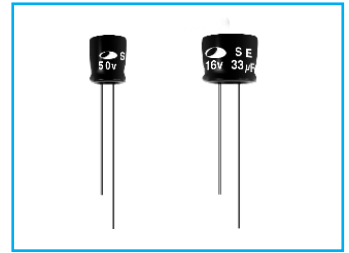
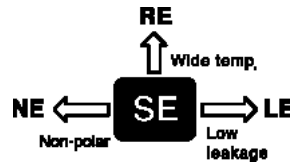


MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



SE Standard, Height 5mm Series

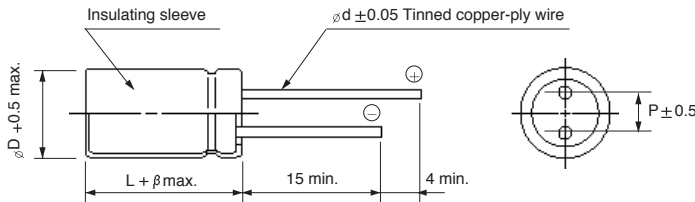
- Ultra miniature series with 5mm height
- Suitable to replace tantalum capacitors at low cost
- Load life of 2000 hours at 85°C



Item	Characteristics																		
Operating temperature range	-40 ~ +85°C																		
Leakage current max.	$I = 0.01CV$ or $4\mu A$ whichever is greater (after 1 minute)																		
Capacitance tolerance	$\pm 20\%$ 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> </tr> <tr> <td>tan δ</td> <td>0.35</td> <td>0.24</td> <td>0.20</td> <td>0.16(0.20)</td> <td>0.13(0.15)</td> <td>0.12(0.14)</td> <td>0.09(0.11)</td> <td>0.09(0.11)</td> </tr> </table>	WV	4	6.3	10	16	25	35	50	63	tan δ	0.35	0.24	0.20	0.16(0.20)	0.13(0.15)	0.12(0.14)	0.09(0.11)	0.09(0.11)
	WV	4	6.3	10	16	25	35	50	63										
tan δ	0.35	0.24	0.20	0.16(0.20)	0.13(0.15)	0.12(0.14)	0.09(0.11)	0.09(0.11)											
Figures in () are for $\phi 3$ products.																			
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>16~63</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>6</td> <td>4</td> <td>3</td> <td>2</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> </tr> </table>	WV	4	6.3	10	16~63	Z-25°C/Z+20°C	6	4	3	2	Z-40°C/Z+20°C	12	8	6	4			
	WV	4	6.3	10	16~63														
	Z-25°C/Z+20°C	6	4	3	2														
Z-40°C/Z+20°C	12	8	6	4															
Load life (after application of the rated voltage for 2000 hours at 85°C)	Leakage current	Less than specified value																	
	Capacitance change	Within $\pm 20\%$ of initial value																	
	tan δ	Less than 200% of specified value																	
Shelf life (at 85°C)	After 1000 hours no load test, leakage current, capacitance and tan δ are same as load life value.																		

● DRAWING

Unit : mm



ϕD	3	4	5	6.3	8
P	1.0	1.5	2.0	2.5	2.5
ϕd	0.4	0.45	0.45	0.45	0.45
β	1.0				1.5

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

μF WV	4	6.3	10	16	25	35	50	63								
0.1							4 x 5(3 x 5)	4.1(3.1)	4 x 5(3 x 5)	4.1(3.1)						
0.15							4 x 5(3 x 5)	5.0(3.8)	4 x 5(3 x 5)	5.0(3.8)						
0.22							4 x 5(3 x 5)	6.1(4.6)	4 x 5(3 x 5)	6.1(4.6)						
0.33							4 x 5(3 x 5)	7.5(5.7)	4 x 5(3 x 5)	7.5(5.7)						
0.47							4 x 5(3 x 5)	8.9(6.7)	4 x 5(3 x 5)	8.9(6.7)						
0.68							4 x 5(3 x 5)	11(8.1)	4 x 5(3 x 5)	11(8.1)						
1.0							4 x 5(3 x 5)	13(9.8)	4 x 5(3 x 5)	13(9.8)						
1.5							4 x 5(3 x 5)	16(12)	4 x 5	16						
2.2						4 x 5(3 x 5)	17(13)	4 x 5	19	4 x 5	19					
3.3					4 x 5(3 x 5)	20(15)	4 x 5	20	4 x 5	24	5 x 5	27				
4.7				4 x 5(3 x 5)	21(16)	4 x 5	23	4 x 5	24	5 x 5	33	5 x 5	33			
6.8			4 x 5(3 x 5)	23(19)	4 x 5	25	4 x 5	28	5 x 5	34	5 x 5	39	6.3 x 5	46		
10	4 x 5(3 x 5)	21(17)	4 x 5(3 x 5)	25(21)	4 x 5	28	4 x 5	31	5 x 5	40	5 x 5	41	6.3 x 5	56	6.3 x 5	56
15	4 x 5(3 x 5)	26(21)	4 x 5	31	4 x 5	34	5 x 5	44	5 x 5	49	6.3 x 5	59	6.3 x 5	68	8 x 5	81
22	4 x 5(3 x 5)	31(26)	4 x 5	37	5 x 5	47	5 x 5	53	6.3 x 5	69	6.3 x 5	72	8 x 5	98	8 x 5	98
33	4 x 5	38	5 x 5	53	5 x 5	58	6.3 x 5	76	6.3 x 5	84	8 x 5	104	8 x 5	120		
47	4 x 5	45	5 x 5	63	6.3 x 5	81	6.3 x 5	91	8 x 5	119	8 x 5	124				
68	5 x 5	63	6.3 x 5	89	6.3 x 5	98	6.3 x 5	109	8 x 5	143						
100	5 x 5	89	6.3 x 5	108	8 x 5	140	8 x 5	157	8 x 5	174						
150	6.3 x 5	109	8 x 5	157	8 x 5	172	8 x 5	192								
220	6.3 x 5	133	8 x 5	190	8 x 5	208										
330	8 x 5	192														

Ripple current (mA rms) at 85°C, 120Hz
Case size $\phi D \times L$ (mm)

MINIATURE TYPES