

Type TC Axial Leaded Aluminum Electrolytic Capacitors

85 °C, High Ripple, General Purpose Capacitor



Type TC is an axial leaded, 85 °C, 1000 hour long life general purpose aluminum electrolytic capacitor with a high ripple current rating and is suitable for consumer electronic equipment applications.

Highlights

- General purpose
- High ripple current
- Low profile mounting

Specifications

| | |
|-------------------------------------|--|
| Capacitance Range: | 1.0 to 5,000 μ F |
| Voltage Range: | 16 to 450 WVdc |
| Capacitance Tolerance: | Dia. < .625, $\pm 20\%$ Dia. \geq .625 16 to 150 WVdc, -10 +75% 250 to 450 WVdc, -10 +50% |
| Operating Temperature Range: | -40 °C to 85 °C |
| DC Leakage Current: | $I = 6 \sqrt{CV}$ after 5 minutes, not to exceed 3 mA @ 25 °C I = leakage current in μ A C = Capacitance in μ F V = Rated voltage |

Ripple Current Multipliers:

| Rated WVdc | Ripple Multipliers | | | |
|------------|--------------------|--------|---------|---------|
| | 60 Hz | 400 Hz | 1000 Hz | 2400 Hz |
| 0 to 50 | 0.8 | 1.05 | 1.10 | 1.14 |
| 51 to 150 | 0.8 | 1.08 | 1.13 | 1.16 |
| 151 & up | 0.8 | 1.15 | 1.21 | 1.25 |

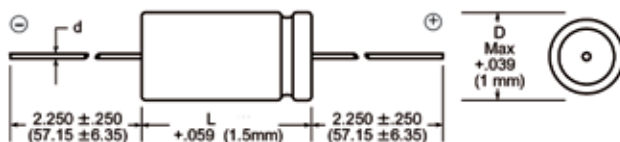
| Ambient Temp. | +45 °C | +55 °C | +65 °C | +75 °C | +85 °C |
|-------------------|--------|--------|--------|--------|--------|
| Ripple Multiplier | 2.2 | 2.0 | 1.7 | 1.4 | 1.0 |

QA Stability Test:

Apply WVdc for 1,000 h at 85 °C

- Capacitance change $\leq 15\%$ from initial limits
- DC leakage current meets initial limits
- ESR $\leq 150\%$ of initial measured value

Outline Drawing



For diameters less than .625 (15.88) lead lengths are 1.378 (35.0) Minimum.

Parts are supplied with PVC insulating sleeve. Add .010" to diameter and .125" max to length to allow for insulation.

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Ratings

| Cap (µF) | Catalog Part Number | Max ESR | | Max Ripple | | Size | | Lead Wire (d) |
|-----------------------------------|------------------------|------------------------|------------------------|---------------------------|-------------------------|-------|--|---------------------|
| | | 120 Hz 25 °C (Ω) | 120 Hz 85 °C (A) | Diameter D (Inches) | Length L (Inches) | | | |
| 16 WVdc (20 Vdc Surge) | | | | | | | | |
| 3,000 | TC1530 | 0.11 | 2.066 | 0.875 | 1.625 | 0.040 | | |
| 4,000 | TC1540 | 0.08 | 2.518 | 0.875 | 1.875 | 0.040 | | |
| 4,000 | TC1540A | 0.07 | 1.450 | 0.866 | 1.575 | 0.023 | | |
| 5,000 | TC1550 | 0.07 | 3.217 | 0.875 | 2.625 | 0.040 | | |
| 25 WVdc (30 Vdc Surge) | | | | | | | | |
| 470 | TC2505A | 0.38 | 0.550 | 0.394 | 0.787 | 0.023 | | |
| 1,500 | TC2515 | 0.14 | 1.881 | 0.750 | 2.125 | 0.040 | | |
| 1,500 | TC2515A | 0.12 | 1.225 | 0.709 | 1.575 | 0.023 | | |
| 2,000 | TC2520 | 0.11 | 2.204 | 0.875 | 1.875 | 0.040 | | |
| 2,000 | TC2520A | 0.09 | 1.350 | 0.866 | 1.575 | 0.023 | | |
| 3,000 | TC2530 | 0.07 | 3.108 | 0.875 | 2.625 | 0.040 | | |
| 4,000 | TC2540 | 0.06 | 3.779 | 1.000 | 2.625 | 0.040 | | |
| 4,000 | TC2540A | 0.07 | 1.450 | 0.866 | 1.575 | 0.023 | | |
| 5,000 | TC2550 | 0.05 | 4.136 | 1.000 | 2.625 | 0.040 | | |
| 50 WVdc (65 Vdc Surge) | | | | | | | | |
| 22 | TC36A | 6.09 | 0.073 | 0.236 | 0.630 | 0.023 | | |
| 47 | TC39A | 3.14 | 0.130 | 0.315 | 0.630 | 0.023 | | |
| 1,000 | TC50100 | 0.08 | 2.949 | 0.875 | 2.625 | 0.040 | | |
| 1,000 | TC50100A | 0.12 | 1.447 | 0.866 | 1.575 | 0.023 | | |
| 1,500 | TC50150 | 0.07 | 3.423 | 1.000 | 2.625 | 0.040 | | |
| 2,000 | TC50200 | 0.07 | 3.448 | 1.000 | 2.625 | 0.040 | | |
| 2,000 | TC50200A | 0.09 | 1.350 | 0.866 | 1.575 | 0.023 | | |
| 3,000 | TC50300 | 0.05 | 4.766 | 1.000 | 3.625 | 0.040 | | |
| 5,000 | TC50500 | 0.03 | 5.820 | 1.000 | 3.625 | 0.040 | | |
| 5,000 | TC50500A | 0.56 | 3.305 | 0.866 | 1.575 | 0.023 | | |
| 75 WVdc (95 Vdc Surge) | | | | | | | | |
| 100 | TC75101 | 0.77 | 0.597 | 0.625 | 1.375 | 0.040 | | |
| 100 | TC75101A | 2.66 | 0.270 | 0.512 | 1.181 | 0.023 | | |
| 250 | TC75251 | 0.37 | 1.024 | 0.750 | 1.625 | 0.040 | | |
| 500 | TC75501 | 0.19 | 1.765 | 0.875 | 2.125 | 0.040 | | |
| 1,000 | TC75102 | 0.10 | 2.344 | 1.000 | 1.625 | 0.040 | | |
| 2,000 | TC75202 | 0.05 | 3.991 | 1.000 | 2.625 | 0.040 | | |
| 100 WVdc (125 Vdc Surge) | | | | | | | | |
| 100 | TC10101 | 0.36 | 0.974 | 0.750 | 1.375 | 0.040 | | |
| 100 | TC10101A | 3.32 | 0.419 | 0.630 | 1.299 | 0.023 | | |
| 150 | TC10151 | 0.55 | 1.276 | 0.750 | 1.625 | 0.040 | | |
| 150 | TC10151A | 1.34 | 0.823 | 0.709 | 1.575 | 0.023 | | |
| 250 | TC10251 | 0.15 | 1.885 | 0.875 | 1.875 | 0.040 | | |
| 500 | TC10501 | 0.08 | 3.251 | 1.000 | 2.625 | 0.040 | | |
| 1,000 | TC10102 | 0.08 | 3.918 | 1.000 | 3.875 | 0.040 | | |
| 1,000 | TC10102A | 0.12 | 1.447 | 0.866 | 1.575 | 0.023 | | |
| 1,500 | TC10152 | 0.06 | 4.495 | 1.000 | 3.625 | 0.040 | | |
| 150 WVdc (175 Vdc Surge) | | | | | | | | |
| 80 | TC492 | 1.96 | 0.670 | 0.750 | 1.625 | 0.040 | | |
| 100 | TC493 | 0.70 | 0.748 | 0.750 | 1.625 | 0.040 | | |
| 100 | TC493A | 3.32 | 0.555 | 0.709 | 1.575 | 0.023 | | |
| 150 | TC495 | 0.47 | 0.993 | 0.875 | 1.625 | 0.040 | | |
| 200 | TC496 | 0.35 | 1.293 | 0.875 | 2.125 | 0.040 | | |
| 300 | TC499 | 0.355 | 1.687 | 1.000 | 2.125 | 0.040 | | |
| 500 | TC4990 | 0.15 | 2.362 | 1.000 | 2.625 | 0.040 | | |
| 250 WVdc (300 Vdc Surge) | | | | | | | | |
| 5 | TCS0XA | 70.60 | 0.060 | 0.394 | 0.787 | 0.023 | | |
| 8 | TCS1 | 15.27 | 0.197 | 0.625 | 1.125 | 0.032 | | |
| 10 | TCS2 | 12.22 | 0.220 | 0.625 | 1.125 | 0.032 | | |
| 10 | TCS2A | 33.20 | 0.890 | 0.394 | 0.984 | 0.023 | | |
| 12 | TCS3 | 8.65 | 0.262 | 0.625 | 1.125 | 0.032 | | |
| 16 | TCS4 | 7.64 | 0.304 | 0.625 | 1.375 | 0.032 | | |

| Cap (µF) | Catalog Part Number | Max ESR | | Max Ripple | | Size | | Lead Wire (d) |
|-----------------------------------|------------------------|------------------------|------------------------|---------------------------|-------------------------|-------|--|---------------------|
| | | 120 Hz 25 °C (Ω) | 120 Hz 85 °C (A) | Diameter D (Inches) | Length L (Inches) | | | |
| 250 WVdc (300 Vdc Surge) | | | | | | | | |
| 20 | TCS5 | 6.13 | 0.345 | 0.750 | 1.125 | 0.040 | | |
| 20 | TC55A | 15.10 | 0.175 | 0.512 | 1.181 | 0.023 | | |
| 30 | TCS7 | 4.09 | 0.461 | 0.750 | 1.375 | 0.040 | | |
| 30 | TC57A | 10.10 | 0.241 | 0.630 | 1.181 | 0.023 | | |
| 40 | TC58 | 2.69 | 0.573 | 0.750 | 1.625 | 0.040 | | |
| 40 | TC58A | 8.58 | 0.280 | 0.630 | 1.299 | 0.023 | | |
| 50 | TC59 | 2.15 | 0.640 | 0.750 | 1.625 | 0.040 | | |
| 50 | TC59A | 7.06 | 0.318 | 0.630 | 1.299 | 0.023 | | |
| 100 | TC1265 | 1.08 | 1.220 | 0.875 | 2.625 | 0.040 | | |
| 100 | TC1265A | 3.32 | 0.555 | 0.866 | 1.575 | 0.023 | | |
| 160 | TC1266 | 0.30 | 1.649 | 1.000 | 2.625 | 0.040 | | |
| 225 | TC1267 | 0.22 | 2.105 | 1.000 | 3.125 | 0.040 | | |
| 300 WVdc (350 Vdc Surge) | | | | | | | | |
| 150 | TC593 | 0.36 | 1.624 | 1.000 | 3.125 | 0.040 | | |
| 200 | TC594 | 0.28 | 1.865 | 1.000 | 3.125 | 0.040 | | |
| 350 WVdc (400 Vdc Surge) | | | | | | | | |
| 5 | TC60 | 30.48 | 0.139 | 0.625 | 1.125 | 0.032 | | |
| 8 | TC61 | 19.05 | 0.193 | 0.625 | 1.375 | 0.032 | | |
| 8 | TC61A | 33.20 | 0.089 | 0.512 | 0.827 | 0.023 | | |
| 10 | TC62 | 15.25 | 0.215 | 0.625 | 1.375 | 0.032 | | |
| 10 | TC62A | 33.20 | 0.089 | 0.512 | 0.827 | 0.023 | | |
| 12 | TC63 | 12.71 | 0.239 | 0.750 | 1.125 | 0.040 | | |
| 16 | TC64 | 9.54 | 0.302 | 0.750 | 1.375 | 0.040 | | |
| 20 | TC65 | 7.63 | 0.337 | 0.750 | 1.375 | 0.040 | | |
| 20 | TC65A | 15.10 | 0.175 | 0.512 | 1.181 | 0.023 | | |
| 40 | TC67 | 3.96 | 0.514 | 0.875 | 1.625 | 0.040 | | |
| 60 | TC68 | 2.78 | 0.691 | 0.875 | 2.125 | 0.040 | | |
| 60 | TC68A | 6.44 | 0.376 | 0.709 | 1.575 | 0.023 | | |
| 100 | TC69 | 1.35 | 1.093 | 0.875 | 2.625 | 0.040 | | |
| 100 | TC69A | 3.32 | 0.555 | 0.866 | 1.575 | 0.023 | | |
| 150 | TC692 | 0.96 | 1.495 | 1.000 | 3.625 | 0.040 | | |
| 450 WVdc (525 Vdc Surge) | | | | | | | | |
| 2 | TC695 | 86.91 | 0.082 | 0.625 | 1.125 | 0.032 | | |
| 2 | TC695A | 151.00 | 0.030 | 0.315 | 0.787 | 0.023 | | |
| 4 | TC697 | 43.47 | 0.116 | 0.625 | 1.125 | 0.032 | | |
| 4 | TC697A | 70.60 | 0.051 | 0.394 | 0.984 | 0.023 | | |
| 5 | TC70 | 35.86 | 0.144 | 0.750 | 1.125 | 0.040 | | |
| 5 | TC70A | 70.60 | 0.051 | 0.394 | 0.984 | 0.023 | | |
| 8 | TC71 | 21.74 | 0.183 | 0.750 | 1.125 | 0.040 | | |
| 8 | TC71A | 33.20 | 0.089 | 0.512 | 0.827 | 0.023 | | |
| 10 | TC72 | 17.39 | 0.243 | 0.875 | 1.375 | 0.040 | | |
| 10 | TC72A | 33.20 | 0.089 | 0.512 | 0.827 | 0.023 | | |
| 12 | TC73 | 14.50 | 0.267 | 0.875 | 1.375 | 0.040 | | |
| 16 | TC74 | 10.88 | 0.304 | 0.750 | 1.625 | 0.040 | | |
| 16 | TC74A | 24.15 | 0.140 | 0.512 | 0.984 | 0.023 | | |
| 20 | TC75 | 8.71 | 0.371 | 0.875 | 1.625 | 0.040 | | |
| 20 | TC75A | 15.10 | 0.175 | 0.512 | 1.181 | 0.023 | | |
| 30 | TC77 | 5.82 | 0.488 | 1.000 | 1.625 | 0.040 | | |
| 30 | TC77A | 10.10 | 0.241 | 0.630 | 1.181 | 0.023 | | |
| 40 | TC78 | 4.36 | 0.653 | 1.000 | 2.125 | 0.040 | | |
| 40 | TC78A | 8.58 | 0.280 | 0.630 | 1.299 | 0.023 | | |
| 50 | TC79 | 3.06 | 0.709 | 1.000 | 2.125 | 0.040 | | |
| 50 | TC79A | 7.06 | 0.318 | 0.630 | 1.299 | 0.023 | | |
| 60 | TC795 | 2.55 | 0.855 | 1.000 | 2.625 | 0.040 | | |
| 80 | TC80 | 2.19 | 1.068 | 1.000 | 3.125 | 0.040 | | |
| 80 | TC80A | 3.32 | 0.555 | 0.866 | 1.575 | 0.023 | | |
| 100 | TC807 | 1.97 | 1.178 | 1.000 | 3.125 | 0.040 | | |
| 100 | TC807A | 3.32 | 0.555 | 0.866 | 1.575 | 0.023 | | |

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