

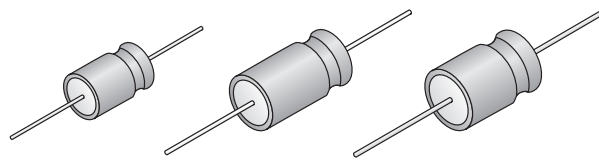


Aluminum Electrolytic Capacitors

TG Series

FEATURES

- 105°C, 2000 hours assured
- Excellent temperature performance
- RoHS Compliant



SPECIFICATIONS

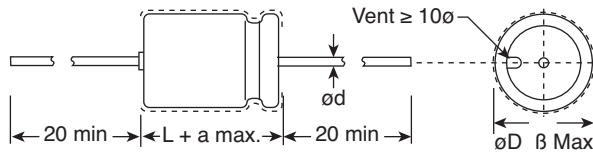
Items	Performance															
Operating Temperature Range	6.3 ~ 450V															
	-40°C ~ +105°C															
Capacitance Tolerance	±20% (at 120Hz, 20°C)															
Leakage Current (at 20°C)	Rated Voltage		≤100V					> 100V								
	Time		after 2 minutes					after 5 minutes								
	Leakage Current		I = 0.02CV or 3 (μA) whichever is greater					CV ≤ 1000 I = 0.03CV+15(μA)				CV > 1000 I = 0.02CV+25(μA)				
	Where, C= rated capacitance in μF. V = rated DC working voltage in V.															
Dissipation Factor (Tan δ at 120Hz, 20°C)	Working Voltage (WV)		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	Tan δ		0.23	0.20	0.17	0.15	0.12	0.10	0.09	0.08	0.12	0.14	0.17	0.20	0.25	0.25
	When the capacitance exceeds 1000μF, 0.02 shall be added every 1000μF increase.															
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.															
	Rated Voltage		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	Impedance Ratio	Z(-25°C) øD<16	6	4	3	3	2	2	2	2	3	6	8	12	14	16
		/Z(+20°C) øD≥16	8	6	4	4	3	3	3	3						
		Z(-40°C) øD<16	10	8	6	6	4	3	3	3	4	8	10	—	—	—
/Z(+20°C) øD≥16		18	16	12	10	8	8	6	6							
Load Life Test	Test Time		1000 hours													
	Capacitance Change		Within ±20% of initial value													
	Dissipation Factor		Less than 200% of specified value													
	Leakage Current		Within specified value													
	The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 1000 hours at 105°C															
Shelf Life Test	Test Time		1000 hours													
	Capacitance Change		Within ±20% of initial value													
	Dissipation Factor		Less than 200% of specified value													
	Leakage Current	6.3 ~ 100V	Within specified value													
		160 ~ 450V	Less than 200% of specified value													
	The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied.															
Ripple Current & Frequency Multipliers	Freq. (Hz) Cap. (μF)		60		120		500		1K		10K up					
	Under 100		0.70		1.00		1.30		1.40		1.50					
	100 to 1000		0.75		1.00		1.20		1.30		1.35					
Other Standards	JIS C 5101-4															

PART NUMBERING SYSTEM

1	4	0	-	T	G	1	0	1	M	2	A	-	1	3	2	2	-	R	C
Prefix				Series		Capacitance			Capacitance Tolerance	Rated Voltage			Case Size				Suffix (RoHS Compliant)		

Specifications are subject to change without notice. No liability or warranty implied by this information. Environmental compliance based on producer documentation.

■ DIMENSIONS AND PERMISSIBLE RIPPLE CURRENT



Lead Diameter (mm)

Lead Diameter (mm)	5	6.3	8	10	13	16	18	22	25
øD	5	6.3	8	10	13	16	18	22	25
ød	0.6				0.8				1.0
P	1.5				2.0				
β	0.5				1.0				

Dimension: øD x L(mm)

Ripple Current: mA/rms at 120 Hz, 105°C

VDC	Contents	6.3 (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
		øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA
0.1	0R1											5 x 12	2	5 x 12	3	5 x 12	3
0.22	R22											5 x 12	3.5	5 x 12	4.5	5 x 12	5
0.33	R33											5 x 12	5	5 x 12	7.5	5 x 12	8
0.47	R47											5 x 12	6	5 x 12	9	5 x 12	9
1	010											5 x 12	10	5 x 12	15	5 x 12	15
2.2	2R2											5 x 12	20	5 x 12	30	5 x 12	30
3.3	3R3											5 x 12	34	5 x 12	32	5 x 12	32
4.7	4R7											5 x 12	34	5 x 12	36	6 x 13	38
10	100											5 x 12	50	6.3 x 13	56	6 x 14	64
22	220							5 x 12	63	6.3 x 13	73	6 x 14	80	6.3 x 13	90	8 x 16	106
33	330					5 x 12	73	6 x 13	78	6.3 x 13	96	6.3 x 13	105	8 x 13	123	10 x 17	150
47	470			5 x 12	77	6.3 x 13	93	6 x 13	99	6.3 x 13	114	8 x 16	140	8 x 16	162	10 x 21	180
100	101	6.3 x 13	113	6.3 x 13	121	6.3 x 13	145	6 x 13	166	8 x 16	180	10 x 17	225	10 x 17	248	13 x 22	287
220	221	6.3 x 13	172	6.3 x 13	185	8 x 13	231	8 x 13	246	10 x 17	305	10 x 21	349	13 x 22	420	13 x 27	458
330	331	8 x 16	236	8 x 16	253	8 x 16	323	10 x 17	345	10 x 21	391	13 x 22	450	13 x 27	495	16 x 33	582
470	471	8 x 16	281	8 x 16	302	8 x 16	359	8 x 16	432	13 x 22	490	13 x 22	561	13 x 27	632	16 x 33	713
1000	102	10 x 17	453	10 x 17	486	10 x 17	569	10 x 21	662	13 x 27	721	16 x 33	875	18 x 37	984	18 x 40	1096
2200	222	13 x 22	740	13 x 22	793	13 x 27	926	13 x 27	1024	16 x 37	1177	18 x 40	1408				
3300	332	13 x 22	906	13 x 27	1015	16 x 27	1173	16 x 33	1300	16 x 40	1449	22 x 43	1724				
4700	472	13 x 27	1168	16 x 27	1252	16 x 37	1443	16 x 37	1638	22 x 43	1878						

VDC	Contents	160 (2C)		200V (2D)		250V (2E)		350V (2V)		400V (2G)		450V (2W)	
		øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA	øD x L	mA
1	010	6.3 x 13	7	6.3 x 16	9	6.3 x 16	12	8 x 16	13	8 x 16	15	8 x 16	15
2.2	2R2	6.3 x 13	15	8 x 16	16	8 x 16	17	8 x 20	19	10 x 21	23	10 x 21	23
3.3	3R3	8 x 16	21	8 x 16	26	8 x 20	31	8 x 20	33	10 x 21	36	10 x 21	36
4.7	4R7	8 x 16	31	8 x 16	33	10 x 17	38	10 x 21	44	13 x 22	46	13 x 22	46
10	100	10 x 17	60	10 x 21	66	10 x 21	72	13 x 22	77	13 x 27	82	13 x 27	82
22	220	13 x 22	121	13 x 22	121	13 x 27	126	13 x 27	132	16 x 37	143	16 x 37	143
33	330	13 x 22	154	13 x 27	167	16 x 27	178	16 x 33	186	16 x 42	201	16 x 42	201
47	470	13 x 27	198	16 x 32	214	16 x 33	241	16 x 42	253	22 x 43	402	22 x 43	402
100	101	16 x 33	345	16 x 37	368	18 x 43	391	22 x 43	402	25 x 52	448	25 x 52	448
220	221	18 x 42	586	22 x 43	609	22 x 43	632						
330	331	22 x 43	632										

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