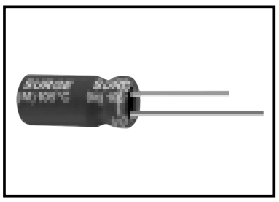
SURGE
Components Inc.
1016 Grand Boulevard
Deer Park, NY 11729 • 631 595-1818 • FAX: 631 595-1283

ALUMINUM ELECTROLYTIC CAPACITORS

FEATURES

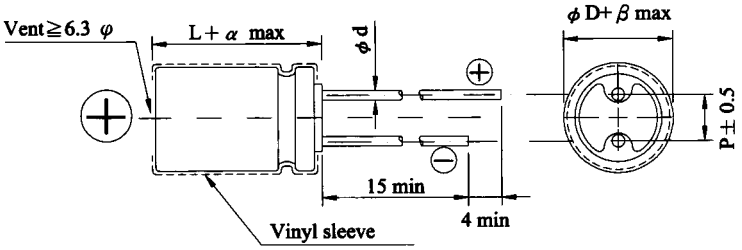
☐ 105˚C, 2000 ~ 5000 HOURS ASSURED
☐ LOW ESR, SUITABLE FOR SWITCHING POWER SUPPLIES
☐ SMALLER SIZE WITH LARGE PERMISSIBLE RIPPLE CURRENT



SPECIFICATIONS

Items	Performance
Operating Temperature Range	-55˚C~+105˚C
Capacitance Tolerance	±20% (at 120Hz, 20˚C)
Leakage Current (at 20 ˚C)	I = 0.01CV or 3(μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF. V = rated DC working voltage in V.
Dissipation Factor (Tan δ at 120 Hz, 20 ˚C)	Rated Voltage: 6.3 / 10 / 16 / 25 / 35 / 50 Tan δ (max): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 When the capacitance exceeds 1000μF, 0.02 shall be added every 1000 μF increase.
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. Rated Voltage: 6.3 / 10 / 16 / 25 / 35 / 50 Impedance Ratio Z(-55˚C)/Z(+20˚C): 4 / 4 / 3 / 3 / 3 / 3
Load Life Test	Test Time: 2000hrs for ø D= 5 ~ 6.3mm; 3000 hrs for øD = 8mm; 5000 hrs for øD ≥ 10mm Capacitance Change: ≤ ± 20% Dissipation Factor: Less than 200% of specified value Leakage Current: Within specified value *The above specifications shall be satisfied when the capacitors are restored to 20 ˚C after the rated voltage applied for 2000 hrs at 105 ˚C.
Shelf Life Test	Test Time: 1000 hrs Capacitance Change: ≤ ± 20% Dissipation Factor: Less than 200% of specified value Leakage Current: Within specified value *The above specifications shall be satisfied when the capacitors are restored to 20 ˚C after exposing them for 1000 hrs at 105 ˚C without voltage applied.
Ripple Current & Frequency Multipliers	Freq. (Hz) / Cap. (μF): 60 (50) / 120 / 500 / 1K / 10K / 100K Under 33: 0.40 / 0.55 / 0.65 / 0.80 / 0.90 / 1.00 39 to 330: 0.60 / 0.70 / 0.80 / 0.90 / 0.95 / 1.00 390 to 1000: 0.65 / 0.80 / 0.85 / 0.98 / 1.00 / 1.00 1200 up above: 0.80 / 0.90 / 0.95 / 0.98 / 1.00 / 1.00
Ripple Current & Temperature Multipliers	Temperature(˚C): Under 50 / 70 / 85 / 105 Multiplier: 2.40 / 2.05 / 1.70 / 1.00
Standards	Satisfies Characteristic W of JIS C 5141

DIAGRAM OF DIMENSIONS



Unit: mm

LEAD SPACING AND DIAMETER

ø D	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ø d	0.5		0.6			0.8	
α	1.0		1.5				
β	0.5						

DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: ø D x L(mm)
Ripple Current: mA/rms at 100 Hz, 105 ˚C

V.DC / Item		6.3V(0J)					10V(1A)						16V(1C)			
		ø D X L	Impedance (Ω, Max/100K Hz)		Ripple Current (mA rms) (mA/rms, 105 ˚C)		ø D X L	Impedance (Ω, Max/100K Hz)		Ripple Current (mA rms) (mA/rms, 105 ˚C)		ø D X L	Impedance (Ω, Max/100K Hz)		Ripple Current (mA rms) (mA/rms, 105 ˚C)	
µF	code		20˚C	-10˚C	120Hz	100KHz		20˚C	-10˚C	120Hz	100KHz		20˚C	-10˚C	120Hz	100KHz
56	560											5x11	0.72	1.80	116	165
82	820															
120	121	5x11	0.72	1.80	116	165	6.3x11	0.44	0.88	165	235	6.3x11	0.38	0.95	179	255
180	181	6.3x11	0.39	0.78	175	250										
220	221	6.3x11	0.38	0.95	179	255	6.3x15	0.24	0.48	259	370	8x11.5	0.16	0.32	322	460
270	271	6.3x15	0.27	0.68	231	330										
330	331	6.3x15	0.27	0.68	231	330	8x11.5	0.20	0.50	291	415	8x15	0.16	0.40	347	495
390	391	8x11.5	0.20	0.50	332	415										
470	471	8x15	0.14	0.28	440	550	8x15	0.16	0.40	396	495	8x20	0.11	0.28	512	640
		10x12.5	0.12	0.30	500	625						10x16	0.084	0.21	660	825
560	561	8x15	0.16	0.40	396	495										
680	681	8x20	0.084	0.21	660	825	8x20	0.11	0.28	512	640	10x20	0.062	0.16	832	1,040
		10x16	0.085	0.17	636	795	10x16	0.084	0.21	660	825					
820	821	8x20	0.110	0.28	512	640										
1,000	102	10x20	0.075	0.15	760	950	10x20	0.062	0.16	832	1,040	10x30	0.047	0.094	1,128	1,410
1,200	122	10x20	0.062	0.16	936	1,040										
1,500	152	10x25	0.052	0.13	1,134	1,260	10x30	0.044	0.11	1,296	1,440	13x25	0.034	0.085	1,521	1,690
1,800	182	10x30	0.050	0.12	1,233	1,370										
2,200	222	10x30	0.044	0.11	1,296	1,440	13x25	0.034	0.085	1,521	1,690	13x30	0.030	0.075	1,755	1,950
		13x20	0.046	0.12	1,206	1,340						16x20	0.038	0.095		1,630
2,700	272	13x25	0.038	0.076	1,431	1,590										
3,300	332	13x25	0.034	0.068	1,539	1,710	13x35.5	0.027	0.068	1,980	2,200	13x40	0.024	0.06	2,151	2,390
							16x20	0.038	0.095	1,467	1,630					
3,900	392	13x30	0.030	0.075	1,755	1,950										
		16x20	0.038	0.095	1,467	1,630										
4,700	472	13x35.5	0.027	0.068	1,980	2,200	16x31.5	0.023	0.046	2,178	2,420	16x35.5	0.022	0.055	2,295	2,550
5,600	562	13x40	0.024	0.060	2,151	2,390										
		16x25	0.028	0.070	1,863	2,070										
6,800	682	16x31.5	0.025	0.063	2,115	2,350	16x35.5	0.022	0.055	2,295	2,550	18x35.5	0.021	0.053	2,394	2,660

SURGE
Components Inc.
1016 Grand Boulevard
Deer Park, NY 11729 • 631 595-1818 • FAX: 631 595-1283

V.DC / Item		25V(1E)					35V(1V)						50V(1H)			
		ø D X L	Impedance (Ω, Max/100K Hz)		Ripple Current (mA rms) (mA/rms, 105 ˚C)		ø D X L	Impedance (Ω, Max/100K Hz)		Ripple Current (mA rms) (mA/rms, 105 ˚C)		ø D X L	Impedance (Ω, Max/100K Hz)		Ripple Current (mA rms) (mA/rms, 105 ˚C)	
µF	code		20˚C	-10˚C	120Hz	100KHz		20˚C	-10˚C	120Hz	100KHz		20˚C	-10˚C	120Hz	100KHz
18	**180**											5x11	1.10	3.30	91	130
27	**270**															
39	**390**	5x11	0.72	1.80	116	165	6.3x11	0.41	0.82	172	245	6.3x11	0.56	1.60	154	220
56	**560**	6.3x11	0.44	0.88	165	235										
68	**680**	6.3x11	0.36	0.72	182	260	6.3x15	0.24	0.48	259	370	8x11.5	0.29	0.84	238	340
82	**820**	6.3x11	0.38	0.95	179	255										
120	**121**	6.3x15	0.27	0.68	231	330	8x11.5	0.20	0.50	291	415	8x20	0.18	0.52	427	610
							10x12.5	0.12	0.30	438	625	10x16	0.12	0.30	529	755
150	**151**	8x11.5	0.20	0.50	291	415										
180	**181**	10x12.5	0.12	0.30	438	625	8x15	0.16	0.40	347	495	10x20	0.088	0.22	662	945
220	**221**	8x15	0.16	0.40	347	495										
330	**331**	8x20	0.11	0.28	448	640	10x20	0.062	0.16	728	1,040	10x30	0.059	0.15	882	1,260
		10x16	0.084	0.21	578	825						13x20	0.059	0.15	833	1,190
390	**391**	10x20	0.07	0.14	788	985										
470	**471**	10x20	0.062	0.16	832	1,040						13x25	0.045	0.110	1,192	1,490
560	**561**	10x25	0.052	0.13	1,008	1,260										
680	**681**	10x30	0.046	0.092	1,136	1,420	13x25	0.034	0.085	1,352	1,690	13x35.5	0.033	0.083	1,512	1,890
												16x20	0.043	0.110	1,136	1,420
820	**821**	10x30	0.044	0.11	1,152	1,440										
		13x20	0.046	0.12	1,072	1,340										
1,000	**102**	13x25	0.034	0.085	1,352	1,690	13x31.5	0.030	0.075	1,560	1,950	16x31.5	0.029	0.073	1,720	2,150
						`	16x20	0.038	0.095	1,304	,1630					
1,200	**122**	13x25	0.032	0.064	1,584	1,760										
1,500	**152**	13x30	0.030	0.075	1,755	1,950	13x40	0.024	0.060	2,151	2,390					
		16x20	0.038	0.095	1,467	1,630										
1,800	**182**	13x35.5	0.027	0.068	1.980	2,200										
		16x25	0.028	0.070	1,863	2,070										
2,200	**222**	13x40	0.024	0.060	2,151	2,390	16x35.5	0.022	0.055	2,295	2,550	18x40	0.020	0.050	2,349	2,610
2,700	**272**	16x31.5	0.025	0.063	2,115	2,350										
3,300	**332**	16x35.5	0.022	0.055	2,295	2,550	18x40	0.017	0.043	2,709	3,010					
3,900	**392**	18x35.5	0.021	0.053	2,394	2,660										
4,700	**472**	18x40	0.017	0.043	2,709	3,010										