

Miniature Aluminum Electrolytic Capacitors

SH [For General]

105°C Single-Ended Lead Aluminum Electrolytic Capacitors
for the Rated Voltage up to 450V

ELECTRICAL CHARACTERISTICS

Operating Temperature Range : -40 ~ +105°C / -25 ~ +105°C

Rated Voltage Range : 6.3 ~ 100V / 160 ~ 450V

Rated Capacitance Range : 0.47 ~ 15000μF / 0.47 ~ 470μF

Capacitance Tolerance : -20 ~ +20% at 120Hz, 20°C

Leakage Current (μA) : $I = 0.01CV (\mu A) + 3\mu A / 0.03CV (\mu A) + 10\mu A$
(After Rated Voltage Applied for 2 Minutes)

Dissipation Factor

WV (V) :	6.3	10	16	25	35	50	63 ~ 100	160 ~ 250	350 ~ 450
D.F (%) :	26	22	18	16	14	12	10	15	20

For capacitors whose capacitance exceeds 1000μF. The value of DF(%) is increased by 2% for every addition of 1000μF.

Low Temperature Stability Impedance Ratio (Max.)

WV (V) :		6.3	10	16	25 ~ 100	160 ~ 250	350 ~ 450
Impedance :	Z - 25°C / Z + 25°C	4	3	2	2	4	4
	Z - 40°C / Z + 20°C	8	6	4	3	-	-

Endurance : After the rated voltage has been applied at 105°C for 2000 hours, the capacitors shall meet following requirements.

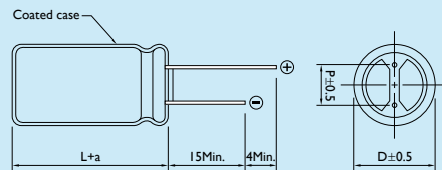
- (a) Capacitance Change : Within 20% of Initial Value
- (b) Dissipation Factor : 200% or Less of Initial Specified Value
- (c) Leakage Current : Initial Specified Value or Less

Shelf Life: After leaving capacitors under no load at 105°C for 1000 hours, the capacitors shall meet the same requirements as Endurance.

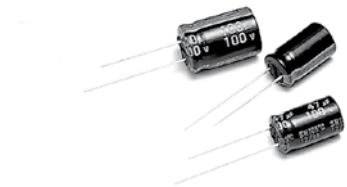
DIAGRAM OF DIMENSIONS

Dø	F	dø
5.0	2.0	0.5
6.3	2.5	
8.0	3.5	0.6
10.0	5.0	
12.0		
13.0		
16.0	7.5	0.8
18.0		
22.0	10.0	

Rubber Stand-off



$L \leq 16$ $L + 1.5Max.$ $D\phi < 20$ $D\phi + 0.5$
 $L > 16$ $L + 2Max.$ $D\phi \geq 20$ $D\phi + 1$
 $D\phi = 8 \ \& \ 10$ $L + 2.5Max.$



DESCRIPTION

Long life for 2000 hours at 105°C, ideally suited for high quality and high reliability applications.

Featuring high CV products

MULTIPLIER FOR RIPPLE CURRENT

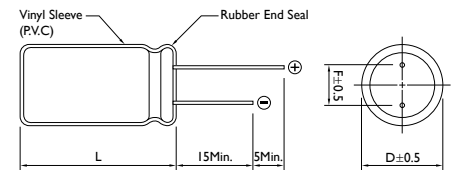
Frequency Coefficient

FREQUENCY (Hz)	120	300	1K	10K~100K
6.3~100V Below~68μF	1.00	1.30	1.57	2.00
6.3~100V 100~470μF	1.00	1.23	1.34	1.50
6.3~100V 471~22000μF	1.00	1.10	1.13	1.15
160~450V ALL Cap(μF)	1.00	1.25	1.40	1.60

Temperature Coefficient

TEMPERATURE (°C)	65	85	105
FACTOR	1.70	1.40	1.00

Dimensions: mm





CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)									
	6.3 (8) SIZE		10 (13) SIZE		16 (20) SIZE		25 (32) SIZE		35 (44) SIZE	
	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE
10					5 x 11	44	5 x 11	43	5 x 11	44
15									5 x 11	50
22							5 x 11	60	5 x 11	65
33					5 x 11	70	5 x 11	75	5 x 11	85
47			5 x 11	75	5 x 11	85	5 x 11	90	6.3 x 11	115
68			5 x 11	80	5 x 11	100	6.3 x 11	125	8 x 11	130
100	5 x 11	100	5 x 11	110	5 x 11	115	6.3 x 11	145	6.3 x 11	150
					6.3 x 11	135			8 x 11	190
150	5 x 11	120	6.3 x 11	130	8 x 11	180	8 x 11	200	10 x 12	240
220	6.3 x 11	165	6.3 x 11	180	6.3 x 11	180	8 x 11	200	10 x 12	315
					8 x 11	235	10 x 12	250		
330	6.3 x 11	161	8 x 11	255	8 x 11	315	10 x 12	355	10 x 12	380
	8 x 11	200			10 x 12	285			10 x 15	440
470	6.3 x 11	225	8 x 11	305	8 x 11	315	10 x 15	470	10 x 15	440
	8 x 11	280			10 x 12	395			10 x 19.5	460
									13 x 20	580
680	10 x 12	320	10 x 12	420	10 x 15	530	10 x 19.5	650	13 x 20	730
1000	10 x 12	470	10 x 12	490	10 x 19.5	700	13 x 20	855	13 x 25	995
			10 x 15	570						
1500	10 x 15	600	10 x 19.5	750	10 x 19.5	705	13 x 25	1020	16 x 25	1110
					13 x 20	860				
2200	13 x 20	930	10 x 19.5	800	13 x 20	991	16 x 25	1230	16 x 25	1236
			13 x 20	1010	13 x 25	1150			16 x 32	1450
3300	13 x 20	1100	13 x 25	1220	13 x 25	1150	16 x 32	1450	16 x 36	1477
					16 x 25	1350			18 x 36	1660
4700	16 x 25	1320	16 x 25	1410	16 x 25	1330	18 x 36	1690		
					16 x 32	1560				
6800	16 x 25	1490	16 x 32	1610	18 x 36	1790				
10000	16 x 32	1830	18 x 36	1980						
15000	18 x 36	2280								

Note: I. Ripple Current: (mA/rms) 105°C, 120Hz

CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)									
	50 (63)		63 (79)		100 (125)		160 (200)		200 (250)	
	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE
0.47	5 x 11	7	5 x 11	8	5 x 11	10	5 x 11	12	5 x 11	12
1.0	5 x 11	12	5 x 11	12	5 x 11	15	5 x 11	17	6.3 x 11	17
2.2	5 x 11	18	5 x 11	20	5 x 11	22	6.3 x 11	25	6.3 x 11	25
3.3	5 x 11	25	5 x 11	27	5 x 11	29	8 x 11	36	8 x 11	36
4.7	5 x 11	30	5 x 11	34	5 x 11	37	6.3 x 11	34	10 x 12	50
							8 x 11	43		
6.8	5 x 11	30	5 x 11	37	5 x 11	46	10 x 12	54	10 x 12	60
10	5 x 11	50	5 x 11	55	6.3 x 11	65	10 x 12	70	10 x 12	69
									10 x 15	80
15	5 x 11	50	5 x 11	65	8 x 11	82	10 x 15	90	10 x 19.5	110
22	5 x 11	75	6.3 x 11	90	8 x 11	115	10 x 19.5	130	10 x 15	140
									10 x 19.5	150
33	6.3 x 11	105	8 x 11	110	10 x 12	160	13 x 20	180	13 x 20	220
									13 x 25	190
47	6.3 x 11	101	8 x 11	155	10 x 15	210	13 x 25	250	13 x 20	220
	8 x 11	125							13 x 25	260
68	8 x 11	159	10 x 12	198	10 x 19.5	241	13 x 25	270	16 x 20	242
									16 x 25	280
100	8 x 11	169	10 x 12	260	10 x 19.5	305	16 x 25	390	16 x 32	400
	10 x 12	210			13 x 20	385				
150	10 x 12	289	10 x 15	330	13 x 25	414	16 x 32	435	16 x 36	450
220	10 x 12	346	10 x 19.5	465	13 x 25	495	16 x 36	700	18 x 36	675
	10 x 15	400			16 x 25	590			18 x 40	750
330	10 x 19.5	535	13 x 20	650	16 x 25	720	18 x 40	850	18 x 40	780
	13 x 20	600							22 x 40	920
470	10 x 19.5	560	13 x 20	650	16 x 32	875	22 x 40	980	18 x 45	800
	13 x 20	730	13 x 25	800					22 x 40	920
680	13 x 25	860	16 x 25	1000	16 x 36	1200				
1000	16 x 25	1110	16 x 25	1023						
			16 x 32	1200						
1500	16 x 32	1350	16 x 36	1450						
2200	16 x 36	1360	18 x 45	1800						
	18 x 36	1530								

Note: I. Ripple Current: (mA/rms) 105°C, 120Hz



CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)													
	250 (300) SIZE		350 (400) SIZE		400 (450) SIZE		450 (500) SIZE							
		RIPPLE		RIPPLE		RIPPLE		RIPPLE						
0.47	5 x 11	12	6.3 x 11	14	6.3 x 11	14	6.3 x 11	16						
1.0	6.3 x 11	17	6.3 x 11	15	6.3 x 11	17	8 x 11	22						
			8 x 11	20	8 x 11	20								
2.2	6.3 x 11	23	10 x 12	35	8 x 11	29	10 x 12	37						
	8 x 11	29			10 x 12	35								
3.3	8 x 11	34	10 x 15	47	10 x 12	42	10 x 12	42						
	10 x 12	42			10 x 15	49			10 x 15	51				
4.7	8 x 11	41	10 x 12	43	10 x 12	66	10 x 15	59						
	10 x 12	52			10 x 15	57			10 x 15	57				
6.8	10 x 12	62	10 x 19.5	65	10 x 15	67	13 x 20	69						
10	10 x 15	75	10 x 15	65	10 x 19.5	75	10 x 19.5	72						
	10 x 19.5	88	13 x 20	95	13 x 20	97	13 x 25	99						
15	13 x 20	120	13 x 20	140	13 x 25	145	16 x 25	150						
22	13 x 20	130	13 x 20	125	13 x 20	120	16 x 25	145						
					13 x 25	155			16 x 25	165	13 x 25	140	16 x 32	175
									16 x 20	147				
					16 x 25	170								
33	13 x 25	200	16 x 20	150	16 x 20	164	16 x 32	211						
			16 x 32	195	16 x 25	190			18 x 36	250				
			18 x 16	148	16 x 32	230								
47	13 x 25	228	16 x 36	210	16 x 25	200	18 x 40	350						
					16 x 25	270			16 x 32	250				
									18 x 25	243				
									18 x 36	300				
68	16 x 32	300	18 x 36	320	18 x 25	310	18 x 32	320						
					18 x 36	325			22 x 40	380				
100	16 x 36	300	18 x 40	300	18 x 32	280								
	18 x 36	440	22 x 40	360	18 x 36	290								
					22 x 40	365								
120					18 x 32	300	18 x 45	420						
					18 x 36	320								
					18 x 40	350								
150	18 x 40	600	22 x 40	480	22 x 40	465								
220	22 x 40	800												

Note: I. Ripple Current: (mA/rms) 105°C, 120Hz

单击下面可查看定价，库存，交付和生命周期等信息

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