

# 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.

### ELECTRICAL CHARACTERISTICS

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

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

Rate Capacitance Range: 0.1~22000 $\mu$ F/0.47~330 $\mu$ F

Capacitance Tolerance: -20~+20%/-20~+20%

DC Leakage Current ( $\mu$ A): 0.01 CV or 3  $\mu$ A/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

DF(%): 22 19 16 14 12 10 9 8 15 20

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

Load Life: 1000hours at rated temperature

(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

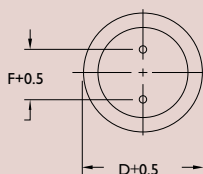
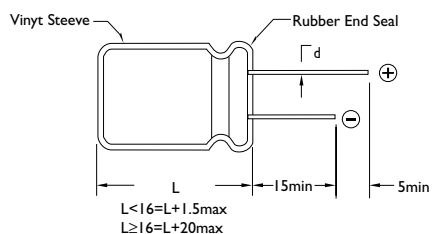
Shelf Life: 500hours, no Voltage applied

(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

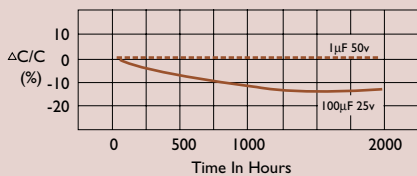
D	F	d $\phi$
5.0	2.0	0.5
6.0	2.5	
8.0	3.5	
10.0	5.0	0.6
13.0		
16.0	7.5	0.8
18.0		

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

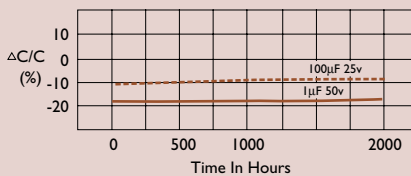
CAP ( $\mu\text{P}$ )	RATED VOLTAGE WV(SV)													
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.1						5x11								
0.22						5x11								
0.33						5x11								
0.47						5x11	5x11	5x11	5x11	5x11	5x11	5x11	6x11	6x11
1.0						5x11	5x11	5x11	5x11	5x11	6x11	6x11	6x11 8x11.5	8x11.5
2.2						5x11	5x11	5x11	6x11	6x11	6x11	8x11.5	8x11.5 10x12	10x12
3.3						5x11	5x11	5x11	8x11.5	8x11.5	10x12	10x12	10x12	10x16
4.7					5x11	5x11	5x11	5x11	8x11.5	8x11.5 10x12	10x16	10x16	10x16	10x16
10			5x11	5x11	5x11	5x11	5x11	6x11	10x12	10x12 10x16	10x20	10x16	10x20 13x20	13x20 13x25
22	5x11	5x11	5x11	5x11	5x11	5x11	6x11	8x11.5	10x16	10x16	10x16	13x20	13x20	13x25 16x25
33	5x11	5x11	5x11	5x11	5x11	6x11	6x11 8x11.5	10x12	10x20	10x20	13x25	13x25	16x25	16x36
47	5x11	5x11	5x11	5x11	5x11 6x11	6x11 8x11.5	8x11.5	10x12 10x16	13x20	13x20 13x25	16x32	16x25	16x32	18x40
100	5x11	5x11	5x11 6x11	6x11	8x11.5	8x11.5 10x12	10x12	10x20	16x25	16x25	18x40	18x36	22x40	22x40
220	5x11 6x11	6x11	6x11 8x11.5	8x11.5 10x12	10x12	10x16	10x16 10x20	13x25	16x32 16x36	18x36 18x40	22x40	22x40		
330	6x11 8x11.5	8x11.5	8x11.5	10x12	10x12 10x16	10x16 10x20	13x20	13x25 16x25	18x36 18x40	22x40				
470	6x11 8x11.5	8x11.5	8x11.5 10x12	10x12 10x16	10x20 13x20	13x20	13x25	16x25	22x40					
1000	10x12	10x12 10x16	10x16 10x20	10x20 13x20	13x20 13x25	13x25 16x25	16x25 16x32	16x32 18x40						
2200	10x20 13x20	10x20 13x20	13x20 13x25	13x25 16x25	16x25 16x32	16x32 18x36	18x40	22x40						
3300	10x20 13x20	13x20 13x25	13x25 16x25	16x25 16x32	16x32 18x36	18x40	22x40							
4700	13x20 16x25	13x25 16x25	16x25 16x32	16x32 18x36	18x36	22x40								
6800	13x25 16x25	16x25 16x32	16x32 18x36	18x36	22x40									
10000	16x25 16x32	16x32 18x36	18x36	22x40										
15000	16x32 18x36	18x36	22x40	22x40										
22000	18x40	22x40	22x40											

**LOAD LIFE**

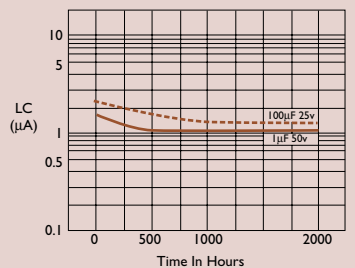
Capacitance Change Ratio



Dissipation Factor Change



Leakage Current Change



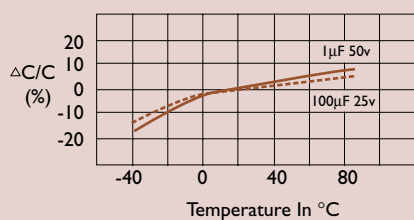


## PERMISSIBLE RIPPLE CURRENT (mA, rms) at 85°C, 120Hz

CAP.( $\mu$ P)	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	10	10	12	12	14	14	14	14
1.0						10	21	21	17	17	17	18	18	19
2.2						23	29	30	26	26	30	28	28	29
3.3						35	35	40	40	35	35	35	32	35
4.7				30	35	40	45	50	40	45	45	40	41	50
10			40	50	60	65	70	75	65	70	70	70	70	75
22	35	55	75	90	95	100	115	130	110	110	130	110	120	110
33	55	80	110	115	115	125	140	170	150	160	160	140	140	150
47	75	95	130	130	140	150	190	230	180	180	210	220	160	230
100	130	180	185	185	230	250	300	400	300	330	310	360	300	350
220	240	250	320	320	370	440	490	710	510	520	600 800	700		
330	300	330	360	420	490	580	680	860	600	700				
470	380	400	470	540	640	760	880	1100	900					
1000	580	630	790	950	1100	1350	1550	1680						
2200	1050	1100	1350	1550	1800	2090	2200	2300						
3300	1250	1400	1700	1950	2220	2400	2500							
4700	1700	1800	2100	2360	2400	2500								
6800	1900	2150	2500	2550	2600									
10000	2250	2500	2700	2800										
15000	2880	2950	3150	2200										
20000	3650	3700	3800											

## TEMPERATURE CHARACTERISTICS

Capacitance Change Ratio



Dissipation Factor Change

