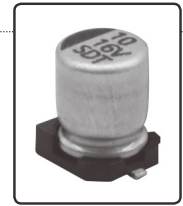


FEATURES

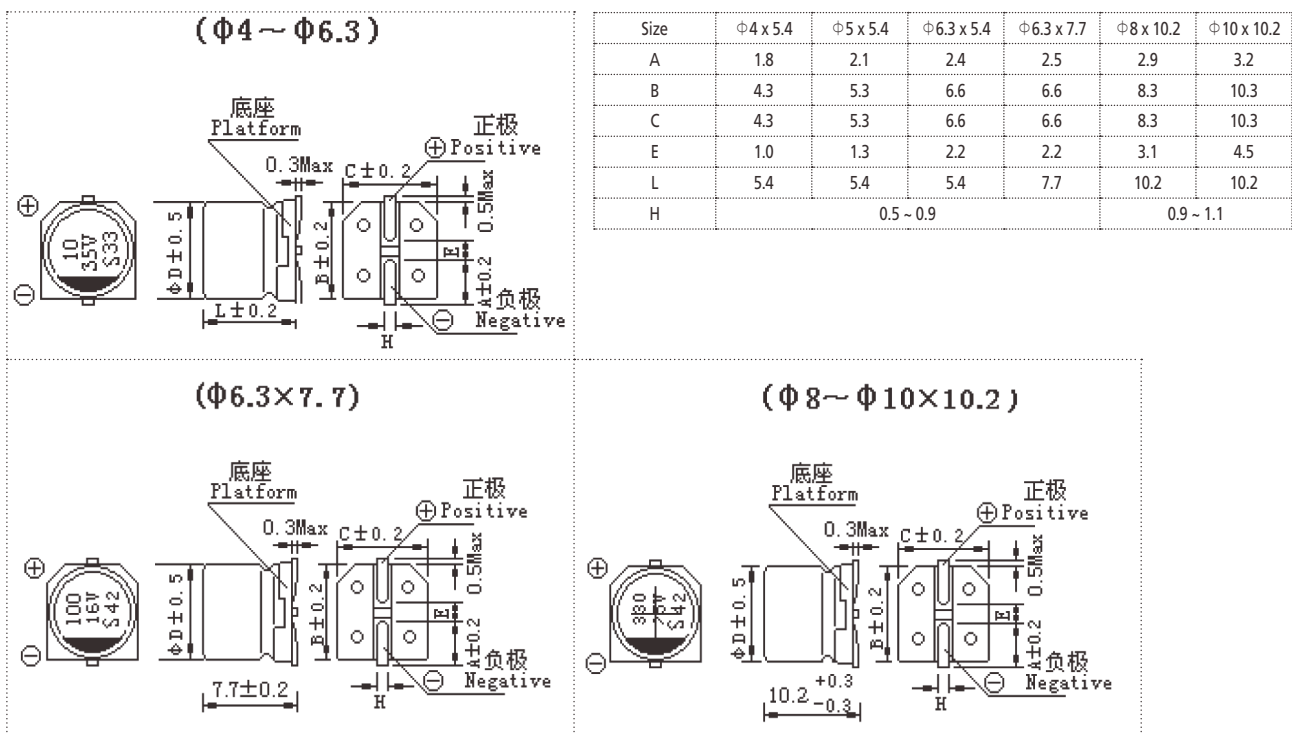
- Reflow soldering is available
- Available for high density surface mounting
- High stability and reliability
- Life time: 85°C, 2,000Hrs



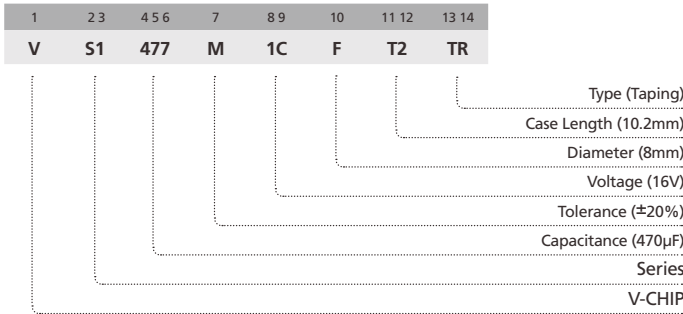
SPECIFICATIONS

| Item | Performance Characteristics | | | | | | |
|---------------------------------|---|---|------|------|------|------|------|
| Operating Temperature Range | -40 to +85°C | | | | | | |
| Rated Working Voltage Range | 6.3 to 50V | | | | | | |
| Nominal Capacitance Range | 0.1 to 1500μF | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, +20°C | | | | | | |
| Leakage Current | I ≤ 0.01CV or 3(μA) whichever is greater measure after 2 minutes application of rated working voltage at +20°C | | | | | | |
| tanδ (120Hz, +20°C) | Working Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | tanδ (max.) φ4~6.3 | 0.26 | 0.22 | 0.18 | 0.16 | 0.13 | 0.12 |
| | φ8~10 | 0.35 | 0.26 | 0.20 | 0.16 | 0.14 | 0.12 |
| Low Temperature Characteristics | Impedance ratio max. at 120Hz | | | | | | |
| | Working Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z-40°C / Z+20°C | 8 | 8 | 4 | 4 | 3 | 3 |
| High Temperature Loading | Test time : 2,000 hours | Post test requirements at +20°C | | | | | |
| | Test temperature : +85°C | Leakage current : ≤ Initial specified value | | | | | |
| | Test conditions : Rated DC working voltage | Cap. change : within ±20% of the initial measured value | | | | | |
| | | tanδ : ≤ 200% of the initial specified value | | | | | |
| Shelf Life | At +85°C no voltage applied after 1,000 hours and then being stabilized at +20°C the capacitors shall meet the following limits | | | | | | |
| | Leakage current : ≤ 200% of initial specified value | | | | | | |
| | Cap. change : within ±20% of the initial measured value | | | | | | |
| | tanδ : ≤ 200% of the initial specified value | | | | | | |
| Industrial Standard | JIS C - 5101-4 (IEC 60384-4) | | | | | | |

DIMENSIONS & MARKING



PART NUMBER SYSTEM (EXAMPLE: 16V 470µF)



STANDARD RATINGS

| Voltage (Code) | | 6.3V (0J) | | 10V (1A) | | 16V (1C) | | 25V (1E) | |
|----------------|------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|
| Cap. (µF) | Code | Case Size | Ripple Current | Case Size | Ripple Current | Case Size | Ripple Current | Case Size | Ripple Current |
| 4.7 | 475 | | | | | | | 4 x 5.4 | 16 |
| 10 | 106 | | | | | 4 x 5.4 | 23 | 4 x 5.4 | 24 |
| 22 | 226 | 4 x 5.4 | 28 | 4 x 5.4 | 30 | 5 x 5.4 | 37 | 5 x 5.4 | 38 |
| 33 | 336 | 5 x 5.4 | 37 | 5 x 5.4 | 41 | 5 x 5.4 | 44 | 6.3 x 5.4 | 52 |
| 47 | 476 | 5 x 5.4 | 45 | 6.3 x 5.4 | 52 | 5 x 5.4 | 48 | 6.3 x 5.4 | 60 |
| | | | | | | 6.3 x 5.4 | 58 | | |
| 100 | 107 | 5 x 5.4 | 50 | 6.3 x 5.4 | 76 | 6.3 x 5.4 | 86 | 6.3 x 7.7 | 130 |
| | | 6.3 x 5.4 | 70 | | | | | | |
| 220 | 227 | 6.3 x 5.4 | 95 | 6.3 x 7.7 | 150 | 6.3 x 7.7 | 150 | 8 x 10.2 | 232 |
| 330 | 337 | 6.3 x 7.7 | 150 | 8 x 10.2 | 240 | 8 x 10.2 | 270 | 10 x 10.2 | 305 |
| 470 | 477 | 8 x 10.2 | 265 | 8 x 10.2 | 290 | 8 x 10.2 | 280 | 10 x 10.2 | 393 |
| | | | | | | 10 x 10.2 | 330 | | |
| 1000 | 108 | 10 x 10.2 | 400 | 10 x 10.2 | 454 | | | | |
| 1500 | 158 | 10 x 10.2 | 489 | | | | | | |

Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz

Case Size Φ D x L (mm)

| Voltage (Code) | | 35V (1V) | | 50V (1H) | |
|----------------|------|-----------|----------------|-----------|----------------|
| Cap. (µF) | Code | Case Size | Ripple Current | Case Size | Ripple Current |
| 0.1 | 104 | | | 4 x 5.4 | 1.0 |
| 0.22 | 224 | | | 4 x 5.4 | 2.0 |
| 0.33 | 334 | | | 4 x 5.4 | 2.8 |
| 0.47 | 474 | | | 4 x 5.4 | 4.0 |
| 1 | 105 | | | 4 x 5.4 | 8.4 |
| 2.2 | 225 | | | 4 x 5.4 | 13 |
| 3.3 | 335 | 4 x 5.4 | 18 | 4 x 5.4 | 17 |
| 4.7 | 475 | 4 x 5.4 | 20 | 5 x 5.4 | 20 |
| 10 | 106 | 5 x 5.4 | 29 | 6.3 x 5.4 | 33 |
| 22 | 226 | 6.3 x 5.4 | 46 | 6.3 x 5.4 | 43 |
| 33 | 336 | 6.3 x 5.4 | 53 | 6.3 x 7.7 | 85 |
| 47 | 476 | 6.3 x 5.4 | 55 | 6.3 x 7.7 | 90 |
| | | 6.3 x 7.7 | 70 | 8 x 10.2 | 140 |
| | | 6.3 x 7.7 | 80 | 8 x 10.2 | 145 |
| 100 | 107 | 8 x 10.2 | 175 | 10 x 10.2 | 195 |
| | | 8 x 10.2 | 185 | | |
| 220 | 227 | 10 x 10.2 | 265 | 10 x 10.2 | 415 |
| 330 | 337 | 10 x 10.2 | 324 | | |
| 470 | 477 | 10 x 10.2 | 395 | | |

Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz

Case Size Φ D x L (mm)

Specifications are subject to change without notice. Should a safety or technical concern arise regarding the product, please be sure to contact our sales offices or agents immediately.