

# 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

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

### Ripple Current Multipliers:

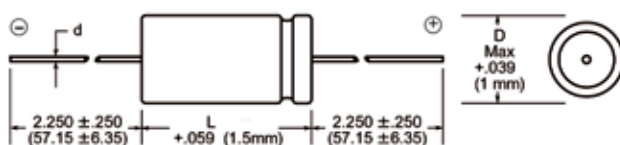
Rated WVdc	Ripple Multipliers			
	60 Hz	400 Hz	1000 Hz	2400 Hz
0 to 50	0.8	1.05	1.10	1.14
51 to 150	0.8	1.08	1.13	1.16
151 & up	0.8	1.15	1.21	1.25

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

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		120 Hz 25 °C ( $\Omega$ )	120 Hz 85 °C (A)	120 Hz 25 °C ( $\Omega$ )	120 Hz 85 °C (A)	Diameter D (Inches)	Length L (Inches)	
<b>250 WVdc ( 300 Vdc Surge )</b>								
20	TCS5	6.13	0.345	0.750	1.125	0.750	1.125	0.040
20	TCS5A	15.10	0.175	0.512	1.181	0.512	1.181	0.023
30	TCS7	4.09	0.461	0.750	1.375	0.750	1.375	0.040
30	TCS7A	10.10	0.241	0.630	1.181	0.630	1.181	0.023
40	TCS8	2.69	0.573	0.750	1.625	0.750	1.625	0.040
40	TCS8A	8.58	0.280	0.630	1.299	0.630	1.299	0.023
50	TCS9	2.15	0.640	0.750	1.625	0.750	1.625	0.040
50	TCS9A	7.06	0.318	0.630	1.299	0.630	1.299	0.023
100	TC1265	1.08	1.220	0.875	2.625	0.875	2.625	0.040
100	TC1265A	3.32	0.555	0.866	1.575	0.866	1.575	0.023
160	TC1266	0.30	1.649	1.000	2.625	1.000	2.625	0.040
225	TC1267	0.22	2.105	1.000	3.125	1.000	3.125	0.040
<b>300 WVdc ( 350 Vdc Surge )</b>								
150	TC593	0.36	1.624	1.000	3.125	1.000	3.125	0.040
200	TC594	0.28	1.865	1.000	3.125	1.000	3.125	0.040
<b>350 WVdc ( 400 Vdc Surge )</b>								
5	TC60	30.48	0.139	0.625	1.125	0.625	1.125	0.032
8	TC61	19.05	0.193	0.625	1.375	0.625	1.375	0.032
8	TC61A	33.20	0.089	0.512	0.827	0.512	0.827	0.023
10	TC62	15.25	0.215	0.625	1.375	0.625	1.375	0.032
10	TC62A	33.20	0.089	0.512	0.827	0.512	0.827	0.023
12	TC63	12.71	0.239	0.750	1.125	0.750	1.125	0.040
16	TC64	9.54	0.302	0.750	1.375	0.750	1.375	0.040
20	TC65	7.63	0.337	0.750	1.375	0.750	1.375	0.040
20	TC65A	15.10	0.175	0.512	1.181	0.512	1.181	0.023
40	TC67	3.96	0.514	0.875	1.625	0.875	1.625	0.040
60	TC68	2.78	0.691	0.875	2.125	0.875	2.125	0.040
60	TC68A	6.44	0.376	0.709	1.575	0.709	1.575	0.023
100	TC69	1.35	1.093	0.875	2.625	0.875	2.625	0.040
100	TC69A	3.32	0.555	0.866	1.575	0.866	1.575	0.023
150	TC692	0.96	1.495	1.000	3.625	1.000	3.625	0.040
<b>450 WVdc ( 525 Vdc Surge )</b>								
2	TC695	86.91	0.082	0.625	1.125	0.625	1.125	0.032
2	TC695A	151.00	0.030	0.315	0.787	0.315	0.787	0.023
4	TC697	43.47	0.116	0.625	1.125	0.625	1.125	0.032
4	TC697A	70.60	0.051	0.394	0.984	0.394	0.984	0.023
5	TC70	35.86	0.144	0.750	1.125	0.750	1.125	0.040
5	TC70A	70.60	0.051	0.394	0.984	0.394	0.984	0.023
8	TC71	21.74	0.183	0.750	1.125	0.750	1.125	0.040
8	TC71A	33.20	0.089	0.512	0.827	0.512	0.827	0.023
10	TC72	17.39	0.243	0.875	1.375	0.875	1.375	0.040
10	TC72A	33.20	0.089	0.512	0.827	0.512	0.827	0.023
12	TC73	14.50	0.267	0.875	1.375	0.875	1.375	0.040
16	TC74	10.88	0.304	0.750	1.625	0.750	1.625	0.040
16	TC74A	24.15	0.140	0.512	0.984	0.512	0.984	0.023
20	TC75	8.71	0.371	0.875	1.625	0.875	1.625	0.040
20	TC75A	15.10	0.175	0.512	1.181	0.512	1.181	0.023
30	TC77	5.82	0.488	1.000	1.625	1.000	1.625	0.040
30	TC77A	10.10	0.241	0.630	1.181	0.630	1.181	0.023
40	TC78	4.36	0.653	1.000	2.125	1.000	2.125	0.040
40	TC78A	8.58	0.280	0.630	1.299	0.630	1.299	0.023
50	TC79	3.06	0.709	1.000	2.125	1.000	2.125	0.040
50	TC79A	7.06	0.318	0.630	1.299	0.630	1.299	0.023
60	TC795	2.55	0.855	1.000	2.625	1.000	2.625	0.040
80	TC80	2.19	1.068	1.000	3.125	1.000	3.125	0.040
80	TC80A	3.32	0.555	0.866	1.575	0.866	1.575	0.023
100	TC807	1.97	1.178	1.000	3.125	1.000	3.125	0.040
100	TC807A	3.32	0.555	0.866	1.575	0.866	1.575	0.023

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