

Miniature Size Aluminum Electrolytic Capacitors

SK [For General]

85°C Single-Ended Lead Aluminum Electrolytic Capacitors



DESCRIPTION

Lower-cost capacitors expressly intended for high density printed circuit board.

Very High Volumetric Efficiency

Ideally suited for general-purpose applications, decoupling, by pass, and filtering circuit in entertainment electronics.

Feature High CV Product with Moderate Cost

For Detail Specifications, Please Refer to Engineering Bulletin No. 2052

ELECTRICAL CHARACTERISTICS

Working Voltage : 6.3 ~ 100V / 160 ~ 450V

Operating Temperature : -40° ~ +85°C / -25° ~ +85°C

Rate Capacitance Range : 0.1 ~ 22000μF / 0.47 ~ 470μF

Capacitance Tolerance : -20 ~ +20%

DC Leakage Current (μA) : 0.01 CV or 3 μA / 0.03 CV +10 Whichever is greater.
(After 2 Minutes Application of DC Working Voltage at 25°C)

Dissipation Factor : at 120Hz, 25°C

WV (V):	6.3	10	16	25	35	50	63	100	160 ~ 250	350 ~ 450
D.F (%) :	22	19	16	14	12	10	9	8	15	20

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

Load Life : 2000 Hours at 85°C Assured with Full Rated Maximum Ripple Current Applied

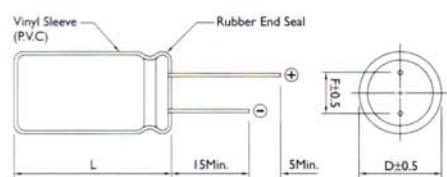
- (a) Capacitance Change : Within 20% of Initial Value
- (b) Dissipation Factor : Not Exceed 200% of Initial Requirement
- (c) Leakage Current : Not Exceed the Initial Requirement

Shelf Life : 1000 Hours, No Voltage Applied

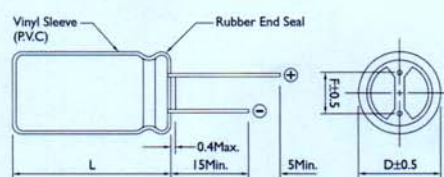
- (a) Capacitance Change : Within 20% of Initial Value
- (b) Dissipation Factor : Not Exceed 200% of Initial Requirement
- (c) Leakage Current : Not Exceed 200% of Initial Requirement

DIAGRAM OF DIMENSIONS

Dimensions : mm



Rubber Stand-off



L ≤ 12 L + 1.5Max.
13 ≤ L ≤ 15 L +1.0 / -0.5
L ≥ 16 L + 2.0Max.

Dø	F	dø
4.0	1.5	0.45
5.0	2.0	0.5
6.0	2.5	
8.0	3.5	
10.0	5.0	0.6
12.0		
13.0		
16.0	7.5	0.8
18.0		
22.0	10.0	0.8

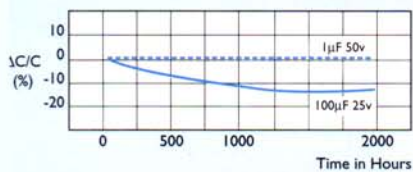
CASE SIZE OF STANDARD PRODUCTS $D\phi \geq 6\text{mm}$ with Safety Vent at Can Bottom

D x L : mm

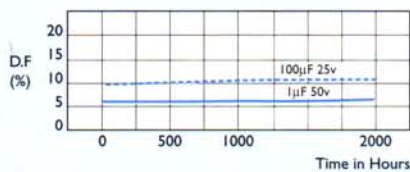
CAP. (μP)	RATED VOLTAGE WV (SV)													
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.1						5 x 11								
0.22						5 x 11								
0.33						5 x 11								
0.47						5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	6 x 11
1.0						5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	6 x 11	6 x 11 8 x 11	8 x 11
2.2						5 x 11	5 x 11	5 x 11	6 x 11	6 x 11 8 x 11	6 x 11 8 x 11	8 x 11	8 x 11 10 x 12	10 x 12
3.3						5 x 11	5 x 11	5 x 11	6 x 11 8 x 11	6 x 11 8 x 11	8 x 11 10 x 12	8 x 11 10 x 12	10 x 12	10 x 15
4.7		5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11 8 x 11	8 x 11 10 x 12	8 x 11 10 x 12	10 x 12 10 x 15	10 x 15	10 x 15
10		5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	8 x 11 10 x 12	10 x 12 10 x 15	10 x 15	10 x 15	10 x 15	10 x 19 13 x 20
22	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	8 x 11	10 x 15	10 x 15	10 x 19	13 x 20	13 x 20 16 x 25	16 x 25
33	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	6 x 11 8 x 11	8 x 11 10 x 12	10 x 19	10 x 19	13 x 20 13 x 25	13 x 25	16 x 25	16 x 32 16 x 36
47	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11 6 x 11	6 x 11 8 x 11	8 x 11	10 x 12 10 x 15	13 x 20	13 x 20 13 x 25	13 x 25	16 x 25	16 x 25 16 x 32	18 x 36 18 x 40
100	5 x 11	5 x 11	5 x 11 6 x 11	6 x 11	8 x 11	8 x 11 10 x 12	10 x 12	10 x 19	13 x 20 16 x 25	16 x 25	16 x 32	18 x 36	18 x 36	22 x 40
220	5 x 11 6 x 11	6 x 11	6 x 11 8 x 11	8 x 11 10 x 12	8 x 11 10 x 12	10 x 12 10 x 15	10 x 15 10 x 19	13 x 25	16 x 32 16 x 36	18 x 32 18 x 36	18 x 40			
330	6 x 11 8 x 11	8 x 11	8 x 11	8 x 15 10 x 12	10 x 12 10 x 15	10 x 15 10 x 19	10 x 19 13 x 20	13 x 25	18 x 36 18 x 40	18 x 36 18 x 40				
470	6 x 11 8 x 11	8 x 11	8 x 11 10 x 12	10 x 12 10 x 15	10 x 19 13 x 20	10 x 19 13 x 20	13 x 25	16 x 25	22 x 40	18 x 40				
1000	8 x 11 10 x 12	10 x 12 10 x 15	10 x 15 10 x 19	10 x 19 13 x 20	13 x 25	16 x 25	16 x 25 16 x 32	18 x 40						
2200	10 x 19 13 x 20	10 x 19 13 x 20	13 x 20 13 x 25	13 x 25 16 x 25	16 x 25 16 x 32	16 x 36 18 x 36	18 x 40	22 x 40						
3300	10 x 19 13 x 20	13 x 20 13 x 25	13 x 25 16 x 25	16 x 25 16 x 32	18 x 36	18 x 40	22 x 40							
4700	13 x 20 16 x 25	13 x 25 16 x 25	16 x 25 16 x 32	18 x 36	22 x 35 22 x 40									
6800	16 x 25	16 x 25 16 x 32	16 x 36 18 x 36	18 x 36	22 x 40									
10000	16 x 25 16 x 32	16 x 36 18 x 36	18 x 36	22 x 40										
15000	16 x 36 18 x 36	18 x 36	22 x 40	22 x 40										
22000	18 x 40	22 x 40	22 x 40											

LOAD LIFE

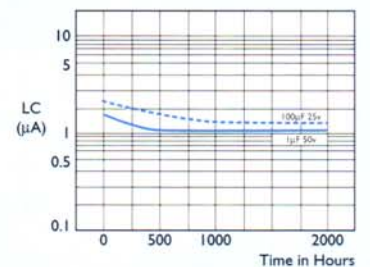
Capacitance Change Ratio



Dissipation Factor Change



Leakage Current Change

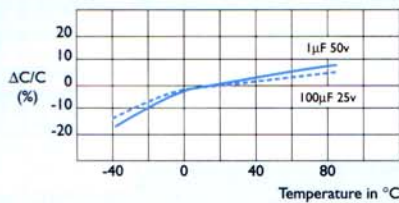


PERMISSIBLE RIPPLE CURRENT (mA, rms) at 85°C, 120Hz

CAP. (μF)	RATED VOLTAGE WV (SV)													
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.1						1								
0.22						2								
0.33						3								
0.47						5	5	10	12	14	14	14	14	14
1.0						10	10	21	17	19	19	19	19	19
2.2						23	29	30	26	22	24	33	26	33
3.3						35	35	40	45	30	30	33	40	42
4.7		20	25	30	35	40	45	50	32	36	36	39	45	50
10		35	40	50	60	65	70	75	50	57	70	70	56	60
22	35	55	75	90	95	100	115	130	110	120	130	130	110	110
33	55	80	110	115	120	125	130	140	150	160	140	170	170	160
47	75	95	130	135	140	140	150	190	190	180	160	210	180	200
100	130	180	185	200	230	230	250	300	400	250	300	330	310	360
220	200	250	320	290	290	380	410	710	450	600	600			
330	260	330	360	380	420	490	540	720	540	800				
470	330	400	400	460	510	610	880	1100	900	1000				
1000	460	580	630	760	950	1100	1310	1350						
2200	840	880	1100	1300	1600	1850	2200	2300						
3300	1000	1250	1400	1660	1970	2170	2500							
4700	1300	1500	1800	1950	2400	2500								
6800	1700	1800	2100	2360										
10000	1900	2150	2200	2550	2600									
15000	2500	2950	3150	3200										
22000	3650	3700	3800											

TEMPERATURE CHARACTERISTICS

Capacitance Change Ratio



Dissipation Factor Change

