

Type TCX 105 °C, Axial Leaded Aluminum Electrolytic Capacitors

Extended Life Computer Grade Capacitor



Type TCX is an axial leaded, 105 °C, 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 °C 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 °C to 105 °C
DC Leakage Current: $I = 2 \sqrt{CV}$ after 5 minutes

Not to exceed 2 mA @ 25 °C

I = leakage current in μA

C = Capacitance in μF

V = Rated voltage

Ripple Current Multipliers:

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

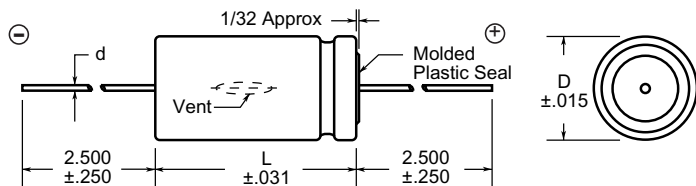
Ambient Temp.	+45 °C	+55 °C	+65 °C	+75 °C	+85 °C	+95 °C
Ripple Multiplier	1.7	1.58	1.4	1.2	1.0	0.7

QA Stability Test:

Apply WVdc for 2,000 h at 105 °C

- Capacitance change $\pm 15\%$ from initial limits
- DC leakage current meets initial limits
- ESR $\leq 150\%$ 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.

Type TCX 105 °C, Axial Leaded Aluminum Electrolytic Capacitors

Ratings

Cap (µF)	Catalog Part Number	Max ESR		Max Ripple		Size		
		120 Hz 25 °C (Ω)	120 Hz 85 °C (A)	Diameter D (Inches)	Length L (Inches)	Lead Wire (d)		
10 WVdc (12 Vdc Surge)								
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		
8,200	TCX822U015N2L	0.025	5.796	1.000	2.625	0.040		
12,000	TCX123U015N3L	0.019	7.589	1.000	3.625	0.040		
25 WVdc (30 Vdc Surge)								
1,200	TCX122U025N1C	0.109	1.899	1.000	1.125	0.040		
1,800	TCX182U025L1L	0.071	2.557	0.875	1.625	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	TCX311U030G1C	0.316	0.852	0.625	1.125	0.032		
470	TCX471U030J1C	0.214	1.149	0.750	1.125	0.040		
1,400	TCX142U030J2C	0.075	2.583	0.750	2.125	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		
40 WVdc (50 Vdc Surge)								
360	TCX361U040J1C	0.230	1.107	0.750	1.125	0.040		
1,000	TCX102U040L1L	0.088	2.290	0.875	1.625	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		

Cap (µF)	Catalog Part Number	Max ESR		Max Ripple		Size		
		120 Hz 25 °C (Ω)	120 Hz 85 °C (A)	Diameter D (Inches)	Length L (Inches)	Lead Wire (d)		
40 WVdc (50 Vdc Surge)								
4,200	TCX422U040N3L	0.028	6.361	1.000	3.625	0.040		
50 WVdc (65 Vdc Surge)								
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	TCX501U050G2C	0.155	1.624	0.625	2.125	0.032		
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	TCX142U050L2L	0.061	3.436	0.875	2.625	0.040		
1,900	TCX192U050N2L	0.047	4.170	1.000	2.625	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	TCX101U075J1C	1.932	0.574	0.750	1.125	0.040		
560	TCX561U075L2L	0.115	2.491	0.875	2.625	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	Case Code Chart					
	Inches		Millimeters		d	
	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

Case Code	Case Code Chart					
	Inches		Millimeters		d	
	D	L	D	L	Inches	AWG
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

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.