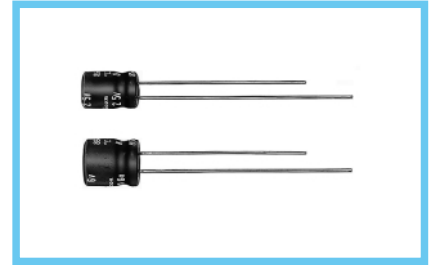
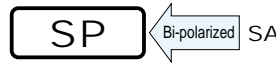


ALUMINUM ELECTROLYTIC CAPACITORS

SP series 7mmL, Bi-Polarized



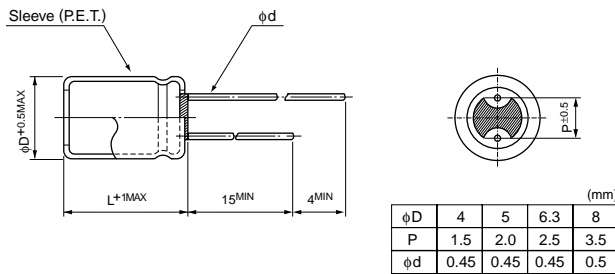
- Bi-polarized series with 7mm height.
- Extended capacitance range by an addition of $\phi 8$ product.
- Adapted to the RoHS directive (2002/95/EC).



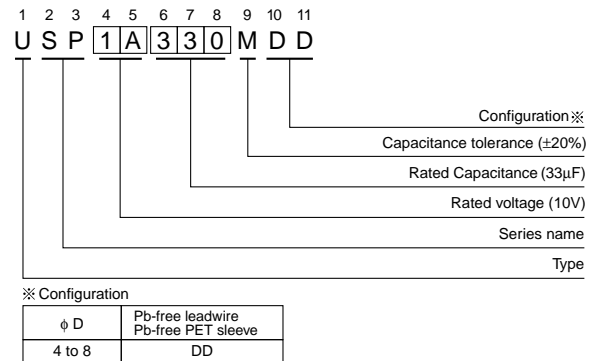
Specifications

Item	Performance Characteristics																							
Category Temperature Range	-40 to +85°C																							
Rated Voltage Range	6.3 to 50V																							
Rated Capacitance Range	0.1 to 220 μ F																							
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C																							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.05CV or 10 (μ A), whichever is greater.																							
tan δ	Measurement frequency : 120Hz, Temperature : 20°C																							
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	tan δ (MAX.)	0.24	0.20	0.16	0.16	0.14	0.12									
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tan δ (MAX.)	0.24	0.20	0.16	0.16	0.14	0.12																		
Stability at Low Temperature	Measurement frequency : 120 Hz																							
	<table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Impedance ratio</td> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>ZT / Z20 (MAX.)</td> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V)		6.3	10	16	25	35	50	Impedance ratio	Z-25°C / Z+20°C	4	3	2	2	2	2	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	8	6	4	4	3
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Impedance ratio	Z-25°C / Z+20°C	4	3	2	2	2	2																	
ZT / Z20 (MAX.)	Z-40°C / Z+20°C	8	6	4	4	3	3																	
Endurance	After 2000 hours' application of rated voltage at 85°C with the polarity inverted every 250 hours, capacitors meet the characteristic requirements listed at right.																							
	<table border="1"> <tr> <td>Capacitance change</td> <td>Within $\pm 20\%$ of initial value</td> </tr> <tr> <td>tan δ</td> <td>200% or less of initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance change	Within $\pm 20\%$ of initial value	tan δ	200% or less of initial specified value	Leakage current	Initial specified value or less																	
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Leakage current	Initial specified value or less																							
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.																							
Marking	Printed with white color letter on black sleeve.																							

Radial Lead Type



Type numbering system (Example : 10V 33 μ F)



Dimensions

Cap. (μ F)	Code	V		6.3		10		16		25		35		50	
		Code	0J	1A	1C	1E	1V	1H							
0.1	0R1													4 × 7	1.0
0.22	R22													4 × 7	2.3
0.33	R33													4 × 7	3.5
0.47	R47													4 × 7	5.0
1	010													4 × 7	10
2.2	2R2													4 × 7	14
3.3	3R3													4 × 7	20
4.7	4R7							4 × 7	18	5 × 7	21	4 × 7	16	5 × 7	27
10	100			4 × 7	24	5 × 7	30	6.3 × 7	35	6.3 × 7	37	6.3 × 7	37	8 × 7	44
22	220			5 × 7	40	6.3 × 7	51	6.3 × 7	53	8 × 7	62	8 × 7	62	8 × 7	65
33	330	5 × 7	42	6.3 × 7	56	6.3 × 7	63	8 × 7	73	8 × 7	76				
47	470	6.3 × 7	58	6.3 × 7	67	6.3 × 7	75	8 × 7	87						
100	101	8 × 7	95	8 × 7	110	8 × 7	125								
220	221	8 × 7	140												
														Case size $\phi D \times L$ (mm)	Rated ripple

Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

Rated Ripple (mArms) at 85°C 120Hz

Please refer to page 20, 21, 22 about the formed or taped product spec. Please refer to page 4 for the minimum order quantity.

CAT.8100W