

SEPC is designed to have even lower ESR than the SEP series. Suitable for use on computer and peripheral products such as motherboards, servers and VGAs. Lead free-flow is supported.*2



Specifications

| Items | | Condition | | Specifications | | | | |
|--|---|--|---------------------|---|-----|-----|----|----|
| Rated voltage (V) | | - | | 2.5 | 4.0 | 6.3 | 10 | 16 |
| Surge voltage (V) | | Room temperature | | 3.3 | 5.2 | 8.2 | 12 | 18 |
| Category temperature range (°C) | | - | | -55 to +105 | | | | |
| Capacitance tolerance (%) | | 120Hz/20°C | | M : ±20 | | | | |
| Dissipation Factor (DF) | | 120Hz/20°C | | 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°C | | Please see the attached characteristics list | | | | |
| Characteristics of impedance ratio at high temp. and low temp. | Based the value at 100kHz, +20°C | -55°C | Z/Z _{20°C} | 0.75 to 1.25 | | | | |
| | | +105°C | Z/Z _{20°C} | 0.75 to 1.25 | | | | |
| Endurance | 105°C, 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°C, 90%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 | Flow method (260±5°C X 10s) | ΔC/C | | Within ±5% of the initial value | | | | |
| | | DF | | Within the initial limit | | | | |
| | | ESR | | Within 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 for 120 minutes at 105°C.

*2 Please refer to page 26 for flow soldering conditions.

Marking and dimensions



B9, C55, C6, C7, C9, E7, E9 size flat rubber is used.

Size list

RV : Rated voltage

(unit : mm)

| μF \ RV | 2.5 | 4.0 | 6.3 | 10 | 16 |
|---------|-----------------|-------------|-----------------|----|---------|
| 100 | B9 | | | | C6, C9 |
| 150 | | | | | E7 |
| 180 | | | | | E9, E12 |
| 220 | | | C55 | | E7 |
| 270 | | | | E7 | E9, E12 |
| 330 | B9, C9 | | | | |
| 390 | C6 | | | | |
| 470 | B9 | | C7, C9, E9, E13 | | F13 |
| 560 | B9, C6, C9, E9 | C9, E9, E13 | C9, E9 | | |
| 680 | | E13 | F13 | | |
| 820 | C9, E7, E9, E13 | F13 | | | |
| 1,000 | E9 | | | | |
| 1,500 | | | F13 | | |
| 2,700 | F13 | | | | |

| Size code | φD ±0.5 | L max | F | φd ±0.05 |
|-----------|---------|-------|---------|----------|
| B9 | 5.0 | 9.0 | 2.0±0.5 | 0.6 |
| C55 | 6.3 | 5.5 | 2.5±0.5 | 0.45 |
| C6 | 6.3 | 6.0 | 2.5±0.5 | 0.45*3 |
| C7 | 6.3 | 7.0 | 2.5±0.5 | 0.6 |
| C9 | 6.3 | 9.0 | 2.5±0.5 | 0.6*4 |
| E7 | 8.0 | 7.0 | 3.5±0.5 | 0.6 |
| E9 | 8.0 | 9.0 | 3.5±0.5 | 0.6 |
| E12 | 8.0 | 12.0 | 3.5±0.5 | 0.6 |
| E13 | 8.0 | 13.0 | 3.5±0.5 | 0.6 |
| F13 | 10.0 | 13.0 | 5.0±0.5 | 0.6 |

*3 2SEPC390M : 0.5±0.05

*4 16SEPC150MD, 10SEPC270MD : 0.45±0.05

● SEPC series characteristics list

| Size code | Part number | Rated voltage (V) | Rated capacitance (μF) | ESR (mΩ) (max) 100kHz to 300kHz/20°C | Rated ripple current 100kHz (mA rms) at 105°C | DF (% max) | Leakage current (μA)(max) After 2 minutes |
|-----------|-------------|-------------------|------------------------|---|--|------------|--|
| B9 | 2SEPC100MZ | 2.5 | 100 | 7 | 4180 | 10 | 500 |
| | 2SEPC330MZ | 2.5 | 330 | 7 | 4180 | 10 | 500 |
| | 2SEPC470MZ | 2.5 | 470 | 7 | 4180 | 10 | 500 |
| | 2SEPC560MZ | 2.5 | 560 | 7 | 4180 | 10 | 500 |
| C55 | 6SEPC220M | 6.3 | 220 | 18 | 2980 | 12 | 280 |
| C6 | 16SEPC100M | 16 | 100 | 24 | 2490 | 10 | 320 |
| | 2SEPC390M | 2.5 | 390 | 10 | 3900 | 12 | 500 |
| | 2SEPC560M | 2.5 | 560 | 10 | 3900 | 12 | 500 |
| C7 | 6SEPC470ME | 6.3 | 470 | 20 | 2970 | 10 | 592 |
| C9 | 16SEPC100MW | 16 | 100 | 10 | 4680 | 10 | 500 |
| | 6SEPC470MW | 6.3 | 470 | 7 | 5600 | 10 | 592 |
| | 6SEPC560MW | 6.3 | 560 | 7 | 5600 | 10 | 705 |
| | 4SEPC560MW | 4.0 | 560 | 7 | 5600 | 10 | 500 |
| | 2SEPC330MW | 2.5 | 330 | 7 | 5600 | 10 | 500 |
| | 2SEPC560MW | 2.5 | 560 | 7 | 5600 | 10 | 500 |
| | 2SEPC820MW | 2.5 | 820 | 7 | 5600 | 10 | 500 |
| E7 | 16SEPC150MD | 16 | 150 | 22 | 3220 | 12 | 500 |
| | 16SEPC220MD | 16 | 220 | 13 | 4150 | 10 | 500 |
| | 10SEPC270MD | 10 | 270 | 22 | 3220 | 12 | 500 |
| | 2SEPC820MD | 2.5 | 820 | 8 | 5300 | 10 | 500 |
| E9 | 16SEPC180MX | 16 | 180 | 10 | 5000 | 10 | 576 |
| | 16SEPC270MX | 16 | 270 | 10 | 5000 | 10 | 864 |
| | 6SEPC470MX | 6.3 | 470 | 8 | 5700 | 10 | 592 |
| | 6SEPC560MX | 6.3 | 560 | 7 | 6100 | 10 | 705 |
| | 4SEPC560MX | 4.0 | 560 | 7 | 6100 | 10 | 500 |
| | 2SEPC560MX | 2.5 | 560 | 8 | 4700 | 10 | 280 |
| | 2SEPC820MX | 2.5 | 820 | 7 | 6100 | 10 | 500 |
| | 2SEPC820MY | 2.5 | 820 | 5 | 7200 | 10 | 500 |
| E12 | 16SEPC180M | 16 | 180 | 16 | 4360 | 10 | 576 |
| | 16SEPC270M | 16 | 270 | 11 | 5000 | 10 | 864 |
| E13 | 6SEPC470M | 6.3 | 470 | 8 | 5700 | 10 | 592 |
| | 4SEPC560M | 4.0 | 560 | 7 | 6100 | 10 | 500 |
| | 4SEPC680M | 4.0 | 680 | 7 | 6100 | 10 | 544 |
| | 2R5SEPC820M | 2.5 | 820 | 7 | 6100 | 10 | 500 |
| F13 | 16SEPC470M | 16 | 470 | 10 | 6100 | 10 | 1504 |
| | 6SEPC680M | 6.3 | 680 | 7 | 6640 | 10 | 857 |
| | 6SEPC1500M | 6.3 | 1500 | 10 | 5560 | 10 | 1890 |
| | 4SEPC820M | 4.0 | 820 | 7 | 6640 | 10 | 656 |
| | 2SEPC2700M | 2.5 | 2700 | 10 | 5560 | 10 | 1350 |

● 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 |

※ Red letters : New models