

# Miniature Size Aluminum Electrolytic Capacitors

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

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

### ELECTRICAL CHARACTERISTICS

Working Voltage : 6.3 ~ 16V

Operating Temperature : -40° ~ +105°C

Rate Capacitance Range : 470 ~ 4700µF

Capacitance Tolerance : -20 ~ +20%

DC Leakage Current (µA) : I = 0.01 CV(µA)

(Measurements shall be Made After a 2 Minute Charge at Rated Working Voltage)

Dissipation Factor : at 120 Hz, 25°C

WV (V) : 6.3    10    16

D.F (%) : 15    14    12

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

Load Life : 2000 Hours for Dø = 8ø; 3000 Hours for Dø ≥ 10ø at 105°C

- (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 105°C

- (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



### DESCRIPTION

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

Very low impedance and E.S.R., high permissible ripple current at high frequency and higher operating temperature (-40°C to +105°C).

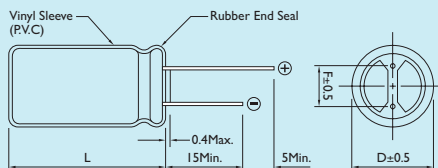
High Temperature Load Life at 105°C for 3000 Hours

For Detail Specifications, Please Refer to Engineering Bulletin No. 2066

### DIAGRAM OF DIMENSIONS

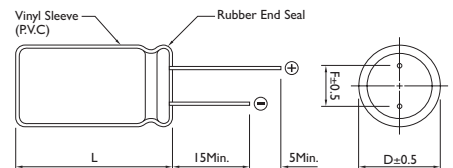
Dø	F	dø
4.0	1.5	0.45
5.0	2.0	0.5
6.0	2.5	
8.0	3.5	
10.0	5.0	0.6
12.0		
13.0		
16.0	7.5	0.8
18.0		
22.0	10.0	0.8

#### Rubber Stand-off



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

Dimensions : mm




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

D x L : mm

CAP. ( $\mu\text{F}$ )	RATED VOLTAGE WV (SV)		
	6.3 (8)	10 (13)	16 (20)
220			
330			
470	8 x 11		
680			
820			
1000	8 x 15	8 x 20 10 x 15	10 x 19
1200	8 x 20 10 x 15	10 x 19	10 x 22
1500	10 x 19	10 x 25	13 x 20
2200	10 x 22	13 x 20	13 x 25
2700	10 x 25		
3300	13 x 20		
3900		13 x 30	
4700	13 x 30		

**PERMISSIBLE RIPPLE CURRENT AT 100KHZ, 105°C** mA, rms

**IMPEDANCE AT 100KHZ, 25°C** Ohm

$\mu\text{F}$	WV			$\mu\text{F}$	WV		
	6.3	10	16		6.3	10	16
220				220			
330				330			
470	582			470	0.100		
680				680			
820				820			
1000	950	1250 1430	1820	1000	0.053	0.041 0.038	0.023
1200	1250 1430	1820	2150	1200	0.041 0.038	0.023	0.022
1500	1820	2150	2360	1500	0.023	0.022	0.028
2200	2150	2360	2770	2200	0.023	0.021	0.025
2700	2200			2700	0.021		
3300	2360			3300	0.021		
3900		3290		3900		0.016	
4700	3290			4700	0.016		