

SB [For Low Leakage Current]

105 °C Single-Ended Lead Aluminum Electrolytic Capacitors

Manufacturing Aluminum
Electrolytic Capacitors

ELECTRICAL CHARACTERISTICS

Working Voltage : 6.3 ~ 100V

Operating Temperature : -40° ~ +105°C

Rate Capacitance Range : 0.1 ~ 47000 μ F

Capacitance Tolerance : -20 ~ +20%

DC Leakage Current (μ A) : $I=0.002CV$ (μ A) or 0.4 μ A, whichever is greater.

(After 2 Minutes Application of DC Working Voltage at 25°C)

Equivalent Series Resistance (E.S.R. at 120Hz):

When measured at 25°C and 1 KHz E.S.R value shall not exceed the value given in the table on the next page.

Load Life : 1000 Hours at 105°C Assured with Full Rated Maximum Ripple Current Applied

- (a) Capacitance Change : Within 25% of Initial Value
- (b) Dissipation Factor : Not Exceed 200% of Initial Requirement
- (c) Leakage Current : Not Exceed the Initial Requirement

Shelf Life : 500 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 where low leakage current is essential as in coupling of pre-amplifiers.

Very low leakage current remains even after prolonged storage.

For detail specifications, please refer to Engineering Bulletin No. 2031.

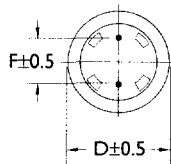
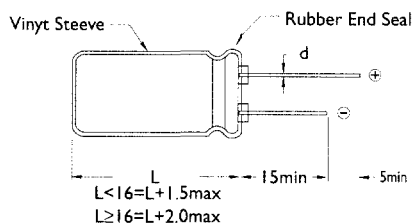

CASE SIZE OF STANDARD PRODUCTS ($D\phi \geq 6\text{mm}$ with Safety Vent at Can Bottom)

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)	80 (100)	100 (125)
0.1						5 x 11	5 x 11	5 x 11	5 x 11
0.15						5 x 11	5 x 11	5 x 11	5 x 11
0.22						5 x 11	5 x 11	5 x 11	5 x 11
0.33						5 x 11	5 x 11	5 x 11	5 x 11
0.47						5 x 11	5 x 11	5 x 11	5 x 11
0.56						5 x 11	5 x 11	5 x 11	5 x 11
1.0						5 x 11	5 x 11	5 x 11	5 x 11
1.5						5 x 11	5 x 11	5 x 11	5 x 11
2.2						5 x 11	5 x 11	5 x 11	6 x 11
3.3						5 x 11	5 x 11	6 x 11	8 x 11
4.7				5 x 11	5 x 11	6 x 11	6 x 11	6 x 11	8 x 11
6.8				5 x 11	5 x 11	6 x 11	6 x 11	8 x 11	10 x 12
10			5 x 11	6 x 11	6 x 11	8 x 11	8 x 11	10 x 12	10 x 15
15			5 x 11	6 x 11	8 x 11	8 x 11	10 x 12	10 x 15	10 x 19
22		5 x 11	6 x 11	8 x 11	8 x 11	10 x 12	10 x 15	10 x 15	10 x 19
33		6 x 11	6 x 11	8 x 11	10 x 12	10 x 15	10 x 15	10 x 19	13 x 20
47		6 x 11	8 x 11	10 x 12	10 x 12	10 x 15	10 x 19	10 x 19	13 x 25
68	6 x 11	6 x 11	8 x 11	10 x 12	10 x 15	10 x 19	10 x 19	13 x 20	13 x 25
100	6 x 11	8 x 11	10 x 12	10 x 15	10 x 19	13 x 20	13 x 25	13 x 25	16 x 25
150	8 x 11	10 x 12	10 x 15	10 x 19	13 x 20	13 x 25	13 x 25	16 x 25	16 x 32
220	10 x 12	10 x 15	10 x 19	13 x 20	13 x 25	16 x 25	16 x 32	16 x 32	18 x 36
330	10 x 15	10 x 19	13 x 20	13 x 25	16 x 25	16 x 32	16 x 36	16 x 36	18 x 40
470	10 x 19	13 x 20	13 x 20	16 x 25	16 x 25	16 x 36	18 x 36	18 x 36	
680	13 x 20	13 x 20	13 x 25	16 x 32	16 x 32	16 x 36	18 x 36		
820	13 x 25	13 x 25	16 x 25	16 x 32	16 x 36	16 x 36	18 x 40		
1000	13 x 25	13 x 25	16 x 25	16 x 36	18 x 36	18 x 40			
1500	13 x 25	16 x 25	16 x 32	16 x 36	18 x 40				
2200	16 x 25	16 x 32	18 x 36	18 x 40					
3300	16 x 36	16 x 36	18 x 40						
4700	18 x 36	18 x 40							

DIAGRAM OF DIMENSION

Dimensions : mm



D	F	dø
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		
22.0	10.0	0.8

E.S.R. AT 1 KHZ, 25°C (Ohm)

E.S.R. AT 120HZ, 25°C (Ohm)

µF	WV								
	6.3	10	16	25	35	50	60	80	100
0.1						215	204	193	182
0.15						126	120	113	107
0.22						80.0	76.0	72.0	68.0
0.33						65.2	61.9	58.6	55.4
0.47						45.7	43.4	41.1	38.8
0.56						33.0	31.3	29.7	28.0
0.68						31.2	29.6	28.0	26.5
1.0						25.3	24.0	22.7	21.5
1.5						21.7	20.6	19.5	18.4
2.2						17.5	16.6	15.7	14.8
3.3						13.2	12.5	11.8	11.2
4.7				13.0	18.8	9.20	8.74	8.28	7.82
6.8				11.0	13.0	9.00	8.55	8.10	7.65
10			11.3	8.84	8.84	8.84	8.39	7.95	7.51
15			7.07	5.89	5.89	5.89	5.59	5.30	5.00
22		5.22	4.82	4.01	4.01	4.01	3.80	3.60	3.40
33		3.48	3.21	2.67	2.67	2.67	2.53	2.40	2.26
47		2.44	2.25	1.88	1.88	1.88	1.78	1.69	1.59
68	2.00	1.68	1.56	1.30	1.30	1.30	1.23	1.17	1.10
100	1.15	1.14	1.06	0.88	0.88	0.88	0.83	0.79	0.74
150	0.77	0.76	0.70	0.58	0.58	0.58	0.55	0.52	0.49
220	0.52	0.52	0.48	0.40	0.40	0.40	0.38	0.36	0.34
330	0.34	0.34	0.32	0.26	0.26	0.26	0.24	0.23	0.22
470	0.24	0.24	0.22	0.18	0.18	0.18	0.17	0.16	
680	0.16	0.16	0.15	0.12	0.12	0.12	0.11		
820	0.14	0.14	0.12	0.10	0.10	0.10			
1000	0.11	0.11	0.10	0.08	0.08				
1500	0.07	0.07	0.06	0.05	0.05				
2200	0.06	0.06	0.06	0.04					
3300	0.04	0.04	0.04						
4700	0.03	0.03							

µF	WV								
	6.3	10	16	25	35	50	60	80	100
0.1						510	484	459	433
0.15						355	337	319	301
0.22						223	209	198	187
0.33						185	175	166	157
0.47						96.0	91.2	86.4	81.6
0.56						50.0	47.5	45.0	42.5
0.68						47.0	45.1	42.7	40.3
1.0						43.4	41.2	39.0	36.8
1.5						35.2	33.4	31.6	29.9
2.2						32.5	30.8	29.2	27.6
3.3						24.3	23.0	21.9	20.6
4.7						20.0	28.2	20.7	19.6
6.8						19.5	19.5	19.5	18.5
10						17.0	13.2	13.2	12.5
15						10.6	8.84	8.8	8.84
22		7.83	7.23	6.02	6.02	6.02	5.71	5.41	5.11
33		5.22	4.82	4.01	4.01	4.01	3.30	3.60	3.40
47		3.66	3.38	2.82	2.82	2.82	2.67	2.53	2.39
68	3.00	2.53	2.34	1.95	1.95	1.95	1.85	1.75	1.65
100	1.72	1.72	1.59	1.32	1.32	1.32	1.25	1.18	1.12
150	1.15	1.14	1.06	0.88	0.88	0.88	0.83	0.79	0.74
220	0.78	0.78	0.72	0.60	0.60	0.60	0.57	0.54	0.51
330	0.52	0.52	0.48	0.40	0.40	0.40	0.38	0.36	0.34
470	0.36	0.36	0.33	0.28	0.28	0.28	0.26	0.25	
680	0.25	0.25	0.23	0.19	0.19	0.19	0.18		
820	0.21	0.21	0.18	0.15	0.15	0.15			
1000	0.17	0.17	0.14	0.13	0.13	0.13			
1500	0.11	0.11	0.10	0.08	0.08				
2200	0.09	0.09	0.08	0.06					
3300	0.06	0.06	0.06						
4700	0.05	0.05							

