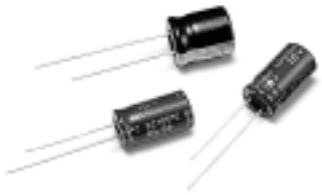
Miniature Size Aluminum Electrolytic Capacitors

SC [For Low Impedance and Low E.S.R Suitable for Output of Mother Board]

105°C Single-Ended Lead Aluminum Electrolytic Capacitors For High Frequency Applications



DESCRIPTION

Used in switching regulator applications in computers. Especially for high frequency.

Low impedance and E.S.R., high permissible ripple current at high frequency and higher operating temperature (-40ºC to +105ºC).

High Temperature Load Life at 105ºC for 3000 Hours

For Detail Specifications, Please Refer to Engineering Bulletin No. 2063

ELECTRICAL CHARACTERISTICS

Working Voltage : 6.3 ~ 100V

Operating Temperature : -40º ~ +105ºC

Rate Capacitance Range : 4.7 ~ 15000μF

Capacitance Tolerance : -20 ~ +20%

DC Leakage Current (μA) : I = 0.01 CV(μA) or 3μA Whichever is greater.
(Measurements shall be Made After a 2 Minute Charge at Rated Working Voltage)

Dissipation Factor : at 120 Hz, 25ºC

WV (V) :	6.3	10	16	25	35	50	63	80	100
D.F (%) :	15	14	12	10	10	8	8	7	7

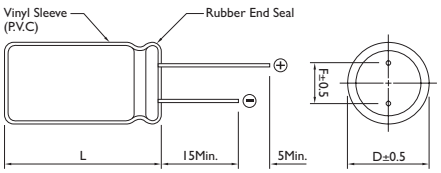
For capacitor whose capacitance exceeds 1000μF. The value of D.F(%) is increased by 2% for every addition of 1000μF.

WV (V) :	6.3	10	16	25	35	50	63	100
Impedance : Z - 40°C / Z + 20°C	10	8	5	4	4	4	4	4

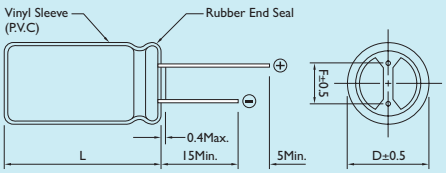
Load Life : 3000 Hours at 105ºC Assured with Full Rated Maximum Ripple Current Applied
5 x 11 ~ 10 x 12 : Life = 2000 Hours
10 x 15 or Higher : Life = 3000 Hours
(a) Capacitance Change : Within 20% of Initial Value
(b) Dissipation Factor : Not Exceed 200% of Initial Requirement
(c) Leakage Current : Not Exceed the Initial Requirement

Shelf Life : 1000 Hours, No Voltage Applied, at 105ºC
(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



G.R.Y.



L ≤ 12 L + 1.5Max.
13 ≤ L ≤ 15 $L^{+1.0}_{-0.5}$
L ≥ 16 L + 2.0Max.

Dimensions : mm

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 Dø ≥ 6mm with Safety Vent at Can Bottom

D x L : mm

CAP. (μF)	RATED VOLTAGE W V							
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)
4.7					5 x 11	5 x 11	5 x 11	5 x 11
6.8					5 x 11	5 x 11	5 x 11	5 x 11
10					5 x 11	5 x 11	5 x 11	6 x 11
15					5 x 11	5 x 11	5 x 11	6 x 11
22					5 x 11	5 x 11	6 x 11	8 x 11
33					5 x 11	6 x 11	6 x 11	8 x 15
47				5 x 11	6 x 11	6 x 11	8 x 11	10 x 15
68			5 x 11	6 x 11	6 x 11	8 x 11	8 x 11	10 x 19
100		5 x 11	5 x 11	6 x 11	8 x 11	8 x 15	8 x 20	13 x 20
120		5 x 11	6 x 11	8 x 11	8 x 11	8 x 20	10 x 15	13 x 25
150	5 x 11	6 x 11	6 x 11	8 x 11	8 x 15	10 x 12	10 x 15	13 x 25
220	6 x 11	6 x 11	8 x 11	8 x 15	10 x 12	10 x 15	10 x 19	16 x 25
330	8 x 11	8 x 11	8 x 15	8 x 20	10 x 19	10 x 19	13 x 20	16 x 32
470	8 x 11	8 x 15	10 x 12	10 x 15	10 x 19	13 x 20	13 x 25	18 x 36
680	8 x 15	10 x 12	10 x 15	10 x 19	13 x 20	13 x 25	16 x 25	
820	8 x 20	10 x 15	10 x 19	10 x 19	13 x 20	16 x 25	16 x 32	
1000	8 x 20	8 x 20	10 x 19	13 x 20	13 x 25	16 x 25	16 x 32	
1200	10 x 15	10 x 19	13 x 20	13 x 25	16 x 25	16 x 32	16 x 36	
1500	10 x 19	10 x 19	13 x 20	16 x 25	16 x 25	16 x 36	18 x 36	
2200	13 x 20	13 x 20	13 x 25	16 x 32	16 x 36	18 x 40		
3300	13 x 25	13 x 25	16 x 25	16 x 36	18 x 36			
4700	16 x 25	16 x 25	16 x 36	18 x 36				
6800	16 x 32	16 x 36	18 x 36					
8200	16 x 32	18 x 36						
10000	16 x 36							
15000	18 x 36							

PERMISSIBLE RIPPLE CURRENT AT 10K~100KHZ, 105°C mA, rms

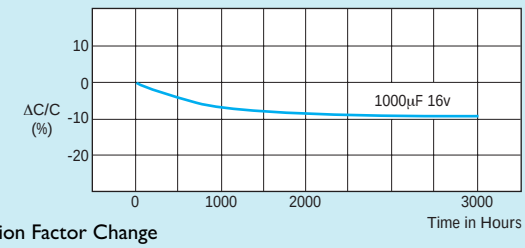
μF	W V							
	6.3	10	16	25	35	50	63	100
4.7					115	115	115	120
6.8					120	120	120	140
10					140	140	140	200
15					170	180	200	250
22					190	200	250	300
33					200	250	300	450
47				150	250	300	450	550
68			150	200	300	450	550	650
100		150	200	250	450	550	650	800
120		200	250	300	550	650	800	1050
150	200	250	300	550	650	800	1050	1300
220	250	300	550	750	800	1050	1300	1400
330	400	550	750	800	1050	1300	1400	1550
470	550	750	800	1050	1300	1400	1550	1700
680	700	800	1050	1100	1400	1550	1700	1900
820	750	1050	1100	1250	1550	1700	1900	2100
1000	800	1080	1250	1450	1700	1900	2100	2550
1200	1000	1250	1450	1600	1900	2100	2550	2800
1500	1250	1450	1600	2000	2100	2550	2800	
2200	1450	1600	2000	2200	2550	2800		
3300	1700	2000	2200	2550	2800			
4700	1800	2200	2550	2800				
6800	2000	2550	2800					
8200	2350	2800						
10000	2550							
15000	3000							

IMPEDANCE AT 100KHZ, 25°C Ohm

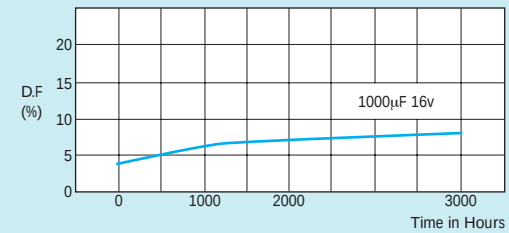
μF	W V							
	6.3	10	16	25	35	50	63	100
4.7					1.200	2.00	2.20	2.00
6.8					1.000	1.85	2.00	1.85
10					0.900	1.70	1.85	1.50
15					0.690	1.20	1.70	1.20
22					0.420	0.70	1.20	0.79
33					0.420	0.60	0.90	0.59
47				0.420	0.370	0.52	0.70	0.35
68			0.420	0.370	0.220	0.35	0.52	0.24
100		0.420	0.370	0.220	0.140	0.25	0.35	0.18
120		0.370	0.320	0.200	0.130	0.21	0.30	0.15
150	0.420	0.320	0.220	0.140	0.100	0.16	0.20	0.11
220	0.320	0.220	0.140	0.100	0.069	0.10	0.15	0.071
330	0.180	0.140	0.100	0.069	0.044	0.072	0.10	0.049
470	0.140	0.100	0.085	0.064	0.039	0.060	0.064	0.038
680	0.100	0.085	0.064	0.039	0.038	0.050	0.052	0.028
820	0.085	0.064	0.044	0.039	0.034	0.040	0.048	0.025
1000	0.069	0.065	0.039	0.038	0.029	0.039	0.042	0.025
1200	0.064	0.044	0.038	0.029	0.028	0.025	0.036	0.025
1500	0.044	0.039	0.034	0.028	0.024	0.025	0.033	
2200	0.043	0.038	0.028	0.024	0.019	0.025		
3300	0.035	0.028	0.024	0.019	0.019			
4700	0.028	0.024	0.019	0.019				
6800	0.024	0.019	0.019					
8200	0.019	0.019						
10000	0.019							
15000	0.019							

LOAD LIFE

Capacitance Change Ratio



Dissipation Factor Change



Leakage Current Change