

Features

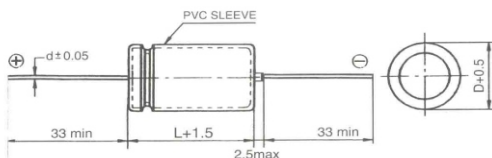
- Load life of 2,000 hours at 85°C.
- Axial type aluminum electrolytic capacitors.
- Case size larger than 6.3mm diameter has safety vent on rubber bun..



Specifications

| Item | Characteristics | | | | | | | |
|--|--|---------------------------------------|------|--------|------|--------|------|------|
| Operating temperature range | -40~+85°C | | | | | | | |
| Rated voltage range | 6.3~100V | | | | | | | |
| Capacitance range | 0.47~10,000 µ F | | | | | | | |
| Capacitance tolerance (at 20°C, 120Hz) | ±20%(M) | | | | | | | |
| Leakage current(I) (at 20°C) | After 2 minutes application of rated voltage. I ≤ 0.01CV (µ A) Where C: Nominal capacitance in µ F, V: Rated voltage in V. | | | | | | | |
| Dissipation factor(Tan δ) (at 20°C, 120Hz) | W.V.(V) | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
| | Tan δ (max.) | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |
| | For capacitance of more than 1,000 µ F, add 0.02 for every increase of 1,000 µ F. | | | | | | | |
| Low temperature characteristics (at 120Hz) | W.V.(v) | 10 | | 16~ 25 | | 35~100 | | |
| | impedance ratio | Z-25°C/Z+20°C | | 3 | | 2 | | 2 |
| | ZT/Z+20°C(max) | Z-40°C/Z+20°C | | 6 | | 4 | | 3 |
| Load life | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with max. ripple current has been applied for 5,000 hours (3,000 hours for case dia. 8 & 10mm, 2,000 hours for case dia. 6.3mm) at 85°C | | | | | | | |
| | Capacitance change | ≤ 20% of the initial value | | | | | | |
| | tan δ | ≤ 200% of the initial specified value | | | | | | |
| | I | ≤ The initial specified value | | | | | | |
| Shelf life | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 85°C for 1000 hours without voltage applied | | | | | | | |
| | Capacitance change | ≤ 20% of the initial value | | | | | | |
| | tan δ | ≤ 150% of the initial specified value | | | | | | |
| | I | ≤ 200% of the initial specified value | | | | | | |
| Others | Satisfies characteristic W of JIS C5141 | | | | | | | |

Dimensions



| | | |
|---|------|-------|
| D | 5~13 | 16~25 |
| d | 0.6 | 0.8 |



TMCE15 Axial Standard Aluminum Electrolytic Capacitors

Case Size DxL(mm) and Maximun Ripple current(mA rms/at 85°C,120Hz)

| W.V.(v) Cap.(μF) | 10 | | 16 | | 25 | | 35 | | 50 | | 63 | | 100 | |
|---------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|------|
| | 0.47 | | | | | | | | | 5×12 | 5 | 5×12 | 10 | 5×12 |
| 1 | | | | | | | | | 5×12 | | 5×12 | 18 | 5×12 | 18 |
| 2.2 | | | | | | | | | 5×12 | 23 | 5×12 | 28 | 5×12 | 28 |
| 3.3 | | | | | | | | | 5×12 | 28 | 5×12 | 31 | 5×12 | 34 |
| 4.7 | | | | | | | | | 5×12 | 34 | 5×12 | 37 | 6.3×12 | 40 |
| 10 | | | | | 5×12 | 40 | 5×12 | 45 | 6.3×12 | 50 | 6.3×12 | 55 | 8×13 | 60 |
| 22 | | | 5×12 | 60 | 5×12 | 65 | 6.3×12 | 70 | 6.3×12 | 85 | 6.3×14 | 90 | 8×16 | 120 |
| 33 | | | 5×12 | 70 | 5×12 | 80 | 6.3×12 | 90 | 6.3×14 | 110 | 8×13 | 120 | 10×17 | 150 |
| 47 | 5×12 | 80 | 5×12 | 85 | 6.3×12 | 100 | 6.3×14 | 120 | 8×13 | 130 | 8×16 | 160 | 10×21 | 190 |
| 100 | 6.3×12 | 130 | 6.3×14 | 160 | 8×13 | 170 | 8×16 | 210 | 10×17 | 220 | 10×17 | 260 | 13×22 | 340 |
| 220 | 8×13 | 210 | 8×16 | 260 | 8×16 | 280 | 10×17 | 340 | 10×21 | 410 | 13×22 | 480 | 16×26 | 560 |
| 330 | 8×16 | 300 | 8×16 | 320 | 10×17 | 380 | 10×21 | 460 | 13×22 | 560 | 13×22 | 650 | | |
| 470 | 8×16 | 350 | 8×16 | 430 | 10×21 | 510 | 13×22 | 610 | 13×22 | 730 | 13×26 | 840 | | |
| 1,000 | 10×17 | 640 | 10×17 | 770 | 13×22 | 900 | 13×24 | 1,060 | 16×33 | 1,260 | 16×36 | 1,330 | | |
| 2,200 | 13×22 | 1,090 | 10×21 | 1,180 | 16×28 | 1,480 | 16×33 | 1,580 | 18×36 | 1,920 | 20×42 | 2,160 | | |
| 3,300 | 13×26 | 1,390 | 13×24 | 1,620 | 16×33 | 1,710 | 18×36 | 2,050 | 20×42 | 2,340 | 25×43 | 2,470 | | |
| 4,700 | 16×28 | 1,730 | 16×36 | 1,840 | 18×36 | 2,170 | 20×36 | 2,470 | 25×43 | 2,650 | 25×54 | 2,710 | | |
| 6,800 | 16×33 | 1,930 | 18×36 | 2,310 | 18×42 | 2,580 | 22×43 | 2,720 | | | | | | |
| 10,000 | 18×36 | 2,350 | 20×36 | 2,620 | 22×42 | 2,940 | 25×54 | 2,600 | | | | | | |

Ripple Current Multipliers

Frequency multiplying factor

| Cap.(μF) | Freq(Hz) | | | | |
|--------------|----------|------|------|------|------|
| | 50 | 120 | 300 | 1k | 10k |
| 0.47~47 | 0.75 | 1.00 | 1.35 | 1.57 | 2.00 |
| 100~470 | 0.80 | 1.00 | 1.23 | 1.34 | 1.50 |
| 1,000~10,000 | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 |

Temperature multiplying factor

| Temperature(°C) | 45 | 65 | 85 |
|-----------------|------|------|------|
| Factor | 1.59 | 1.23 | 1.00 |