

Aluminum Electrolytic Capacitors

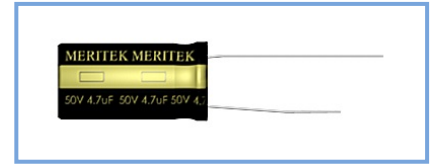


RE Series
(Low Impedance, High R.C.)

MERITEK

FEATURES

- High ripple current, low E.S.R. and long life.
- Suitable for output of switching power supplies



SPECIFICATIONS

| Item | Characteristic | | | | | | | | |
|--|---|-----------------------------------|------|------|--------|------|------|------|------|
| Operating Temp Range | - 55 ~ +105°C | | | | | | | | |
| Rated Working Voltage | 10 ~ 100VDC | | | | | | | | |
| Capacitance Tolerance (120Hz 20°C) | ± 20%(M), +50%/-10%(T) | | | | | | | | |
| Leakage Current (20°C) | $I \leq 0.01CV$ * After 3 minutes I : Leakage Current (μA) C : Rated Capacitance(μF) V : Working Voltage (V) | | | | | | | | |
| Surge Voltage (20°C) | W.V. | 10 | 16 | 25 | 35 | 50 | 63 | 100 | |
| | S.V. | 13 | 20 | 32 | 44 | 63 | 79 | 125 | |
| Dissipation Factor (tan δ) (120Hz 20°C) | add 0.02 per 1000uF for more than 1000uF | | | | | | | | |
| | W.V. | 10 | 16 | 25 | 35 | 50 | 63 | 100 | |
| | tan δ | 0.12 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.06 | 0.06 |
| Low Temperature Stability | Impedance ratio at 120Hz | | | | | | | | |
| | Rated Voltage (V) | 10~16 | | | 25~100 | | | | |
| | -25°C / +20°C | 3 | | | 2 | | | | |
| | -55°C / +20°C | 6 | | | 4 | | | | |
| Load Life | After hours application (φD ≤ 8mm 2000hrs, φD ≥ 10mm 3000hrs) of W.V. and +105°C ripple current value , the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rated working voltage) | | | | | | | | |
| | Capacitance Change | ≤ ±20% of initial value. | | | | | | | |
| | Dissipation Factor | ≤ 200% of initial specified value | | | | | | | |
| | Leakage Current | ≤ initial specified value | | | | | | | |
| Shelf Life | At +105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment) | | | | | | | | |
| | Capacitance Change | ≤ ±20% of initial | | | | | | | |
| | Dissipation Factor | ≤ 200% of initial specified value | | | | | | | |
| | Leakage Current | ≤ 200% of initial specified value | | | | | | | |

PART NUMBER SYSTEM

RE 10V 331 M TA 8x15

Meritek Series

Rated Voltage

Rated Capacitance

Express in micro farad(μF). First two digits are significant figures, Third digit denotes number of zeros. 'R' denotes decimal point for values less than 10uF

Tolerance

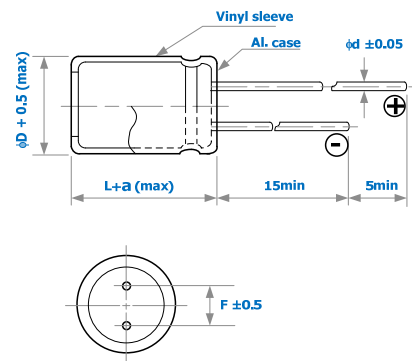
M - ±20%, T - +50/-10%

Package

| Code | TA | TR | Blank |
|------|-------------|-------------|-------|
| | Tape & Ammo | Tape & Reel | |

Case size – (D) Diameter x (L) Length in mm (Optional)

DIMENSIONS (mm)



| φD | 8 | 10 | 12.5 | 16 | 18 |
|----|-----|-----|------|-----|-----|
| F | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| d | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |
| a | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

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RIPPLE CURRENT COEFFICIENTS

| Frequency(Hz) | 60 | 120 | 400 | 1k | 10k | 100k |
|---------------|------------|------|------|------|------|------|
| W.V. | Multiplier | | | | | |
| 10~16V | 0.45 | 0.60 | 0.83 | 0.94 | 0.98 | 1.00 |
| 25~35V | 0.38 | 0.50 | 0.75 | 0.90 | 0.97 | 1.00 |
| 50~100V | 0.36 | 0.46 | 0.70 | 0.88 | 0.94 | 1.00 |

| Temperature(°C) | 65 | 75 | 85 | 95 | 105 |
|-----------------|------|------|------|------|------|
| Multiplier | 2.12 | 1.92 | 1.69 | 1.50 | 1.00 |

CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
 Max. impedance : Ω 20°C 100kHz
 Max. ripple current : A(rms) 105°C 100kHz

| Cap. (uF) | V | 10 | | | 16 | | | 25 | | |
|-----------|---|---------|-------|------|---------|-------|------|---------|-------|------|
| | | Item | DxL | IMP. | R.C. | DxL | IMP. | R.C. | DxL | IMP. |
| 100 | | | | → | 8x11.5 | 0.348 | 0.27 | 8x11.5 | 0.330 | 0.34 |
| 220 | | 8x11.5 | 0.190 | 0.36 | 8x15 | 0.180 | 0.44 | 10x16 | 0.170 | 0.59 |
| 330 | | 8x15 | 0.152 | 0.50 | 10x16 | 0.144 | 0.57 | 10x18 | 0.136 | 0.76 |
| 470 | | 10x16 | 0.124 | 0.62 | 10x18 | 0.118 | 0.71 | 10x20 | 0.112 | 0.95 |
| 680 | | 10x18 | 0.098 | 0.78 | 10x20 | 0.093 | 0.90 | 12.5x20 | 0.088 | 1.21 |
| 1000 | | 10x20 | 0.080 | 1.00 | 12.5x20 | 0.076 | 1.16 | 12.5x25 | 0.072 | 1.62 |
| 2200 | | 12.5x25 | 0.046 | 1.61 | 12.5x30 | 0.043 | 1.89 | 12.5x40 | 0.041 | 2.70 |
| 3300 | | 12.5x30 | 0.038 | 2.00 | 12.5x40 | 0.036 | 2.44 | 16x40 | 0.034 | 3.04 |
| 4700 | | 12.5x40 | 0.032 | 2.50 | 16x40 | 0.031 | 2.64 | | | |

All blank voltage on sleeve marking is the same voltage as "→" point to.

| Cap. (uF) | V | 35 | | | 50 | | |
|-----------|---|---------|-------|------|---------|-------|------|
| | | Item | DxL | IMP. | R.C. | DxL | IMP. |
| 47 | | | | → | 8x11.5 | 0.453 | 0.29 |
| 68 | | 8x11.5 | 0.374 | 0.30 | 8x15 | 0.352 | 0.39 |
| 100 | | 8x15 | 0.311 | 0.40 | 10x16 | 0.292 | 0.49 |
| 220 | | 10x18 | 0.161 | 0.66 | 10x20 | 0.151 | 0.80 |
| 330 | | 10x25 | 0.129 | 0.93 | 12.5x20 | 0.121 | 1.04 |
| 470 | | 12.5x20 | 0.105 | 1.07 | 12.5x25 | 0.099 | 1.37 |
| 680 | | 12.5x25 | 0.083 | 1.42 | 12.5x30 | 0.078 | 1.79 |
| 1000 | | 12.5x30 | 0.068 | 1.87 | 12.5x40 | 0.064 | 2.48 |
| 2200 | | 16x40 | 0.039 | 2.83 | | | |

| Cap. (uF) | V | 63 | | | 100 | | |
|-----------|---|---------|-------|------|---------|-------|------|
| | | Item | DxL | IMP. | R.C. | DxL | IMP. |
| 47 | | 8x15 | 0.424 | 0.35 | 10x25 | 0.368 | 0.44 |
| 68 | | 10x16 | 0.330 | 0.43 | 12.5x20 | 0.286 | 0.51 |
| 100 | | 10x18 | 0.274 | 0.55 | 12.5x25 | 0.238 | 0.68 |
| 220 | | 12.5x20 | 0.142 | 0.92 | 16x35.5 | 0.123 | 1.19 |
| 330 | | 12.5x25 | 0.113 | 1.24 | 18x40 | 0.098 | 1.64 |
| 470 | | 12.5x30 | 0.093 | 1.61 | | | |
| 680 | | 16x35.5 | 0.073 | 2.09 | | | |