294-640

General Purpose Axial Type

— 294 -410 TO 688. —

ALUMINUM ELECTROLYTIC CAPACITORS

The axial type is available in a capacitance range starting at 0.47UF through 10,000UF with a standard tolerance of ±20%.

Operating temperature range: -40°C ~ +85°C.

Capacitance and tolerance: Capacitance measurements shall be made by referred to a frequency of $120Hz^{+10}_{-5}Hz$. The capacitance shall be within the specified tolerance of ±20%. (±10% units are available on request).

Leakage current: Measurement shall be made at rated DC voltage with an application of a steady source of power, such as a regulated power supply. A current-limiting resistor of 1,000 ohms shall be connected in series with each capacitor under test. Rated DC working voltage shall be applied to the capacitor for 5 minutes before making the leakage current measurements.

The maximum leakage current shall not exceed the value determined from the following equation or 3μA, whichever is greater:

$I = 0.03CV$

where: I = Leakage Current (μA)
C = Nominal Capacitance (μF)
V = Rated DC Voltage (V. DC)

Dissipation factor: Measured at a frequency of $120Hz^{+10}_{-5}$ Hz, the dissipation factor shall be less than the values in Table 1.

Table 1.

Rated Voltage (V. DC)	Dissipaton Factor (%)
6.3	22
10	19
16	16
25	14
35	12
50	10
63	9
80, 100	8

Low-temperature characteristics: The ratio of the impedance of -25°C to that of +20°C shall be less than the values in Table 2.

Table 2.

Rated Voltage (V.DC)	Ratio of Impedance			
	Z @ -25°C / Z @ +20°C		Z @ -40°C / Z @ +20°C	
	Body Dia. < 16mm	Body Dia. > 18mm	Body Dia. < 16mm	Body Dia. > 18mm
6.3	4	6	8	10
10	3	4	6	8
16	2	3	4	6
25	2	2	4	4
35,	2	2	4	4
50, 63	2	2	4	4
80, 100	2	2	4	4

Life test: Rated voltage shall be applied to the capacitors in series with a one thousand ohm resistor. All tests shall be conducted in a dry oven with circulating air. Capacitors shall be separated by a distance not less than 2.5CM and air circulation shall be provided to prevent temperature within 15CM of any capacitors from departing more than +0°C-5°C from the norminal ambient temperature of the chamber. Capacitors shall not be exposed to direct radiation from heating elements.

Capacitors shall be subjected to for a period of 1000 hours at 85°C.

After the completion of the life test capacitors shall be returned to standard test conditions.

Table 3.

Leakage current	Same as specified under Leakage Current
Capacitance	• 16WV or lower • Body Dia.<6mm Within ±20% of initial measurement
	• 25 WV or higher • Body Dia.>6mm Within ±15% of initial measurement
Dissipation factor	150% less of values in Table 1.
Appearance	Free from leakage of electrolyte and/or other noticeable deformation

Shelf life test: Capacitors shall be subjected to +85°C± 2°C for 1000±12 hours during which time no voltage shall be applied.

Following this period the capacitors shall be cool to room temperature and then D.C. rated voltage shall be applied to the capacitors for 30 minutes after which the capacitors shall be discharged.

After completion of these procedures, the capacitors shall meet the requirements as listed in Table 3.

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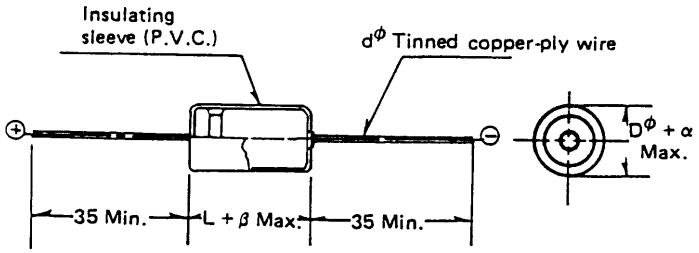
• CONFIGURATION



DIMENSIONS: (mm)

Outside Diameter	Dϕ	6	8	10	13	16	18	22	25.4
Diameter Tolerance	α	0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.0
Length Tolerance	β	1	1	1	1	1	2	2	2
Lead Wire	dϕ	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.8

RIPPLE CURRENT IN mA-RMS (at 120Hz, 85°C)—peak voltage not to exceed rated DC voltage—

Rated Voltage (V) / Surge Voltage (V) / CAP. (μF)	6.3	10	16	25	35	50	63	80	100
	8	13	20	32	44	63	79	100	125
0.47	20	20	20	20	20	20	20	20	20
1	35	35	35	35	35	35	35	35	35
2.2	45	45	45	45	45	45	45	45	45
3.3	60	60	60	60	60	60	60	60	70
4.7	60	60	60	60	60	80	80	85	90
10	75	75	75	90	105	120	130	130	150
22	150	150	150	160	180	190	210	210	210
33	180	180	180	200	220	240	250	250	270
47	200	200	200	240	270	290	290	310	330
100	270	290	330	360	400	420	450	460	500
220	410	450	490	540	600	640	700	700	790
330	500	550	610	670	750	810	830	890	910
470	610	660	740	810	920	930	1050	1070	1180
1000	910	1000	1130	1130	1240	1420	1620	1330	1490
2200	1400	1560	1750	1870	2000	2080	2080	2680	2890
3300	1800	1960	2050	2020	2420	2860	3100	3530	
4700	2150	2190	2220	2690	3240	3700	4360		
10000	3180	3440	4070	5130	6040				

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DIMENSIONS: Diameter (D^{ϕ}) x Length (L): mm

Rated Voltage (V) / Surge Voltage (V) / CAP. (μF)	6.3	10	16	25	35	50	63	80	100
	8	13	20	32	44	63	79	100	125
0.47	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12
1	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12
2.2	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12
3.3	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12
4.7	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x12
10	6x12	6x12	6x12	6x12	6x12	6x12	6x12	6x16	6x16
22	6x12	6x12	6x12	6x12	6x12	6x12	6x16	8x16	8x16
33	6x12	6x12	6x12	6x12	6x16	6x16	6x16	8x16	8x20
47	6x12	6x12	6x12	6x16	6x16	6x16	8x16	8x20	10x21
100	6x12	6x12	6x16	6x16	8x16	8x16	8x20	10x26	10x26
220	6x16	6x16	8x16	8x16	8x20	10x20	10x26	13x26	13x31.5
330	8x16	8x16	8x16	8x20	10x20	10x25	13x26	13x26	16x25
470	8x16	8x16	8x20	10x20	10x26	13x25	13x26	16x31.5	16x41.5
1000	10x20	10x20	10x26	13x26	13x26	16x25	16x30	18x40	22x40
2200	13x25	13x25	13x30	16x25	16x30	18x40	22x40	25.4x52	25.4x61
3300	13x25	13x30	16x25	16x30	16x40	22x42	22x50	25.4x61	
4700	13x30	16x25	16x30	18x40	22x40	22x50	25.4x50		
10000	16x40	18x40	22x40	22x50	25.4x50				