Type TCG Axial Leaded Aluminum Electrolytic Capacitors

85 ºC Computer Grade Capacitor



Type TCG is an axial leaded, 85 ºC, industrial and computer grade quality aluminum electrolytic capacitor that is suitable for computers, communication equipment and power supplies.

Highlights

- Industrial grade
- Computer grade
- Low profile mounting

Specifications

Capacitance Range: 10 to 10,000 µF

Voltage Range: 10 to 450 WVdc

Capacitance Tolerance: 10 to 75 WVdc, –10 +75%
150 to 450 WVdc, –10 +50%

Operating Temperature Range: –40 ºC to 85 ºC

DC Leakage Current: I= 6 $\sqrt{CV}$ after 5 minutes
Not to exceed 3 mA @ 25 ºC
I = leakage current in µA
C = Capacitance in µF
V = Rated voltage

Ripple Current Multipliers:

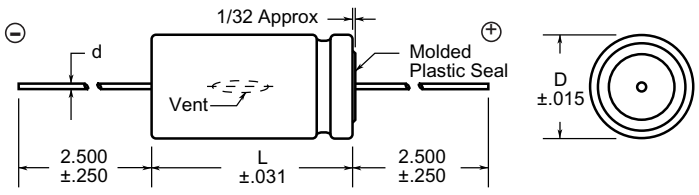
Rated WVdc	Ripple Multipliers			
	60 Hz	400 Hz	1000 Hz	2400 Hz
0 to 50	0.8	1.05	1.10	1.14
51 to 150	0.8	1.08	1.13	1.16
151 & up	0.8	1.15	1.21	1.25

Ambient Temp.	+45 ºC	+55 ºC	+65 ºC	+75 ºC	+85 ºC
Ripple Multiplier	2.2	2.0	1.7	1.4	1.0

QA Stability Test: Apply WVdc for 1,000 h at 85 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)	Size Lead Wire (d)
10 WVdc (12 Vdc Surge)						
2,500	TCG252U010L1C	0.170	1.407	0.875	1.125	0.040
2,500	TCG252U010N1C	0.171	1.521	1.000	1.125	0.040
3,500	TCG352U010N1L	0.092	2.424	1.000	1.625	0.040
5,000	TCG502U010N1G	0.082	2.488	1.000	1.375	0.040
5,500	TCG552U010N1L	0.081	2.584	1.000	1.625	0.040
10,000	TCG103U010L3C	0.046	4.274	0.875	3.125	0.040
10,000	TCG103U010N2C	0.048	3.772	1.000	2.125	0.040
15 WVdc (20 Vdc Surge)						
2,500	TCG252U015G2L	0.126	1.989	0.625	2.625	0.032
2,900	TCG292U015G2L	0.110	2.134	0.625	2.625	0.032
4,000	TCG402U015N1L	0.085	2.518	1.000	1.625	0.040
4,100	TCG412U015N1L	0.083	2.544	1.000	1.625	0.040
5,000	TCG502U015J2L	0.067	3.015	0.750	2.625	0.040
6,300	TCG632U015L2L	0.055	3.612	0.875	2.625	0.040
8,000	TCG802U015N2L	0.045	4.269	1.000	2.625	0.040
8,200	TCG822U015N2L	0.044	4.310	1.000	2.625	0.040
10,000	TCG103U015N2L	0.038	4.634	1.000	2.625	0.040
25 WVdc (30 Vdc Surge)						
1,000	TCG102U025N1C	0.216	1.352	1.000	1.125	0.040
1,100	TCG112U025J1L	0.190	1.431	0.750	1.625	0.040
2,000	TCG202U025N1L	0.154	2.137	1.000	1.625	0.040
2,200	TCG222U025J2L	0.098	2.487	0.750	2.625	0.040
4,000	TCG402U025L3C	0.057	3.827	0.875	3.125	0.040
30 WVdc (40 Vdc Surge)						
500	TCG501U030J1C	0.369	0.874	0.750	1.125	0.040
1,100	TCG112U030G2L	0.169	1.721	0.625	2.625	0.032
2,100	TCG212U030L2L	0.072	3.159	0.875	2.625	0.040
2,400	TCG242U030L2L	0.082	2.961	0.875	2.625	0.040
2,500	TCG252U030N2L	0.078	3.005	1.000	2.625	0.040
3,000	TCG302U030L2C	0.065	3.004	0.875	2.125	0.040
50 WVdc (65 Vdc Surge)						
250	TCG251U050G1G	0.499	0.742	0.625	1.375	0.032
500	TCG501U050G2L	0.156	1.788	0.625	2.625	0.032
500	TCG501U050N1C	0.262	1.227	1.000	1.125	0.040
600	TCG601U050G2L	0.211	1.539	0.625	2.625	0.032
600	TCG601U050L1G	0.215	1.363	0.875	1.375	0.040
1,100	TCG112U050N1G	1.050	2.480	1.000	1.375	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)	Size Lead Wire (d)
50 WVdc (65 Vdc Surge)						
1,200	TCG122U050L2C	0.110	2.313	0.875	2.125	0.040
2,300	TCG232U050N2L	0.062	3.653	1.000	2.625	0.040
2,500	TCG252U050N2L	0.058	3.777	1.000	2.625	0.040
150 WVdc (175 Vdc Surge)						
100	TCG101T150J1L	0.696	0.748	0.750	1.625	0.040
110	TCG111T150J1L	0.634	0.784	0.750	1.625	0.040
250	TCG251T150L2C	0.284	1.439	0.875	2.125	0.040
530	TCG531T150N3C	0.139	2.639	1.000	3.125	0.040
560	TCG561T150N3C	0.133	2.705	1.000	3.125	0.040
200 WVdc (250 Vdc Surge)						
210	TCG211T200N2C	0.646	1.780	1.000	2.125	0.040
300	TCG301T200N2C	0.517	1.977	1.000	2.125	0.040
430	TCG431U200N3L	0.411	2.116	1.000	3.625	0.040
250 WVdc (300 Vdc Surge)						
50	TCG500T250L1G	2.450	0.607	0.875	1.375	0.040
100	TCG101T250L2C	1.230	1.039	0.875	2.125	0.040
200	TCG201T250N2L	0.277	1.726	1.000	2.625	0.040
350 WVdc (400 Vdc Surge)						
20	TCG200T350G1L	9.500	0.294	0.625	1.625	0.032
20	TCG200T350J1C	9.520	0.276	0.750	1.125	0.040
30	TCG300T350G2C	6.336	0.408	0.625	2.125	0.032
30	TCG300T350L1C	6.368	0.369	0.875	1.125	0.040
40	TCG400T350N1C	4.200	0.460	1.000	1.125	0.040
50	TCG500T350N1G	3.353	0.560	1.000	1.375	0.040
100	TCG101T350N2C	1.680	0.957	1.000	2.125	0.040
160	TCG161T350N2L	0.469	1.327	1.000	2.625	0.040
180	TCG181T350N3C	0.417	1.524	1.000	3.125	0.040
450 WVdc (525 Vdc Surge)						
10	TCG100T450G1L	17.392	0.217	0.625	1.625	0.032
10	TCG100T450J1C	17.404	0.204	0.750	1.125	0.040
12	TCG120T450J1G	14.500	0.244	0.750	1.375	0.040
20	TCG200T450G2L	8.704	0.384	0.625	2.625	0.032
20	TCG200T450N1C	8.732	0.341	1.000	1.125	0.040
50	TCG500T450N1L	4.742	0.709	1.000	1.625	0.040
50	TCG500T450N2C	4.049	0.548	1.000	2.125	0.040
60	TCG600T450N2L	3.950	0.890	1.000	2.625	0.040
85	TCG850T450N2L	1.869	0.998	1.000	2.625	0.040

Case Code Format for Type TCG

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
N1G	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

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TCG112U030G2L TCG232U050N2L TCG251U050G1G TCG600T450N2L TCG302U030L2C TCG181T350N3C TCG161T350N2L TCG561T150N3C TCG500T350N1G TCG300T350L1C TCG201T250N2L TCG822U015N2L TCG601U050L1G TCG103M035N2L TCG300T350G2C TCG562M035J2C7 TCG100T450G1L TCG101T150J1L TCG101T250L2C TCG101T350N2C TCG102U025N1C TCG103U010L3C TCG103U010N2C TCG103U015N2L TCG111T150J1L TCG112U025J1L TCG112U050N1G TCG112U050N2C TCG120T450J1G TCG122U050L2C TCG200T350G1L TCG200T350J1C TCG200T450G2L TCG200T450N1C TCG202U025N1L TCG211T200N2C TCG212U030L2L TCG222U025J2L TCG242U030L2L TCG251T150L2C TCG252U010L1C TCG252U010N1C TCG252U015G2L TCG252U030N2L TCG252U050N2L TCG292U015G2L TCG301T200N2C TCG352U010N1L TCG400T350N1C TCG402U015N1L TCG402U025L3C TCG412U015N1L TCG431U200N3L TCG500T250L1G TCG500T450N1L TCG500T450N2C TCG501U030J1C TCG501U050G2L TCG501U050N1C TCG502U010N1G TCG502U015J2L TCG531T150N3C TCG552U010N1L TCG601U050G2L TCG632U015L2L TCG750T450N2C TCG802U015N2L TCG850T450N2L TCG100T450J1C