# Aluminum Electrolytic Capacitors
# Surface Mount Type

SRE series

MERITEK

## FEATURE

- **Ultra Low Impedance Series**
- **Applications : TV Audio/Video Media, monitor/computer, Communication Power industry, electricity meter, Automotive Application**
- **Load life: 105°C**

| Diameter (mm) | Load Life (Hours) |
|---|---|
| 4.0 ~ 10.0 | 2000 |

RoHS

## SPECIFICATIONS

| Item | Characteristic | | | | | | |
|---|---|---|---|---|---|---|---|
| Operating Temperature | -55°C ~ 105°C | | | | | | |
| Rated Working Voltage | 6.3VDC ~ 50VDC | | | | | | |
| Nominal Capacitance | 4.7 μF ~ 1500 μF, ±20% (at 20°C, 120HZ) | | | | | | |
| Leakage Current | $I_L \leq 0.01CV$ or 3 μA whichever is greater after 2 minutes at 20°C<br>$I_L$: Leakage Current (μA) C: Nominal Capacitance (μF) V: Rated Voltage (V) | | | | | | |
| Ripple Current Coefficient, Frequency | **Frequency (Hz)** | **120** | **1K** | **10K** | **100K** | **--** | **--** |
| | **Coefficient** | 0.70 | 0.80 | 0.90 | 1.00 | **--** | **--** |
| Dissipation Factor at 20°C, 120Hz | **Working Voltage (V)** | **6.3** | **10** | **16** | **25** | **35** | **50** |
| | **Dissipation Factor** | 0.26 | 0.19 | 0.16 | 0.14 | 0.12 | 0.12 |
| Low Temperature Stability, Impedance Ratio at 120Hz | **Working Voltage (V)** | **6.3** | **10** | **16** | **25** | **35** | **50** |
| | **Z-25°C / Z+20°C** | 2 | 2 | 2 | 2 | 2 | 2 |
| | **Z-40°C / Z+20°C** | 3 | 3 | 3 | 3 | 3 | 3 |
| Load Life | **Capacitance** | ≤ ±30% of initial value | | Apply Working Voltage for Rated Load Life / Temperature Stabilized at +20°C. | | | |
| | **Dissipation Factor** | ≤ 200% of initial value | | | | | |
| | **Leakage Current** | ≤ Initial specified value | | | | | |
| Shelf Life | **Capacitance** | ≤ ±30% of initial value | | After storage condition without voltage applied for 1000 hours at Rated Temperature, Stabilizing for 1 to 2 hours. | | | |
| | **Dissipation Factor** | ≤ 200% of initial value | | | | | |
| | **Leakage Current** | ≤ Initial specified value | | | | | |
| Resistance to Soldering Heat | **Capacitance** | ≤ ±20% of initial value | | For other procedures than those specified, Soldering iron method: Temperature: 260±5°C. Application time of soldering iron: 10 sec | | | |
| | **Dissipation Factor** | ≤ specified value | | | | | |
| | **Leakage Current** | ≤ specified value | | | | | |

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## STANDARD RATING

| Rated Voltage | Cap | Case Size | Tan δ | Ripple Current | Impedance |
|---|---|---|---|---|---|
| (VDC) | (μF) | (mm) | (%) | (mA/rms) | (Ω) |
| 6.3 | 22 | 4x5.4 | 0.26 | 90 | 1.80 |
| | 33 | 4x5.4 | 0.26 | 90 | 1.80 |
| | 47 | 4x5.4 | 0.26 | 90 | 1.80 |
| | 47 | 5x5.4 | 0.26 | 160 | 0.76 |
| | 100 | 5x5.4 | 0.26 | 160 | 0.76 |
| | 100 | 6.3x5.4 | 0.26 | 240 | 0.44 |
| | 150 | 6.3x5.4 | 0.26 | 240 | 0.44 |
| | 150 | 6.3x7.7 | 0.26 | 240 | 0.34 |
| | 220 | 6.3x5.4 | 0.26 | 240 | 0.44 |
| | 220 | 6.3x7.7 | 0.26 | 240 | 0.34 |
| | 220 | 8x6.2 | 0.26 | 240 | 0.34 |
| | 330 | 6.3x7.7 | 0.26 | 280 | 0.34 |
| | 330 | 8x6.2 | 0.26 | 290 | 0.34 |
| | 470 | 8x10.2 | 0.26 | 600 | 0.16 |
| | 680 | 8x10.2 | 0.26 | 600 | 0.16 |
| | 1000 | 8x10.2 | 0.26 | 600 | 0.16 |
| | 1500 | 10x10.2 | 0.26 | 850 | 0.08 |
| 10 | 22 | 4x5.4 | 0.19 | 90 | 1.80 |
| | 33 | 4x5.4 | 0.19 | 90 | 1.80 |
| | 33 | 5x5.4 | 0.19 | 160 | 0.76 |
| | 47 | 6.3x5.4 | 0.19 | 190 | 0.44 |
| | 100 | 6.3x5.4 | 0.19 | 190 | 0.44 |
| | 150 | 6.3x5.4 | 0.19 | 200 | 0.44 |
| | 150 | 6.3x7.7 | 0.19 | 240 | 0.34 |
| | 220 | 6.3x7.7 | 0.19 | 280 | 0.34 |
| | 220 | 8x6.2 | 0.19 | 280 | 0.34 |
| | 330 | 8x10.2 | 0.19 | 600 | 0.16 |
| | 470 | 8x10.2 | 0.19 | 600 | 0.16 |
| | 680 | 10x10.2 | 0.19 | 600 | 0.09 |
| | 820 | 10x10.2 | 0.19 | 850 | 0.08 |
| | 1000 | 10x10.2 | 0.19 | 850 | 0.08 |
| | 1200 | 10x10.2 | 0.19 | 850 | 0.08 |
| 16 | 3.3 | 4x5.4 | 0.16 | 60 | 1.80 |
| | 10 | 4x5.4 | 0.16 | 90 | 1.80 |
| | 22 | 4x5.4 | 0.16 | 90 | 1.80 |
| | 22 | 5x5.4 | 0.16 | 160 | 0.76 |
| | 33 | 5x5.4 | 0.16 | 160 | 1.00 |
| | 47 | 5x5.4 | 0.16 | 160 | 1.00 |
| | 47 | 6.3x5.4 | 0.16 | 240 | 0.44 |
| | 68 | 6.3x5.4 | 0.16 | 240 | 0.44 |
| | 100 | 6.3x5.4 | 0.16 | 240 | 0.44 |
| | 100 | 6.3x7.7 | 0.16 | 280 | 0.34 |
| | 150 | 6.3x7.7 | 0.16 | 280 | 0.34 |
| | 220 | 6.3x7.7 | 0.16 | 280 | 0.34 |
| | 220 | 8x6.2 | 0.16 | 280 | 0.34 |

| Rated Voltage | Cap | Case Size | Tan δ | Ripple Current | Impedance |
|---|---|---|---|---|---|
| (VDC) | (μF) | (mm) | (%) | (mA/rms) | (Ω) |
| 16 | 220 | 8x10.2 | 0.16 | 370 | 0.16 |
| | 330 | 8x10.2 | 0.16 | 600 | 0.16 |
| | 470 | 8x10.2 | 0.16 | 600 | 0.16 |
| | 470 | 10x10.2 | 0.16 | 650 | 0.09 |
| | 560 | 10x10.2 | 0.16 | 650 | 0.09 |
| | 680 | 10x10.2 | 0.16 | 850 | 0.08 |
| 25 | 10 | 4x5.4 | 0.14 | 90 | 1.80 |
| | 10 | 5x5.4 | 0.14 | 95 | 1.80 |
| | 22 | 5x5.4 | 0.14 | 160 | 0.76 |
| | 33 | 5x5.4 | 0.14 | 160 | 1.00 |
| | 33 | 6.3x5.4 | 0.14 | 240 | 0.52 |
| | 47 | 6.3x5.4 | 0.14 | 240 | 0.44 |
| | 47 | 6.3x7.7 | 0.14 | 260 | 0.44 |
| | 68 | 6.3x5.4 | 0.14 | 240 | 0.34 |
| | 100 | 6.3x7.7 | 0.14 | 280 | 0.34 |
| | 100 | 8X6.2 | 0.14 | 280 | 0.34 |
| | 150 | 8x10.2 | 0.14 | 600 | 0.16 |
| | 220 | 8x10.2 | 0.14 | 600 | 0.16 |
| | 330 | 8x10.2 | 0.14 | 600 | 0.16 |
| | 470 | 10x10.2 | 0.14 | 850 | 0.08 |
| 35 | 4.7 | 4x5.4 | 0.12 | 90 | 1.80 |
| | 10 | 4x5.4 | 0.12 | 90 | 1.80 |
| | 10 | 5x5.4 | 0.12 | 160 | 0.76 |
| | 22 | 5x5.4 | 0.12 | 160 | 0.76 |
| | 22 | 6.3x5.4 | 0.12 | 200 | 0.76 |
| | 33 | 6.3x5.4 | 0.12 | 240 | 0.52 |
| | 47 | 6.3x5.4 | 0.12 | 240 | 0.44 |
| | 47 | 6.3x7.7 | 0.12 | 280 | 0.34 |
| | 68 | 6.3x7.7 | 0.12 | 280 | 0.34 |
| | 100 | 6.3x7.7 | 0.12 | 280 | 0.34 |
| | 100 | 8x10.2 | 0.12 | 600 | 0.16 |
| | 150 | 8x10.2 | 0.12 | 600 | 0.16 |
| | 220 | 8x10.2 | 0.12 | 600 | 0.16 |
| | 330 | 10x10.2 | 0.12 | 850 | 0.08 |
| 50 | 10 | 5X5.4 | 0.12 | 120 | 1.52 |
| | 10 | 6.3x5.4 | 0.12 | 165 | 0.88 |
| | 22 | 6.3x5.4 | 0.12 | 165 | 0.88 |
| | 33 | 6.3x7.7 | 0.12 | 185 | 0.68 |
| | 47 | 6.3x7.7 | 0.12 | 185 | 0.68 |
| | 47 | 8X6.2 | 0.12 | 185 | 0.68 |
| | 100 | 8x10.2 | 0.12 | 300 | 0.34 |
| | 100 | 10x10.2 | 0.12 | 670 | 0.18 |
| | 150 | 10x10.2 | 0.12 | 670 | 0.18 |
| | 220 | 10x10.2 | 0.12 | 670 | 0.18 |

Note: Ripple Current measured at 100KHz, 105°C, Impedance at 20°C 100KHz

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SRE series

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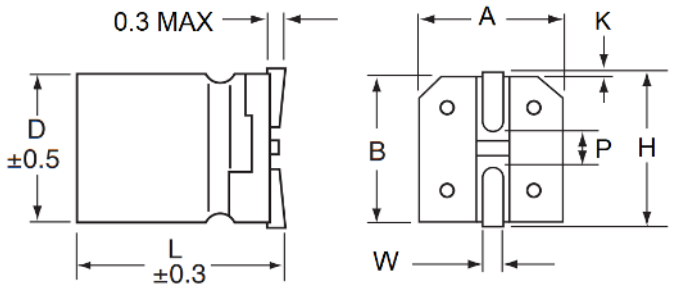
## DIMENSION




Unit :mm

| D | L | A ±0.2 | B ±0.2 | H Max | W | P ±0.2 | K |
|---|---|---|---|---|---|---|---|
| 4.0 (D) | 5.4 | 4.3 | 5.0 | 5.5 | 0.65±0.1 | 1.0 | 0.35+0.15/-0.2 |
| 5.0 (E) | 5.4 | 5.3 | 6.0 | 6.5 | 0.65±0.1 | 1.5 | 0.35+0.15/-0.2 |
| 6.3 (F) | 5.4 | 6.6 | 7.3 | 7.8 | 0.65±0.1 | 2.1 | 0.35+0.15/-0.2 |
| 6.3 (F) | 7.7 | 6.6 | 7.3 | 7.8 | 0.65±0.1 | 2.1 | 0.35+0.15/-0.2 |
| 8.0 (H) | 10.2 | 8.3 | 9.1 | 10.0 | 0.90±0.2 | 3.1 | 0.70±0.20 |
| 8.0 (H) | 6.2 | 8.3 | 9.0 | 9.5 | 0.65±0.1 | 2.2 | 0.35+0.15/-0.2 |
| 10.0 (J) | 10.2 | 10.3 | 11.1 | 12.0 | 0.90±0.2 | 4.6 | 0.70±0.20 |

## PART NUMBERING SYSTEM

**SRE** (1) **1H** (2) **221M** (3) **J102** (4)

| No | Item | Code | Description | |
|---|---|---|---|---|
| (1) | **Meritek Series** | SRE | Aluminum Electrolytic Capacitors, SMD type, 2000 Hrs 105°C | |
| (2) | **Rated Voltage** | 1H | 50VDC | DC Voltage Code, 0J to 1H |
| (3) | **Capacitance** | 221M | 220µF ±20% (M) | First two digit: significant, Third: Multiplier |
| (4) | **Size Code** | J102 | 10x10.2mm | DxL (mm) |

| Voltage | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | 0G | 0J | 1A | 1C | 1E | 1V | 1H | 1J | 2A | 2C | 2D | 2E | 2V | 2G | 2W | 2H |

| Diameter | 4 | 5 | 6.3 | 8 | 10 | 12.5 | 14.5 | 16 | 18 | 20 | 22 | 25 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | D | E | F | H | J | K | U | L | M | N | P | Q |

## LEGACY PART NUMBERING SYSTEM

**SRE** (1) **1H** (2) **221M** (3) **J102** (4)

| No | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Item | Meritek Series | Rated Voltage | Rated Capacitance | Size Code |

*Specifications subject to change without notice.