Type TCX 105 ºC, Axial Leaded Aluminum Electrolytic Capacitors

Extended Life Computer Grade Capacitor

Type TCX is an axial leaded, 105 ºC, 2000 h extended life industrial and computer grade quality aluminum electrolytic capacitor with low DCL and ESR and is suitable for computer applications.

Highlights

- 105 ºC rated
- Computer grade
- Low DCL and ESR

Specifications

Capacitance Range: 27 to 12,000 µF

Voltage Range: 10 to 150 WVdc

Capacitance Tolerance: 10 to 75 WVdc, –10 +75%
100 to 150 WVdc, –10 +50%

Operating Temperature Range: –55 ºC to 105 ºC

DC Leakage Current: I= 2 $\sqrt{CV}$ after 5 minutes
Not to exceed 2 mA @ 25 ºC
I = leakage current in µA
C = Capacitance in µF
V = Rated voltage

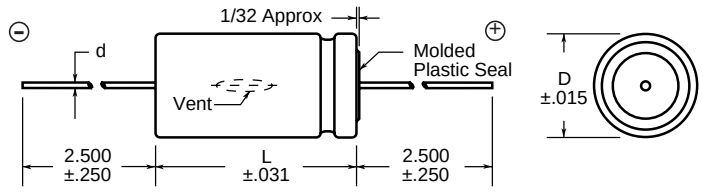
Ripple Current Multipliers:

Rated WVdc	Ripple Multipliers			
	60 Hz	400 Hz	1000 Hz	2400 Hz
0 to 150	0.8	1.05	1.10	1.14

Ambient Temp.	+45 ºC	+55 ºC	+65 ºC	+75 ºC	+85 ºC	+95 ºC
Ripple Multiplier	1.7	1.58	1.4	1.2	1.0	0.7

QA Stability Test: Apply WVdc for 2,000 h at 105 ºC
- Capacitance change ±15% from initial limits
- DC leakage current meets initial limits
- ESR ≤150% of initial measured value

Outline Drawing



(Inches)

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 120 Hz 25 °C (Ω)	Max Ripple 120 Hz 85 °C (A)	Size Diameter D (Inches)	Size Length L (Inches)	Lead Wire (d)
6 WVdc (9 Vdc Surge)						
4,800	TCX482U006A	0.063	1.550	0.866	1.575	0.040
10 WVdc (12 Vdc Surge)						
10,000	TCX103U010A	0.050	1.800	0.866	1.575	0.040
10,000	TCX103U010L3C	0.024	5.952	0.875	3.125	0.040
15 WVdc (20 Vdc Surge)						
1,000	TCX102U015J1C	0.145	1.394	0.750	1.125	0.040
2,100	TCX212U015J1L	0.071	2.337	0.750	1.625	0.040
3,100	TCX312U015A	0.625	1.430	0.866	1.575	0.040
4,600	TCX462U015A	0.063	1.550	0.866	1.575	0.040
6,200	TCX622U015A	0.066	1.572	0.866	1.575	0.040
8,200	TCX822U015A	0.06	1.628	0.866	1.575	0.040
8,200	TCX822U015N2L	0.025	5.796	1.000	2.625	0.040
12,000	TCX123U015A	0.05	1.800	0.866	1.575	0.040
12,000	TCX123U015N3L	0.019	7.589	1.000	3.625	0.040
20 WVdc (25 Vdc Surge)						
640	TCX641U025A	0.248	0.735	0.512	1.181	0.032
25 WVdc (30 Vdc Surge)						
640	TCX641U025A	0.248	0.735	0.512	1.181	0.032
1,200	TCX122U025A	0.118	1.447	0.866	1.575	0.040
1,200	TCX122U025N1C	0.109	1.899	1.000	1.125	0.040
1,500	TCX152U025A	0.140	0.850	0.512	1.181	0.032
1,800	TCX182U025A	0.102	1.268	0.866	1.575	0.040
1,800	TCX182U025L1L	0.071	2.557	0.875	1.625	0.040
2,400	TCX242U025A	0.080	1.320	0.866	1.575	0.040
2,400	TCX242U025N1L	0.057	3.081	1.000	1.625	0.040
3,700	TCX372U025L2L	0.037	4.370	0.875	2.625	0.040
7,200	TCX722U025N3L	0.023	6.882	1.000	3.625	0.040
30 WVdc (40 Vdc Surge)						
310	TCX311U030A	0.447	0.463	0.512	0.984	0.032
310	TCX311U030G1C	0.316	0.852	0.625	1.125	0.032
470	TCX471U030A	0.314	0.554	0.512	0.984	0.032
470	TCX471U030J1C	0.214	1.149	0.750	1.125	0.040
970	TCX971U030A	0.147	1.163	0.630	1.575	0.032
1,400	TCX142U030A	0.120	1.200	0.709	1.575	0.040
1,400	TCX142U030J2C	0.075	2.583	0.750	2.125	0.040
2,700	TCX272U030A	0.328	1.343	0.866	1.575	0.040
2,700	TCX272U030L2L	0.043	4.091	0.875	2.625	0.040
3,000	TCX302U030L3C	0.039	4.643	0.875	3.125	0.040

Cap (µF)	Catalog Part Number	Max ESR 120 Hz 25 °C (Ω)	Max Ripple 120 Hz 85 °C (A)	Size Diameter D (Inches)	Size Length L (Inches)	Lead Wire (d)
40 WVdc (50 Vdc Surge)						
360	TCX361U040A	0.419	0.492	0.512	0.984	0.032
360	TCX361U040J1C	0.230	1.107	0.750	1.125	0.040
1,000	TCX102U040A	0.118	1.447	0.866	1.575	0.040
1,000	TCX102U040L1L	0.088	2.290	0.875	1.625	0.040
1,400	TCX142U040A	0.120	1.200	0.709	1.575	0.040
1,400	TCX142U040J2L	0.063	3.107	0.750	2.625	0.040
2,100	TCX212U040L2L	0.045	3.975	0.875	2.625	0.040
4,200	TCX422U040A	0.586	2.587	0.866	1.575	0.040
4,200	TCX422U040N3L	0.028	6.361	1.000	3.625	0.040
50 WVdc (65 Vdc Surge)						
170	TCX171U050A	0.804	0.362	0.512	0.984	0.032
250	TCX251U050A	0.486	0.488	0.512	1.181	0.032
250	TCX251U050G1G	0.306	0.947	0.625	1.375	0.032
370	TCX371U050L1C	0.216	1.250	0.875	1.125	0.040
500	TCX501U050A	0.313	0.597	0.512	1.181	0.032
500	TCX501U050G2C	0.155	1.624	0.625	2.125	0.032
710	TCX711U050A	0.191	1.055	0.709	1.575	0.040
710	TCX711U050N1G	0.118	1.989	1.000	1.375	0.040
950	TCX951U050N1L	0.089	2.456	1.000	1.625	0.040
1,400	TCX142U050A	0.120	1.200	0.709	1.575	0.040
1,400	TCX142U050L2L	0.061	3.436	0.875	2.625	0.040
1,800	TCX182U050A	0.102	1.268	0.866	1.575	0.040
1,900	TCX192U050A	0.097	1.281	0.866	1.575	0.040
1,900	TCX192U050N2L	0.047	4.170	1.000	2.625	0.040
2,800	TCX282U050A	0.377	1.357	0.866	1.575	0.040
2,800	TCX282U050N3L	0.035	5.655	1.000	3.625	0.040
75 WVdc (95 Vdc Surge)						
65	TCX650U075G1C	2.961	0.419	0.625	1.125	0.032
100	TCX101U075A	3.320	0.410	0.630	1.181	0.032
100	TCX101U075J1C	1.932	0.574	0.750	1.125	0.040
560	TCX561U075A	0.229	0.887	0.709	1.575	0.040
560	TCX561U075L2L	0.115	2.491	0.875	2.625	0.040
740	TCX741U075A	0.183	1.076	0.709	1.575	0.040
740	TCX741U075N2L	0.090	3.033	1.000	2.625	0.040
1,100	TCX112U075N3L	0.084	3.633	1.000	3.625	0.040
100 WVdc (125 Vdc Surge)						
110	TCX111T100L1G	.404	0.996	0.875	1.375	0.040
150	TCX151T100L1L	0.297	1.248	0.875	1.625	0.040
150 WVdc (175 Vdc Surge)						
27	TCX270T150G1C	5.720	0.322	0.625	1.125	0.032
150	TCX151T150J2L	0.404	1.224	0.750	2.625	0.040

Case Code Format for Type TCX

Case Code Chart						
Case	Inches		Millimeters		d	
Code	D	L	D	L	Inches	AWG
E1G	0.500	1.375	12.7	34.9	0.032	#20
E2C	0.500	2.125	12.7	53.9	0.032	#20
G1C	0.625	1.125	15.9	28.6	0.032	#20
G1G	0.625	1.375	15.9	34.9	0.032	#20
G1L	0.625	1.625	15.9	41.3	0.032	#20
G2C	0.625	2.125	15.9	53.9	0.032	#20
G2L	0.625	2.625	15.9	66.7	0.032	#20
G3C	0.625	3.125	15.9	79.4	0.032	#20
G3L	0.625	3.625	15.9	92.1	0.032	#20
J1C	0.750	1.125	19.1	28.6	0.040	#18
J1G	0.750	1.375	19.1	34.9	0.040	#18
J1L	0.750	1.625	19.1	41.3	0.040	#18
J2C	0.750	2.125	19.1	53.9	0.040	#18
J2L	0.750	2.625	19.1	66.7	0.040	#18
J3C	0.750	3.125	19.1	79.4	0.040	#18
J3L	0.750	3.625	19.1	92.1	0.040	#18
L1C	0.875	1.125	22.2	28.6	0.040	#18
L1G	0.875	1.375	22.2	34.9	0.040	#18
L1L	0.875	1.625	22.2	41.3	0.040	#18
L2C	0.875	2.125	22.2	53.9	0.040	#18
L2L	0.875	2.625	22.2	66.7	0.040	#18
L3C	0.875	3.125	22.2	79.4	0.040	#18
L3L	0.875	3.625	22.2	92.1	0.040	#18
N1C	1.000	1.125	25.4	28.6	0.040	#18
NiG	1.000	1.375	25.4	34.9	0.040	#18
N1L	1.000	1.625	25.4	41.3	0.040	#18
N2C	1.000	2.125	25.4	53.9	0.040	#18
N2L	1.000	2.625	25.4	66.7	0.040	#18
N3C	1.000	3.125	25.4	79.4	0.040	#18
N3L	1.000	3.625	25.4	92.1	0.040	#18