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

Miniature Size Aluminum Electrolytic Capacitors

ELECTRICAL CHARACTERISTICS

Operating Temperature : -40° ~ +105°C

Working Voltage : 6.3 ~ 50V

Rate Capacitance Range : 22 ~ 6800μF

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

W.V (V) :	6.3	10	16	25	35	50
D.F (%) :	2.2	19	16	14	12	10

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 D = 8ø; 3000 Hours for D ≥ 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

Pb-free
RoHS
COMPLIANT

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

Multiplier for Ripple Current
Frequency coefficient

Frequency(Hz)	60	120	1K	10K	100K
5.6~33μF	0.45	0.55	0.75	0.90	1.00
39~330μF	0.6	0.70	0.85	0.95	1.00
470~1000μF	0.65	0.75	0.90	0.98	1.00
1200~6800μF	0.75	0.80	0.95	1.00	1.00

Temperature coefficient

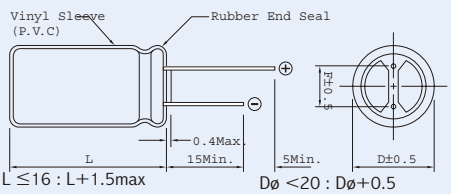
Temperature(°C)	65	85	105
Factor	2.00	1.60	1.00

DIAGRAM OF DIMENSIONS

Dimensions : mm

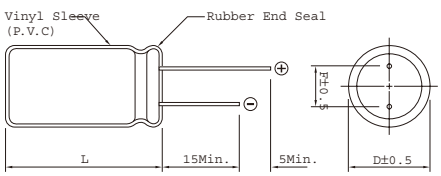
Dø	F	dø
5.0	2.0	0.5
6.3	2.5	
8.0	3.5	
10.0	5.0	0.6
12.0		
13.0		
16.0	7.5	0.8
18.0		
22.0	10.0	0.8

Rubber Stand-off



L ≤16 : L+1.5max
L >16 : L+2max
Dø =8&10 : L+2.5

Dø <20 : Dø+0.5
Dø ≥20 : Dø+1



CASE SIZE OF STANDARD PRODUCTS Dø ≥ 6mm with Safety Vent at Can Bottom

CAP. (μF)	RATED VOLTAGE								
	6.3			10			16		
	SIZE	Ripple	ESR	SIZE	Ripple	ESR	SIZE	Ripple	ESR
56							5 x 11	250	0.30
100				5 x 11	250	0.300			
120							6.3 x 11	405	0.130
150	5 x 11	250	0.30						
220	6.3 x 11	405	0.13	6.3 x 11	405	0.13	8 x 11	760	0.072
330	6.3 x 11	405	0.13	8 x 11	622	0.072	*8 x 11	760	0.072
470	8 x 11	582	0.100	8 x 11	760	0.072	8 x 15	995	0.056
							10 x 12	995	0.056
560	8 x 11	760	0.072						
680				10 x 12	995	0.056	8 x 20	1250	0.041
				8 x 15	995	0.056	10 x 15	1250	0.041
820	8 x 15	995	0.056						
1000	8 x 15	950	0.053	8 x 20	1250	0.041	10 x 19.5	1820	0.023
	10 x 12	1030	0.053	10 x 15	1430	0.038			
1200	8 x 20	1250	0.041	10 x 19.5	1820	0.023	*10 x 25	2150	0.022
	10 x 15	1430	0.038				10 x 22	2150	0.022
1500	10 x 19.5	1820	0.023	10 x 25	2150	0.022	13 x 20	2360	0.028
2200	10 x 22	2150	0.023	13 x 20	2360	0.021	13 x 25	2770	0.025
	10 x 25	2150	0.023						
2700	10 x 25	2200	0.021				12 x 30	3140	0.018
							16 x 20	3140	0.018
3300	13 x 20	2360	0.021	13 x 25	2770	0.018	12 x 35	3400	0.015
3900	13 x 25	2770	0.018	13 x 30	3140	0.018	16 x 25	3460	0.016
				16 x 20	3140	0.018			
4700	13 x 30	3290	0.016	12 x 35	3400	0.015			
5600	12 x 35	3140	0.018	16 x 25	3460	0.016			
	16 x 20	3140	0.018						
6800	16 x 25	3460	0.016						

Note : * 1. D x L : mm

*2. Ripple Current :(mA r.m.s 105°C / 100KHz), ESR (Ω Max20°C / 100KHz)

*3. " * " is down size, Edurance is less 1000 hrs than standard

CASE SIZE OF STANDARD PRODUCTS Dø ≥ 6mm with Safety Vent at Can Bottom

CAP. (μF)	RATED VOLTAGE								
	25			35			50		
	SIZE	Ripple	ESR	SIZE	Ripple	ESR	SIZE	Ripple	ESR
22							5 x 11	238	0.340
33				5 x 11	250	0.30	6.3 x 11	385	0.140
47	5 x 11	250	0.30	6.3 x 11	405	0.130	6.3 x 11	385	0.140
56				6.3 x 11	405	0.130	6.3 x 11	385	0.140
100	6.3 x 11	405	0.13	8 x 11	760	0.072	8 x 11	724	0.074
120							8 x 15	950	0.061
150				8 x 11	760	0.072	10 x 12	979	0.061
180							8 x 20	1190	0.046
220	8 x 11	760	0.072	8 x 15	995	0.056	10 x 15	1370	0.042
				10 x 12	995	0.056			
270	*8 x 15		0.057	8 x 20	1250	0.041	10 x 19.5	1580	0.030
330	10 x 12	995	0.056	10 x 15	1430	0.038	10 x 25	1870	0.028
	8 x 15	995	0.056						
470	8 x 20	1250	0.041	10 x 19.5	1820	0.023	13 x 20	2050	0.027
	10 x 15	1430	0.038						
560				10 x 25	2150	0.022	13 x 25	2410	0.023
680	10 x 19.5	1820	0.028	13 x 20	2360	0.021	12 x 30	2860	0.021
820	10 x 25	2200	0.021				12 x 35	2730	0.023
							16 x 20	2730	0.023
1000	12 x 20	2360	0.021	13 x 25	2770	0.018	16 x 25	3010	0.021
	13 x 20	2360	0.021						
1200				12 x 30	3140	0.018			
				16 x 20	3140	0.018			
1500	13 x 25	2770	0.018	12 x 35	3400	0.015			
1800	16 x 20	3140	0.018	16 x 25	3460	0.016			
2200	12 x 35	3400	0.015						
	16 x 32	3633	0.015	16 x 32	3460	0.016			
2700	16 x 25	3460	0.016						
3300									
3900									
4700									

Note : * 1. D x L : mm

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