



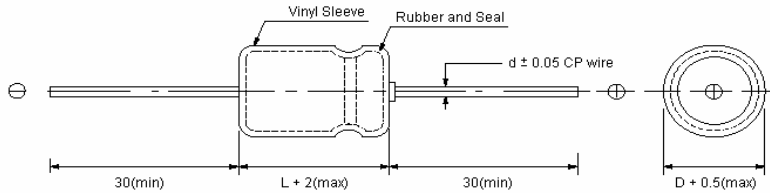
**RoHS Compliant ALUMINIUM ELECTROLYTIC CAPACITOR**

**SA Series**

■ **FEATURES**

Load life of 2000 hours at 85 °C. High value of CV range.  
 Standard series for general purpose.

■ **OUTLINE**



		mm									
D		6	8	10	13	16	18	20	22	25	
d		0.6					0.8				

■ **SPECIFICATIONS**

Items	Characteristics															
<b>Capacitance Tolerance (120Hz, 25°C)</b>	± 20% (M)															
<b>Rated Working Voltage Range</b>	6.3 ~ 100VDC								160 ~ 450VDC							
<b>Operation Temperature</b>	-40°C ~ +85°C								-25°C ~ +85°C							
<b>Leakage Current (25°C)</b>	(After 2 minutes applying the DC working voltage)								(After 5 minutes applying the DC working voltage)							
	I ≤ 0.01CV or 3 (µA)								I ≤ 0.03CV + 10 (µA)							
	I : Leakage Current (µA)				C : Rated Capacitance (µF)				V : Working Voltage (V)							
<b>Surge Voltage (25°C)</b>	<b>W.V.</b>	6.3	10	16	25	35	40	50	63	100	160	200	250	350	400	450
	<b>S.V.</b>	8	13	20	32	44	50	63	79	125	200	250	300	400	450	500
<b>Dissipation Factor (120Hz, 25°C)</b>	<b>W.V.</b>	6.3	10	16	25	35	40	50	63	100	160	200	250	350	400	450
	<b>tan d</b>	0.25	0.20	0.17	0.15	0.12	0.12	0.10	0.10	0.10	0.15	0.15	0.15	0.20	0.20	0.20
	For capacitance exceeding 1000 µF, add 0.02 per increment of 1000 µF															
<b>Temperature Characteristics</b>	<b>W.V.</b>	6.3	10	16	25	35	40	50	63	100	160	200	250	350	400	450
	<b>- 25°C / + 25°C</b>	4	4	3	3	2	2	2	2	2	3	3	3	6	6	6
	<b>- 40°C / + 25°C</b>	10	8	6	4	3	3	3	3	3	4	4	4	6	6	6
<b>Load Test</b>	Impedance ratio at 120Hz															
	After 2000 hours application of WV at +85°C, the capacitor shall meet the following limits.															
	<b>Capacitance Change</b>	≤ ± 20% of initial value														
	<b>tan d</b>	≤ 150% of initial specified value														
<b>Leakage Current</b>	≤ initial specified value															
<b>Shelf Test</b>	After 1000 hours, no voltage applied at +85°C, the capacitor shall meet the following limits.															
	<b>Capacitance Change</b>	≤ ± 20% of initial value														
	<b>tan d</b>	≤ 150% of initial specified value														
	<b>Leakage Current</b>	≤ 200% of initial specified value														



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■ **DIMENSIONS**

**D x L (mm)**

WV uF	6.3	10	16	25	35	40	50	63	100	160	200	250	350	400	450
0.47						⇒	6x13	6x13	6x13	6x13	8x16	8x16	8x16	8x16	8x16
1						⇒	6x13	6x13	6x13	6x13	8x16	8x16	8x16	8x16	8x16
2.2						⇒	6x13	6x13	6x13	8x16	8x16	8x16	10x16	10x16	10x16
3.3						⇒	6x13	6x13	6x13	8x16	10x16	10x16	10x16	10x21	10x21
4.7						⇒	6x13	6x13	6x13	8x16	10x16	10x16	10x21	13x21	13x21
10				⇒	6x13	6x13	6x13	6x13	8x16	10x21	10x21	10x21	13x21	13x24	13x24
22		⇒	6x13	6x13	6x13	6x13	6x13	6x16	8x16	13x21	13x21	13x24	16x33	16x33	16x33
33	⇒	6x13	6x13	6x13	6x13	8x16	8x16	8x16	8x20	13x21	13x27	16x33	16x33	18x36	18x36
47	⇒	6x13	6x13	6x13	8x13	8x16	8x16	8x16	8x21	13x24	13x33	16x33	16x36	18x36	18x36
100	⇒	6x13	6x16	8x16	8x16	8x16	8x16	10x21	10x21	16x33	18x36	18x36	20x36	22x45	22x46
220	⇒	8x16	8x16	8x16	10x21	10x21	10x21	13x21	13x21	18x36	22x42	22x47	25x57		
330	⇒	8x16	8x16	10x21	10x21	13x21	13x21	13x26	16x28	22x50	25x52	25x57			
470	8x16	8x16	8x16	10x21	13x21	13x24	13x24	16x26	16x33	25x42					
1000	10x21	10x21	10x21	13x21	13x24	16x28	16x33	16x33	18x36						
2200	13x21	13x21	13x24	16x28	16x33	18x36	18x36	20x42							
3300	13x24	13x24	16x28	16x33	18x36	20x36	20x42	25x42							
4700	16x28	16x28	16x36	18x36	20x36	20x42	25x43	25x54							
10000	16x33	18x36	20x36	22x42	25x54										

■ **PERMISSIBLE RIPPLE CURRENT**

**mA (rms) at 120Hz 85°C**

WV uF	6.3	10	16	25	35	40	50	63	100	160	200	250	350	400	450
0.47						⇒	5	5	10	9	9	9	10	10	10
1						⇒	10	10	19	11	11	11	12	12	12
2.2						⇒	19	28	29	18	18	20	20	20	20
3.3						⇒	33	38	38	24	24	24	26	26	28
4.7						⇒	43	43	48	28	28	30	30	30	33
10				⇒	57	59	62	67	67	45	45	48	53	53	58
22		⇒	71	86	90	93	95	100	109	76	76	90	93	93	98
33	⇒	57	105	105	105	105	105	124	138	105	105	109	116	116	124
47	⇒	86	124	124	124	124	124	152	171	124	124	143	152	152	171
100	⇒	171	171	171	200	218	238	257	333	204	204	233	247	247	271
220	⇒	238	238	295	333	356	380	428	523	347	356	380	395		
330	⇒	314	333	371	418	447	475	523	665	523	570	617			
470	361	380	418	456	523	570	617	713	855	648					
1000	551	599	646	808	855	930	998	1045							
2200	846	874	950	1140	1188	1212	1235	1314							
3300	969	1034	1045	1235	1330	1425	1740	1825							
4700	1112	1140	1292	1425	1635	1795	1864	1976							
10000	1378	1520	1845	1954	2133										