

Features

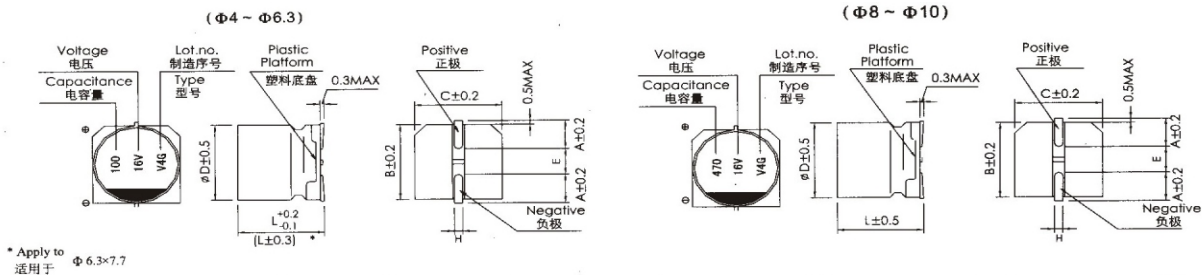
- Case diameter: $\varnothing 4\text{mm} - \varnothing 10\text{mm}$;
- Reflow soldering is available.
- Available for high density surface mounting.



Specifications

| Item | Characteristics | | | | | | | |
|---|--|--|------|------|------|------|------|------|
| Operating temperature range | -55~+105°C | | | | | | | |
| Rated voltage range | 4V~50V | | | | | | | |
| Nominal Capacitance Range | 0.1-1000 μF | | | | | | | |
| Nominal Capacitance Tderance | $\pm 20\%$ (20°C, 120Hz) | | | | | | | |
| Leakage Cument | $1 \leq 0.01C_R V_R$ or 3(μA)Whichever is greater(After 2 minutes' application of rated voltage) C_R :Nominal Capacitance(μF) U_R :Rated voltages (V) | | | | | | | |
| Dissipation Factor(Max) 20°C, 120Hz | U_R (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | $\text{tg } \delta$ | 0.40 | 0.30 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 |
| Load Life | After 2000 hours' application of rated voltage at 105°C, the capacitor shall meet the following requirement. | | | | | | | |
| | Capacitance Change | Within $\pm 20\%$ of the initial value ($\leq 16\text{V}$: within ± 25 of the initial value) | | | | | | |
| | Dissipation Factor | Not more than 200% of the initial specified value | | | | | | |
| | Leakage Cument | Not more than the initial specified value | | | | | | |
| Shelf Life | After storage for 1000 hours +105°C, U_R to be applied for 30 minutes, the capacitors shall meet the requirement of load life above | | | | | | | |
| Low Temperature Stability Impedance Ratio(120Hz) | U_R (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z(-25°C) /Z(+20°C) | 7 | 4 | 3 | 2 | 2 | 2 | 2 |
| | Z(-40°C) /Z(+20°C) | 15 | 8 | 8 | 4 | 4 | 3 | 3 |
| Resistance to Soldering Heat | The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement. | | | | | | | |
| | Capacitance Change | Within $\pm 10\%$ of the initial value | | | | | | |
| | Dissipation Factor | Not more than the initial specified value | | | | | | |
| | Leakage Current | Not more than the initial specified value | | | | | | |

Dimensions



| | 4×5.4 | 5×5.4 | 6.3×5.4 | 6.3×7.7 | 8×10.5 | 10×10.5 |
|---|---------|-------|---------|---------|--------|---------|
| A | 1.8 | 2.1 | 2.4 | 2.4 | 2.9 | 3.2 |
| B | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 10.3 |
| C | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 10.3 |
| E | 1.0 | 1.3 | 2.2 | 2.2 | 3.1 | 4.5 |
| L | 5.4 | 5.4 | 5.4 | 7.7 | 10 | 10 |
| H | 0.5-0.8 | | | 0.8-1.1 | | |

Nominal capacitance, rated voltage, rated ripple current and case size table

| V uF | 4 | | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|---------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|
| | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA |
| 0.1 | | | | | | | | | | | | | 4×5.4 | 1.0 |
| 0.22 | | | | | | | | | | | | | 4×5.4 | 2.6 |
| 0.33 | | | | | | | | | | | | | 4×5.4 | 3.2 |
| 0.47 | | | | | | | | | | | | | 4×5.4 | 3.8 |
| 1.0 | | | | | | | | | | | | | 4×5.4 | 6.3 |
| 2.2 | | | | | | | | | | | 4×5.4 | 7.5 | 4×5.4 | 11 |
| 3.3 | | | | | | | | | | | 4×5.4 | 9 | 4×5.4 | 14 |
| 4.7 | | | | | | | | | 4×5.4 | 13 | 4×5.4 | 15 | 5×5.4 | 19 |
| 10 | | | | | | | 4×5.4 | 18 | 5×5.4 | 23 | 5×5.4 | 25 | 6.3×5.4 | 30 |
| 22 | 4×5.4 | 22 | 4×5.4 | 22 | 5×5.4 | 27 | 5×5.4 | 30 | 6.3×5.4 | 38 | 6.3×5.4 | 42 | 6.3×7.7 | 51 |
| 33 | 5×5.4 | 30 | 5×5.4 | 30 | 5×5.4 | 35 | 6.3×5.4 | 40 | 6.3×5.4 | 48 | 6.3×7.7 | 59 | 6.3×7.7 | 60 |
| 47 | 5×5.4 | 36 | 5×5.4 | 36 | 6.3×5.4 | 46 | 6.3×5.4 | 50 | 6.3×7.7 | 66 | 6.3×7.7 | 63 | 6.3×7.7 | 63 |
| 100 | 6.3×5.4 | 60 | 6.3×5.4 | 60 | 6.3×5.4 | 60 | 6.3×5.4 | 60 | 6.3×7.7 | 91 | 6.3×7.7 | 84 | 8×10.5 | 140 |
| 150 | 6.3×5.4 | 86 | 6.3×5.4 | 86 | 6.3×5.4 | 86 | 6.3×7.7 | 95 | 8×10.5 | 140 | 8×10.5 | 155 | 10×10.5 | 180 |
| 220 | 6.3×7.7 | 102 | 6.3×7.7 | 102 | 6.3×7.7 | 105 | 6.3×7.7 | 105 | 8×10.5 | 155 | 8×10.5 | 190 | 10×10.5 | 220 |
| 330 | 6.3×7.7 | 105 | 6.3×7.7 | 105 | 8×10.5 | 175 | 8×10.5 | 195 | 8×10.5 | 190 | 10×10.5 | 300 | | |
| 470 | 8×10.5 | 210 | 8×10.5 | 210 | 8×10.5 | 210 | 8×10.5 | 230 | 10×10.5 | 300 | | | | |
| 680 | 8×10.5 | 210 | 8×10.5 | 210 | 10×10.5 | 310 | 10×10.5 | 310 | | | | | | |
| 1000 | 8×10.5 | 230 | 8×10.5 | 230 | 10×10.5 | 310 | | | | | | | | |

I~ = Rated ripple current (mA) (105°C, 120Hz)