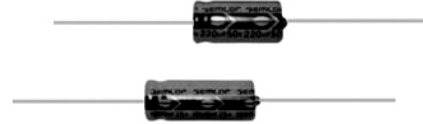


ALUMINUM ELECTROLYTIC CAPACITORS

**GMA** 臥式 85°C 標準品  
Axial Leads, 85°C Standard Series

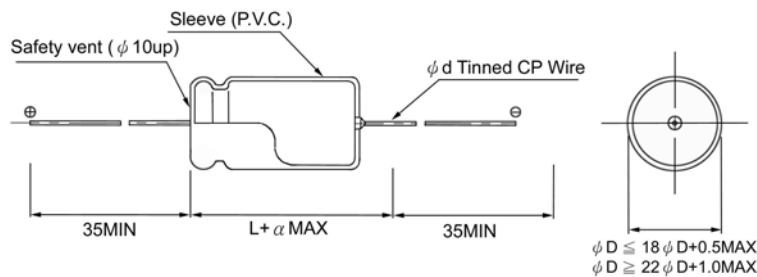
- 一般尺寸標準型品, 適用於各式小型化電子產品
- 產品壽命保證 2,000 小時 / 85°C
- For general use and suitable for consumer electronics products.
- Life guaranteed 2,000hrs./85°C.



• Specifications

Item	Performance Characteristics											
Operating Temperature range 使用溫度範圍	-40 + 85°C						-25 + 85°C					
Rated Voltage 額定電壓	6.3V ~ 100V						160V ~ 450V					
Capacitance Range 容量範圍	0.47 ~ 22,000 μF											
Capacitance Tolerance 靜電容量容許差	±20% (120Hz, 20°C)											
Leakage Current 洩漏電流	I ≤ 0.02CV or 4 μA, whichever is greater after 2 minutes application of rated voltage.						I ≤ 0.03CV + 10 μA, whichever is greater after 2 minutes application of rated voltage.					
Dissipation Factor 散逸係數 (120Hz, 20°C)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350~450	
	Tan δ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.10	0.20	0.25	
For capacitance of more than 1,000μF, add 0.02 for every increase of 1,000μF.												
Temperature Characteristics 溫度特性 (120Hz)	Impedance Ratio / Stability at Low Temperature											
	Rated voltage (V)	6.3	10	16	25	35	50	63~100	160~250	350~400	450	
	Z (-25°C) / Z (20°C)	5	4	3	2	2	2	2	4	4	6	
Z (-40°C) / Z (20°C)												
12 10 8 5 4 3 3 15 10 -												
Load Life 高溫負荷特性	After 2,000 hours application of WV at 85°C, capacitor shall meet the characteristics requirements mentioned below.											
	Capacitance change	Within ±20% of initial value										
	Tan δ	200% or less of initial specified value										
	Leakage current	Initial specified value or less										
Shelf Life 擺置壽命	After leaving capacitors under no load at 85°C for 1,000 hours and applying voltage according to JIS C5102 and C5141, they shall meet the specified value as load life characteristics listed above.											

• Dimension



φD	5	6	8	10	13	16	18	22	25
φd	0.6					0.8	0.8 / 1.0		
α	6.3 ~ 100V		1.5			2.0		2.0	
	160V ~ 450V		1.5			2.0		2.0	

• Frequency coefficient of allowable ripple current

WV	Cap(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 KHz	10 KHz~
6.3~100	~ 47	0.75	1	1.35	1.57	2.00
	100 ~ 470	0.80	1	1.23	1.34	1.50
	1,000 ~ 22,000	0.85	1	1.10	1.13	1.15
160~450	1 ~ 220	0.80	1	1.25	1.40	1.60

## ALUMINUM ELECTROLYTIC CAPACITORS

• Size & ripple current

Unit: DxL(mm)

WV(SV) Cap(μF)	6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)		50 (63)		63 (75)		100 (125)	
0.47											5 x 13	5			5 x 13	10
1											5 x 13	10			5 x 13	18
2.2											5 x 13	23			5 x 13	27
3.3											5 x 13	30			5 x 13	34
4.7											5 x 13	36			5 x 13	40
10							5 x 13	37	5 x 13	41	5 x 13	50	5 x 13	55	6.3 x 13	65
22					5 x 13	50	5 x 13	58	5 x 13	70	6.3 x 13	85	6.3 x 13	90	8 x 16	120
33					5 x 13	60	5 x 13	80	6.3 x 13	95	6.3 x 13	105	6.3 x 16	125	8 x 16	145
47			5 x 13	70	5 x 13	90	6.3 x 13	105	6.3 x 13	115	6.3 x 16	140	8 x 16	165	8 x 20	190
100	5 x 13	110	6.3 x 13	130	6.3 x 13	145	6.3 x 16	170	8 x 16	200	8 x 16	220	8 x 20	260	10 x 21	310
220	6.3 x 13	180	6.3 x 16	220	8 x 16	260	8 x 16	280	8 x 20	340	8 x 20	370	10 x 21	440	13 x 26	560
330	6.3 x 16	250	8 x 16	300	8 x 16	320	8 x 16	350	8 x 20	410	10 x 21	510	13 x 26	650	13 x 31	730
470	8 x 16	330	8 x 16	350	8 x 16	390	8 x 20	460	10 x 21	550	13 x 26	740	13 x 26	780	16 x 31	960
1000	8 x 20	530	8 x 20	570	10 x 21	700	10 x 26	830	13 x 26	980	13 x 31	1130	16 x 31	1330	18 x 41	1640
2200	10 x 21	850	13 x 26	1100	13 x 26	1190	13 x 31	1330	16 x 31	1580	16 x 41	1930	18 x 41	2080	25 x 51	2560
3300	13 x 26	1210	13 x 26	1290	13 x 31	1460	16 x 31	1700	16 x 41	1810	18 x 41	2260	22 x 51	2370		
4700	13 x 26	1400	13 x 31	1550	16 x 31	1840	16 x 41	2190	18 x 41	2380	22 x 51	2510	25 x 41	3970		
6800	13 x 31	1650	16 x 31	1930	16 x 41	2310	18 x 41	2480	22 x 51	2760						
10000	16 x 31	1990	16 x 41	2350	18 x 41	2520	22 x 51	3240	25 x 51	3500						
15000	16 x 41	2480	18 x 41	2630	22 x 51	3310										
22000	18 x 41	2730	22 x 51	3390	25 x 51	3500										Case Size ripple

WV(SV) Cap(μF)	160 (200)		200 (250)		250 (300)		350 (400)		400 (450)		450 (500)	
1					6.3 x 13	16	6.3 x 16	20	6.3 x 16	20	8 x 16	19
2.2			6.3 x 13	24	6.3 x 16	30	8 x 16	33	8 x 16	33	8 x 16	28
3.3	6.3 x 16	37	6.3 x 16	37	8 x 16	40	8 x 16	40	8 x 20	45	8 x 20	38
4.7	8 x 16	50	8 x 16	50	8 x 16	50	8 x 20	55	10 x 21	60	10 x 21	50
10	8 x 20	80	8 x 20	80	10 x 21	90	10 x 26	100	13 x 26	110	13 x 26	90
22	10 x 21	130	10 x 26	145	13 x 26	160	13 x 26	160	13 x 31	170	16 x 31	160
33	10 x 26	180	13 x 26	195	13 x 26	195	13 x 31	200	16 x 31	230	16 x 31	190
47	13 x 26	230	13 x 31	230	13 x 31	240	16 x 31	270	16 x 41	310	16 x 41	270
100	16 x 31	400	16 x 31	400	16 x 41	450	18 x 41	460	22 x 51	370		
220	16 x 41	670	18 x 41	690	22 x 41	764					Case Size	ripple

Ripple (mA) at 85°C 120 Hz