

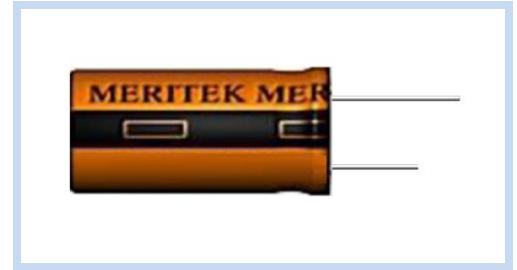
# Aluminum Electrolytic Capacitors 2000Hrs 85°C Low Leakage

LL Series

MERITEK

## FEATURE

- Operating Temperature: -40°C ~ +85°C
- Load Life of 2000 Hours at +85°C
- Standard Low Leakage Current Series
- Suitable for Hi-Fi Pre-Amplifiers and TV Oscillation Loop Circuits



## SPECIFICATIONS

| Item                                      | Characteristic  |                                   |      |      |                       |      |      |
|---|---|-----------------------------------|------|------|-----------------------|------|------|
| Operation Temperature                     | -40°C ~ + 85°C  |                                   |      |      |                       |      |      |
| Rated Working Voltage                     | 10 ~ 63VDC  |                                   |      |      |                       |      |      |
| Capacitance Tolerance                     | ±20% (M), +30% -10%(Q) at 120Hz 20°C  |                                   |      |      |                       |      |      |
| Leakage Current at 20°C                   | I ≤0.002CV or 1 ( μA )<br>*Whichever is greater after 2 minutes   |                                   |      | I:   | Leakage Current ( μA) |      |      |
|   |   |                                   |      | C:   | Capacitance ( μF)     |      |      |
|   |   |                                   |      | V:   | Working Voltage (V)   |      |      |
| Surge Voltage at 20°C                     | Rated Voltage (V)   | 10                                | 16   | 25   | 35                    | 50   | 63   |
|   | Surge Voltage (V)   | 13                                | 20   | 32   | 44                    | 63   | 79   |
| Dissipation Factor-tan δ<br>At 120Hz 20°C | Rated Voltage (V)   | 10                                | 16   | 25   | 35                    | 50   | 63   |
|   | tan δ max   | 0.20                              | 0.16 | 0.14 | 0.12                  | 0.10 | 0.10 |
| Low Temperature Stability                 | Impedance ratio at 120Hz  |                                   |      |      |                       |      |      |
|   | Rated Voltage (V)   | 10                                | 16   | 25   | 35                    | 50   | 63   |
|   | -25°C / +20°C   | 4                                 | 4    | 4    | 4                     | 4    | 4    |
|   | -40°C / +20°C   | 8                                 | 8    | 8    | 8                     | 8    | 8    |
| 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 ≤ rated working voltage ) |                                   |      |      |                       |      |      |
|   | Capacitance Change  | ≤±15% of initial value            |      |      |                       |      |      |
|   | Dissipation Factor  | ≤ 150% 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)                            |                                   |      |      |                       |      |      |

# Aluminum Electrolytic Capacitors

## 2000Hrs 85°C Low Leakage

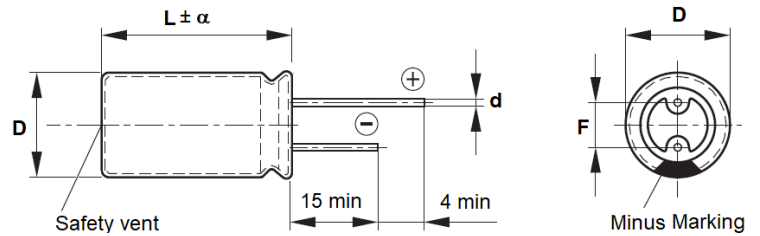
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### DIMENSION

Unit: mm

| D+0.5(max) | 5   | 6.3 | 8   | 10  | 12.5 |
|------------|-----|-----|-----|-----|------|
| F±0.5      | 2.0 | 2.5 | 3.5 | 5.0 | 5.0  |
| d±0.05     | 0.5 | 0.5 | 0.6 | 0.6 | 0.6  |
| α          | 1.5 | 1.5 | 1.5 | 1.5 | 2.0  |



### CASE SIZE AND MAX RIPPLE CURRENT

| Capacitance |      | 10VDC (1A) |         | 16VDC (1C) |         | 25VDC (1E) |         |
|-------------|------|------------|---------|------------|---------|------------|---------|
|             |      | DxL        | RC      | DxL        | RC      | DxL        | RC      |
| μF          | Code | (mm)       | mA(rms) | (mm)       | mA(rms) | (mm)       | mA(rms) |
| 10          | 100  |            | →       | 5x11       | 48      | 6.3x11     | 60      |
| 22          | 220  | 5x11       | 65      | 6.3x11     | 80      | 8x11       | 100     |
| 33          | 330  | 6.3x11     | 90      | 6.3x11     | 100     | 8x11       | 130     |
| 47          | 470  | 6.3x11     | 110     | 8x11       | 140     | 10x12.5    | 160     |
| 100         | 101  | 8x11       | 180     | 10x12.5    | 210     | 10x16      | 250     |
| 220         | 221  | 10x16      | 310     | 10x20      | 390     | 12.5x20    | 410     |
| 330         | 331  | 10x20      | 420     | 12.5x20    | 470     | 12.5x25    | 560     |
| 470         | 471  | 12.5x20    | 500     | 12.5x20    | 560     |            |         |
| 1000        | 102  | 12.5x25    | 810     |            |         |            |         |

| Capacitance |      | 35VDC (1V) |         | 50VDC (1H) |         | 63VDC (1J) |         |
|-------------|------|------------|---------|------------|---------|------------|---------|
|             |      | DxL        | RC      | DxL        | RC      | DxL        | RC      |
| μF          | Code | (mm)       | mA(rms) | (mm)       | mA(rms) | (mm)       | mA(rms) |
| 10          | 100  | 6.3x11     | 65      | 8x11       | 80      | 8x11       | 80      |
| 22          | 220  | 8x11       | 110     | 10x12.5    | 130     | 10x16      | 140     |
| 33          | 330  | 10x12.5    | 140     | 10x16      | 170     | 10x16      | 170     |
| 47          | 470  | 10x12.5    | 170     | 10x16      | 210     | 10x20      | 230     |
| 100         | 101  | 10x20      | 300     | 12.5x20    | 330     | 12.5x25    | 360     |
| 220         | 221  | 12.5x25    | 490     |            |         |            |         |

Note:

1. Max ripple current: mA (rms) at 85°C, 120Hz
2. All blank voltage on sleeve marking is the same voltage as "→" point to.

# Aluminum Electrolytic Capacitors 2000Hrs 85°C Low Leakage

LL Series

**MERITEK**

## PART NUMBERING SYSTEM

LL    1H    220    M    J    125    A    E  
(1)    (2)    (3)    (4)    (5)    (6)    (7)    (8)

| No  | Item               | Code | Description                      | Series Reference                                |
|-----|--------------------|------|----------------------------------|---|
| (1) | Meritek Series     | LL   | Aluminum Electrolytic Capacitors | Low Leakage Current, 2000Hrs 85°C               |
| (2) | Rated Voltage Code | 1H   | 50V:50V                          | DC working voltage, See Table Below             |
| (3) | Capacitance        | 220  | 220:22µF                         | First two digit: significant, Third: Multiplier |
| (4) | Tolerance          | M    | M: ± 20%                         | -20% ~ +20%                                     |
| (5) | Case Diameter Code | J    | J: 10 mm                         | See Table Below                                 |
| (6) | Case Height        | 125  | 125: 12.5 mm                     | Third digit denotes the first decimal place     |
| (7) | Package            | A    | A: Tape & Ammo                   | R: Tape & Reel, Blank : Bulk                    |
| (8) | Taping Pitch Code  | E    | E: 5.0 mm                        | See Table Below, Blank: Bulk                    |

| 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  |

| Pitch | 1.5 | 2 | 2.5 | 3.5 | 5 | 7.5 |
|-------|-----|---|-----|-----|---|-----|
| Code  | A   | B | C   | D   | E | F   |

## LEGACY PART NUMBERING SYSTEM

LL    50V    220    M    TA    1012  
(1)    (2)    (3)    (4)    (5)    (6)

| No   | (1)            | (2)           | (3)         | (4)       | (5)     | (6)       |
|------|----------------|---------------|-------------|-----------|---------|-----------|
| Item | Meritek Series | Rated Voltage | Capacitance | Tolerance | Package | Case Size |

\*Specifications subject to change without notice.