# Surface Mount Aluminum Electrolytic Capacitors

RoHS

SLL Series
(Low Leakage, 85°C)

MERITEK

## FEATURES



- Low Leakage Current (0.5μA to 2.0 μA MAX.)
- Load Life : 85°C 2000 hours
- Height : 5.4mm

## SPECIFICATIONS

| Item | Characteristic | | | | | | |
|---|---|---|---|---|---|---|---|
| Operation Temperature Range | -40 ~ +85°C | | | | | | |
| Rated Working Voltage | 6.3 ~ 50VDC | | | | | | |
| Capacitance Tolerance (120Hz 20°C) | ±20%(M) | | | | | | |
| Leakage Current (20°C) | I ≤0.002CV or 0.5 ( μA )<br>*Whichever is greater after 2 minutes<br>I: Leakage Current ( μA) C: Rated Capacitance ( μF) V: Working Voltage (V) | | | | | | |
| Surge Voltage (20°C) | W.V. | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | S.V. | 8 | 13 | 20 | 32 | 44 | 63 |
| Dissipation Factor (tan δ) (120Hz 20°C) | W.V. | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | tan δ | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 |
| Low Temperature Stability | Impedance ratio at 120Hz | | | | | | |
| | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | -25°C / +20°C | 4 | 3 | 2 | 2 | 2 | 2 |
| | -40°C / +20°C | 8 | 6 | 4 | 4 | 3 | 3 |
| Load Life | After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) | | | | | | |
| | Capacitance Change | ≤ ±25% of initial value | | | | | |
| | Dissipation Factor | ≤ 200% of initial specified value | | | | | |
| | Leakage current | ≤ initial specified value | | | | | |
| Shelf Life | At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment) | | | | | | |
| Resistance to Soldering Heat | Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature. | | | | | | |
| | Capacitance Change | ≤ ±10% of initial value | | | | | |
| | Dissipation Factor | ≤ initial specified value | | | | | |
| | Leakage current | ≤ initial specified value | | | | | |

## PART NUMBERING SYSTEM

SLL 50V 100 M F 054

**Meritek Series**

**Voltage**

**Capacitance**
Capacitance expressed in microfarads (μF).
First two digits are significant figures.
Third digit denotes number of zeros.
'R' denotes decimal point for values less than 10 μF

**Tolerance**
M=±20%

**Case Diameter Code**

**Case Height (mm)**
The third digit denotes the first decimal place
For example, 054 = 5.4mm

| Case Diameter Code | Φ D |
|---|---|
| D | Φ 4.0 |
| E | Φ 5.0 |
| F | Φ 6.3 |

# Surface Mount Aluminum Electrolytic Capacitors

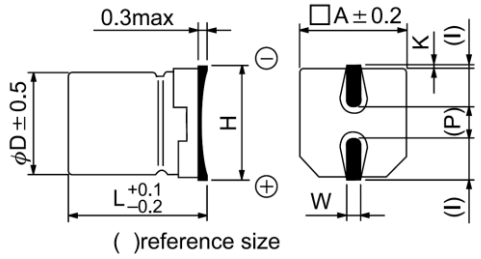
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## DIMENSIONS (mm)

| Φ D | L | A | H | I | W | P | K |
|---|---|---|---|---|---|---|---|
| Φ 4.0 | 5.4 | 4.3 | 5.5MAX | 1.8 | 0.65±0.1 | 1.0 | 0.35 $^{+0.15}_{-0.20}$ |
| Φ 5.0 | 5.4 | 5.3 | 6.5MAX | 2.2 | 0.65±0.1 | 1.5 | 0.35 $^{+0.15}_{-0.20}$ |
| Φ 6.3 | 5.4 | 6.6 | 7.8MAX | 2.6 | 0.65±0.1 | 2.1 | 0.35 $^{+0.15}_{-0.20}$ |




## CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 85°C 120Hz

| Cap. (μF) | V | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Item | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. |
| 0.1 | 0R1 | | | | | | | | | | | 4x5.4 | 1.0 |
| 0.22 | R22 | | | | | | | | | | | 4x5.4 | 2.3 |
| 0.33 | R33 | | | | | | | | | | | 4x5.4 | 3.5 |
| 0.47 | R47 | | | | | | | | | | | 4x5.4 | 5 |
| 1.0 | 010 | | | | | | | | | | | 4x5.4 | 10 |
| 2.2 | 2R2 | | | | | | | | | | | 4x5.4 | 15 |
| 3.3 | 3R3 | | | | | | | | | | | 4x5.4 | 18 |
| 4.7 | 4R7 | | | | | | | 4x5.4 | 19 | 4x5.4 | 20 | 5x5.4 | 23 |
| 10 | 100 | | | | | 4x5.4 | 25 | 5x5.4 | 28 | 5x5.4 | 30 | 6.3x5.4 | 34 |
| 22 | 220 | 4x5.4 | 31 | 5x5.4 | 35 | 5x5.4 | 39 | 6.3x5.4 | 52 | 6.3x5.4 | 54 | | |
| 33 | 330 | 5x5.4 | 39 | 5x5.4 | 43 | 6.3x5.4 | 57 | 6.3x5.4 | 63 | | | | |
| 47 | 470 | 5x5.4 | 47 | 6.3x5.4 | 59 | 6.3x5.4 | 68 | | | | | | |
| 100 | 101 | 6.3x5.4 | 71 | 6.3x5.4 | 76 | | | | | | | | |

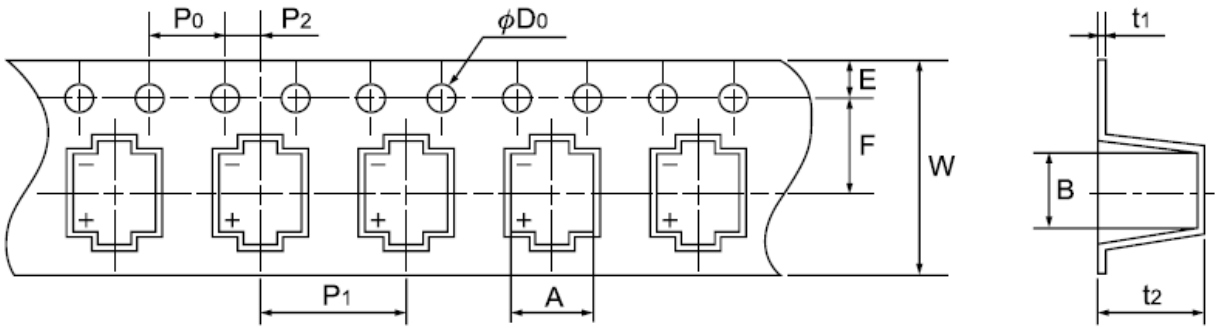
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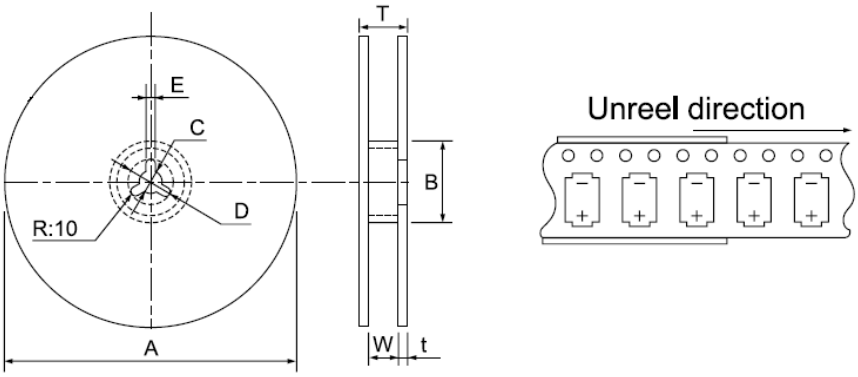
RoHS

## TAPING




| D x L | W ±0.3 | A ±0.2 | B ±0.2 | $P_0$ ±0.1 | $P_1$ ±0.1 | $P_2$ ±0.1 | F ±0.1 | $ØD_0$ ±0.1 | $t_1$ ±0.1 | E ±0.1 | $t_2$ ±0.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø4x5.4 | 12.0 | 4.7 | 4.7 | 4.0 | 8.0 | 2.0 | 5.5 | 1.5 | 0.4 | 1.75 | 5.7 |
| Ø5x5.4 | 12.0 | 5.7 | 5.7 | 4.0 | 12.0 | 2.0 | 5.5 | 1.5 | 0.4 | 1.75 | 5.7 |
| Ø6.3x5.4 | 16.0 | 7.0 | 7.0 | 4.0 | 12.0 | 2.0 | 7.5 | 1.5 | 0.4 | 1.75 | 5.7 |
| Ø4x5.8 | 12.0 | 4.7 | 4.7 | 4.0 | 8.0 | 2.0 | 5.5 | 1.5 | 0.4 | 1.75 | 6.3 |
| Ø5x5.8 | 12.0 | 5.7 | 5.7 | 4.0 | 12.0 | 2.0 | 5.5 | 1.5 | 0.4 | 1.75 | 6.4 |
| Ø6.3x5.8 | 16.0 | 7.0 | 7.0 | 4.0 | 12.0 | 2.0 | 7.5 | 1.5 | 0.4 | 1.75 | 6.4 |
| Ø6.3x7.7 | 16.0 | 7.0 | 7.0 | 4.0 | 12.0 | 2.0 | 7.5 | 1.5 | 0.4 | 1.75 | 8.2 |
| Ø8x6.2 | 16.0 | 8.7 | 8.7 | 4.0 | 12.0 | 2.0 | 7.5 | 1.5 | 0.4 | 1.75 | 6.8 |
| Ø8x10.2 | 24.0 | 8.7 | 8.7 | 4.0 | 16.0 | 2.0 | 11.5 | 1.5 | 0.4 | 1.75 | 11.0 |
| Ø10x10.2 | 24.0 | 10.7 | 10.7 | 4.0 | 16.0 | 2.0 | 11.5 | 1.5 | 0.4 | 1.75 | 11.0 |

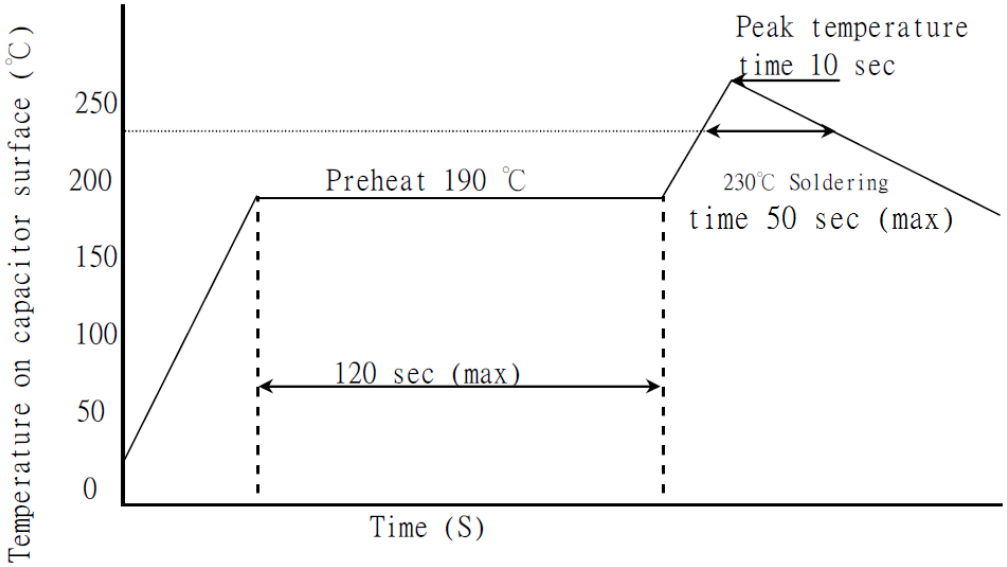
## PACKAGE




| D x L | A ±2.0 | B MIN | C ±0.5 | D ±0.8 | E ±0.5 | W ±1.0 | T ±1.0 | t ±0.5 |
|---|---|---|---|---|---|---|---|---|
| Ø4 Ø5 | 380 | 50 | 13 | 21 | 2.0 | 14.0 | 20.0 | 3.0 |
| Ø6.3 | 380 | 50 | 13 | 21 | 2.0 | 18.0 | 24.0 | 3.0 |
| Ø8x6.2 | 380 | 50 | 13 | 21 | 2.0 | 18.0 | 24.0 | 3.0 |
| Ø8x10.2 | 380 | 50 | 13 | 21 | 2.0 | 26.0 | 32.0 | 3.0 |
| Ø10x10.2 | 380 | 50 | 13 | 21 | 2.0 | 26.0 | 32.0 | 3.0 |

## PERMISSBLE REFLOW CONDITION

## AIR REFLOW AND IR REFLOW




Preheat: Within 120sec., 190°C or less.
Soldering Time: Within 50 sec., 230°C
Peak Temperature: Less than 250°C, within 10 sec.
Possible Reflow Cycle: 2 Cycles
The final test values should be as following:

(A) Capacitance change: ≦ ±10% of initial value
(B) Dissipation factor: ≦ initial specified value
(C) Leakage current: ≦ initial specified value
(D) Visual: No damage