

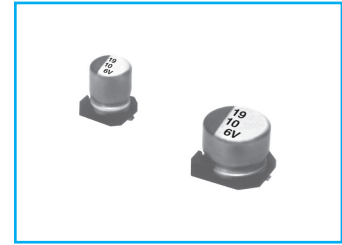
# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS



## SC Chip type, Standard Series



- Chip type higher capacitance in larger case sizes
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape
- Complied to the RoHS directive



Item	Characteristics																														
Operating temperature range	-40 ~ +85°C																														
Leakage current max.	WV ≤ 100 I = 0.01CV or 3μA whichever is greater (after 2 minutes) WV ≥ 160 I = 0.04CV + 100μA(after 1 minutes)																														
Capacitance tolerance	±20% at 120Hz, 20°C																														
Dissipation factor max. (at 120Hz, 20°C)	<table border="1"> <tr> <td>WV</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>160</td> <td>200</td> <td>250</td> <td>400</td> <td>450</td> </tr> <tr> <td>tanδ</td> <td>0.40</td> <td>0.35</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.15</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.25</td> <td>0.25</td> </tr> </table>	WV	4	6.3	10	16	25	35	50	63	100	160	200	250	400	450	tanδ	0.40	0.35	0.24	0.20	0.16	0.15	0.12	0.12	0.12	0.20	0.20	0.20	0.25	0.25
WV	4	6.3	10	16	25	35	50	63	100	160	200	250	400	450																	
tanδ	0.40	0.35	0.24	0.20	0.16	0.15	0.12	0.12	0.12	0.20	0.20	0.20	0.25	0.25																	
Low temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <tr> <td>WV</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35 ~ 100</td> <td>160 ~ 250</td> <td>400 ~ 450</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>6</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>6</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>12</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>6</td> <td>10</td> </tr> </table>	WV	4	6.3	10	16	25	35 ~ 100	160 ~ 250	400 ~ 450	Z-25°C/Z+20°C	6	5	4	3	2	2	3	6	Z-40°C/Z+20°C	12	10	8	6	4	3	6	10			
WV	4	6.3	10	16	25	35 ~ 100	160 ~ 250	400 ~ 450																							
Z-25°C/Z+20°C	6	5	4	3	2	2	3	6																							
Z-40°C/Z+20°C	12	10	8	6	4	3	6	10																							
Load life (after application of the rated voltage for 2000 hours at 85°C)	<table border="1"> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±20% of initial value (Small size : ±25%)</td> </tr> <tr> <td>tanδ</td> <td>Less than 200% of the specified value</td> </tr> </table>	Leakage current	Less than specified value	Capacitance change	Within ±20% of initial value (Small size : ±25%)	tanδ	Less than 200% of the specified value																								
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Capacitance change	Within ±20% of initial value (Small size : ±25%)																														
tanδ	Less than 200% of the specified value																														
Shelf life (at 85°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4																														
Resistance to soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 10 seconds. <table border="1"> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>tanδ</td> <td>Less than specified value</td> </tr> </table>	Leakage current	Less than specified value	Capacitance change	Within ±10% of initial value	tanδ	Less than specified value																								
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CHIP TYPES

### ● DRAWING -Series code of SC is "V"

Unit : mm

(∅4, ∅5)

※ Voltage mark for 6.3V is '6<sub>1</sub>'

∅D×L	W	A	B	C	E	R
4×5.3	4.8		4.3	4.3	1.0	0.5~0.8
5×5.3	5.8		5.3	5.3	1.4	0.5~0.8
6.3×5.3		2.4	6.6	6.6	2.2	0.5~0.8
6.3×5.8		2.4	6.6	6.6	2.2	0.5~0.8
6.3×7.7		2.4	6.6	6.6	2.2	0.5~0.8
8×6.2		3.3	8.3	8.3	2.3	0.5~0.8
8×10		2.9	8.3	8.3	3.1	0.8~1.1
10×10		3.2	10.3	10.3	4.5	0.8~1.1
12.5×13.5		4.6	12.8	12.8	4.5	0.8~1.4

(∅6.3, ∅8×6.2)

∅6.3×7.7 : L ±0.4  
∅8×6.2 : L ±0.4

(∅8×10, ∅10×10)

Safety vent

(∅12.5)

Safety vent

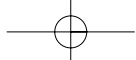
# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

**SC** series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

μF \ WV	4		6.3		10		16		25		35		50	
	0.1													4×5.3
0.22													4×5.3	4.7
0.33													4×5.3	5.7
0.47													4×5.3	6.8
1.0													4×5.3	10
2.2											4×5.3	11	4×5.3	15
3.3									4×5.3	15	4×5.3	16	4×5.3	18
4.7							4×5.3	16	4×5.3	18	4×5.3	19	4×5.3	24
													5×5.3	25
10	4×5.3	16	4×5.3	19	4×5.3	21	4×5.3	21	4×5.3	24	4×5.3	27	5×5.3	41
									5×5.3	30	5×5.3	32	6.3×5.3	43
22	4×5.3	24	4×5.3	29	4×5.3	28	4×5.3	30	5×5.3	41	6.3×5.3	55	6.3×5.3	71
					5×5.3	36	5×5.3	41	6.3×5.3	53			6.3×5.8	73
33	4×5.3	29	4×5.3	30	4×5.3	34	5×5.3	43	5×5.3	50	6.3×5.3	65	6.3×7.7	94
			5×5.3	41	5×5.3	44	6.3×5.3	58	6.3×5.3	64	6.3×5.8	67	8×6.2	95
47	4×5.3	35	4×5.3	36	5×5.3	47	5×5.3	52	6.3×5.3	70	6.3×7.7	94	6.3×7.7	105
			5×5.3	48	6.3×5.3	62	6.3×5.3	69	6.3×5.8	72	8×6.2	105	8×10	140
100	5×5.3	54	5×5.3	60	6.3×5.3	80	6.3×5.3	88	8×6.2	145	6.3×7.7	132	8×10	181
	6.3×5.3	68	6.3×5.3	82	6.3×5.8	82	6.3×5.8	91			8×10	175	10×10	195
220	6.3×5.3	93	6.3×5.8	91	6.3×7.7	173	6.3×7.7	162	8×10	232	10×10	265	10×10	320
					8×6.2	175	8×10	215	10×10	250				
330			6.3×7.7	188	8×10	240	8×10	270	10×10	305	10×10	360	12.5×13.5	600
			8×6.2	190										
470			8×10	265	8×10	290	8×10	307	10×10	400	12.5×13.5	600		
							10×10	330						
1000			8×10	370	10×10	454	12.5×13.5	710	12.5×13.5	820				
			10×10	400										
1500			10×10	480	12.5×13.5	850	12.5×13.5	870						
2200			12.5×13.5	890	12.5×13.5	960								

↑ ↑      Ripple current (mA rms) at 85°C, 120Hz  
 ——— Case size ØD x L (mm)



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## SC series

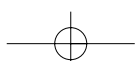
### ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

$\mu\text{F}$ \diagdown WV	63		100		160		200		250		400		450	
2.2													10×10	85
3.3			6.3×5.8	29							10×10	90	10×10	100
4.7	6.3×5.8	31	6.3×5.8 8×6.2	35 40			10×10	100	10×10	100	12.5×13.5	115	12.5×13.5	115
10	6.3×5.8	46	8×10	77	10×10	100	12.5×13.5	150	12.5×13.5	150				
22	8×6.2	96	8×10	100	12.5×13.5	240	12.5×13.5	260						
33	8×10	117	10×10	130	12.5×13.5	260								
47	10×10	140	10×10	155	↑ ↑ — Ripple current (mA rms) at 85°C, 120Hz — Case size $\varnothing D \times L$ (mm)									
68	10×10	160	12.5×13.5	350										
100	12.5×13.5	370	12.5×13.5	420										
220	12.5×13.5	550												

CHIP TYPES

### ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz $\leq$
Coefficient	0.70	1.00	1.17	1.36	1.50



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