

SE-K [For General]

105°C Single-Ended Lead Aluminum Electrolytic Capacitors Rated Voltage up to 450V

Miniature Size Aluminum Electrolytic Capacitors

ELECTRICAL CHARACTERISTICS

Working Voltage : 6.3 ~ 100V / 160 ~ 250V / 350 ~ 450V

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

Rate Capacitance Range : 0.47 ~ 15000μF / 0.47 ~ 470μF / 0.47 ~ 150μF

Capacitance Tolerance : -20 ~ +20%

DC Leakage Current (μA) : $I = 0.01CV + 3 / 0.03CV + 10$

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

Dissipation Factor : at 120 Hz, 25°C

W V (V) :	6.3	10	16	25	35	50	63	80	100	160 ~ 250	350 ~ 450
D.F (%) :	26	22	18	16	14	12	10	10	10	15	20

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

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

(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

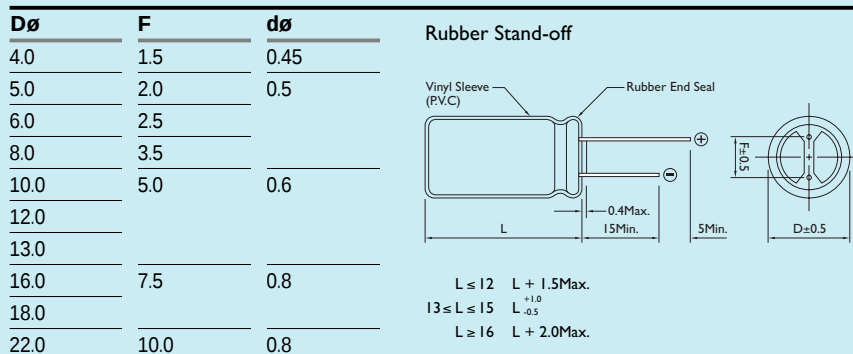
Shelf Life : 500 Hours, No Voltage Applied

(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



DESCRIPTION

Lower-cost capacitors expressly intended for high density printed circuit board.

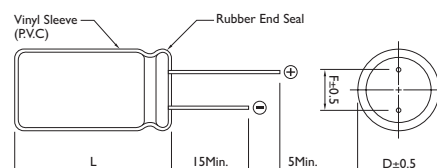
Very High Volumetric Efficiency

Ideally suited for general-purpose applications, coupling, decoupling, by pass, and filtering circuit in entertainment electronics.

Feature High CV Product with Moderate Cost

For Detail Specifications, Please Refer to Engineering Bulletin No. 2030

Dimensions : mm



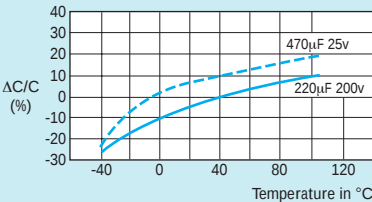
CASE SIZE OF STANDARD PRODUCTS $D\varnothing \geq 6\text{mm}$ with Safety Vent at Can Bottom

D x L : mm

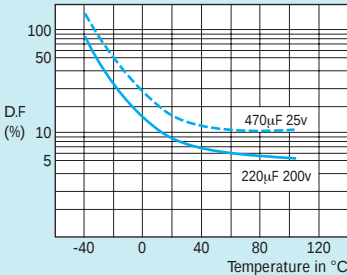
CAP. (μF)	RATED VOLTAGE W V (SV)													
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.47						5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	6 x 11
1.0						5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	6 x 11	6 x 11 8 x 11	8 x 11
2.2						5 x 11	5 x 11	5 x 11	6 x 11	6 x 11 8 x 11	6 x 11 8 x 11	8 x 11	8 x 11 10 x 12	10 x 12
3.3						5 x 11	5 x 11	5 x 11	6 x 11 8 x 11	6 x 11 8 x 11	8 x 11 10 x 12	8 x 11 10 x 12	8 x 11 10 x 12	10 x 15
4.7				5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11 8 x 11	8 x 11 10 x 12	8 x 11 10 x 12	10 x 12 10 x 15	10 x 12 10 x 15	10 x 15
6.8				5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	10 x 12	10 x 12	8 x 15 10 x 12	10 x 15	10 x 19	10 x 19
10			5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11 6 x 11	8 x 11 10 x 12	10 x 12 10 x 15	10 x 15	10 x 15	10 x 19 13 x 20	13 x 20 13 x 25
15			5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	8 x 11	10 x 15	10 x 15	10 x 15	10 x 19	10 x 19 13 x 25	16 x 25
22		5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	8 x 11	10 x 15	10 x 15	10 x 19	13 x 20	13 x 20 13 x 25	16 x 25 16 x 32
33		5 x 11	5 x 11	5 x 11	5 x 11	6 x 11	6 x 11 8 x 11	8 x 11 10 x 12	10 x 19	10 x 19	13 x 20 13 x 25	13 x 25	13 x 25 16 x 25	16 x 25 16 x 36
47	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11 6 x 11	6 x 11 8 x 11	8 x 11	10 x 12 10 x 15	13 x 20	13 x 20 13 x 25	13 x 25	16 x 25	16 x 25 16 x 36	16 x 36 18 x 40
68	5 x 11	5 x 11	5 x 11	6 x 11	8 x 11	8 x 11	10 x 12	10 x 15	13 x 25	13 x 25	16 x 25	16 x 32	18 x 36	22 x 40
100	5 x 11	5 x 11	5 x 11 6 x 11	6 x 11	8 x 11	8 x 11 10 x 12	8 x 15 10 x 12	10 x 19	13 x 25 16 x 25	16 x 25	16 x 32	18 x 36	18 x 36	
150	5 x 11	6 x 11	8 x 11	8 x 11	10 x 12	10 x 12	10 x 15	13 x 25	16 x 32	16 x 36	18 x 40	22 x 40		
220	5 x 11 6 x 11	6 x 11	6 x 11 8 x 11	8 x 11 10 x 12	8 x 15 10 x 12	10 x 15	10 x 15 10 x 19	13 x 25	16 x 32 16 x 36	18 x 36 18 x 40	22 x 40			
330	6 x 11 8 x 11	8 x 11	8 x 11	8 x 15 10 x 12	10 x 12 10 x 15	10 x 15 10 x 19	13 x 20	13 x 25 16 x 25	18 x 36 18 x 40	22 x 40				
470	6 x 11 8 x 11	8 x 11	8 x 11 10 x 12	10 x 12 10 x 15	10 x 19 13 x 20	13 x 20	13 x 20 13 x 25	16 x 25 16 x 32	22 x 40					
680	10 x 12	10 x 12	10 x 15	10 x 19	13 x 20	13 x 25	13 x 25 16 x 25	16 x 36						
1000	8 x 11 10 x 12	10 x 12 10 x 15	10 x 15 10 x 19	10 x 19 13 x 20	13 x 20 13 x 25	13 x 25 16 x 25	16 x 25 16 x 32	18 x 40 22 x 40						
1500	10 x 15	10 x 19	10 x 19 13 x 20	13 x 25	16 x 25	16 x 32	16 x 32 16 x 36							
2200	10 x 19 13 x 20	10 x 19 13 x 20	13 x 20 13 x 25	13 x 25 16 x 25	16 x 25 16 x 32	16 x 36 18 x 36								
3300	10 x 19 13 x 20	13 x 20 13 x 25	13 x 25 16 x 25	16 x 25 16 x 32	16 x 36 18 x 36	18 x 40								
4700	13 x 25 16 x 25	13 x 25 16 x 25	16 x 25 16 x 32	16 x 32 18 x 36	18 x 36 18 x 40	22 x 35								
6800	13 x 25 16 x 25	16 x 25 16 x 32	16 x 36 18 x 36	18 x 36										
10000	16 x 25 16 x 32	16 x 36 18 x 36	18 x 36											
15000	18 x 36													

TEMPERATURE CHARACTERISTICS

Capacitance Change Ratio



Dissipation Factor Change

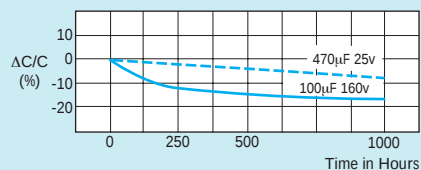


PERMISSIBLE RIPPLE CURRENT (mA, rms) at 105°C, 120Hz

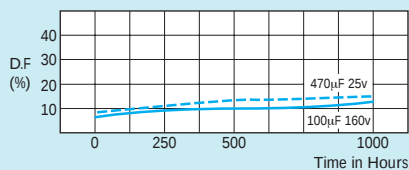
CAP. (μF)	RATED VOLTAGE W V (SV)													
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.47						7	8	10	12	14	14	14	14	14
1.0						12	13	15	17	19	19	20	16 20	20
2.2						18	20	22	25	22	23 28	35	28 35	35
3.3						25	27	29	30 36	32 40	33 42	37 47	38 50	54
4.7				20	25	30	34	37	34 43	40 50	41 52	47 55	49 57	60
6.8				25	30	32	37	46	54	60	57 62	65	72	80
10			25	30	40	50	55	55 65	56 70	69 80	88	95	77 97	85 100
15			40	45	50	60	65	82	90	110	120	140	100 150	160
22		45	55	60	65	75	90	115	130	140	155	165	150 175	150 180
33		60	70	75	85	105	110 120	120 160	180	190	170 200	220	190 230	190 240
47	60	75	85	90	95 115	100 125	155	180 210	270	240 290	330	340	280 350	300 360
68	75	80	100	125	130	159	198	241	300	330	350	370	380	400
100	100	110	110 135	145	190	160 210	230 260	385	330 400	410	430	460	480	
150	120	130	180	200	240	289	330	414	435	450	460	480		
220	140 165	180	180 235	200 250	280 315	400	400 460	590	550 620	580 650	680			
330	160 200	255	285	320 355	380 440	450 535	650	600 720	770 850	780 920				
470	220 280	305	310 395	400 470	490 580	730	700 800	740 875	980					
680	320	420	530	650	730	860	840 1000	1200						
1000	370 470	490 570	590 700	680 855	850 995	930 1110	1020 1200	1340 1500						
1500	600	750	680 860	1020	1110	1350	1300 1450							
2200	740 930	800 1010	990 1150	1030 1230	1230 1450	1360 1530								
3300	880 1100	1050 1220	1140 1350	1230 1450	1470 1660	1700								
4700	1100 1320	1190 1410	1330 1560	1420 1690	1580 1750	1900								
6800	1250 1490	1370 1610	1590 1790	1850										
10000	1560 1830	1760 1980	2100											
15000	2280													

LOAD LIFE

Capacitance Change Ratio



Dissipation Factor Change



Leakage Current Change

