M | 4 | 220 | 35 | 810 | 2560 | 0.12 | 440 |

※1 Capacitance tolerance : M ; ±20%

※2 After 2 minutes

※3 Tx : Ambient temperature

Recommended land pattern dimension of PWB



(unit : mm)

| Size Code | a | b | c |
|-----------|-----|------|-----|
| C6 | 2.1 | 9.1 | 1.6 |
| E7 | 2.8 | 11.1 | 1.9 |

Specifications for each series