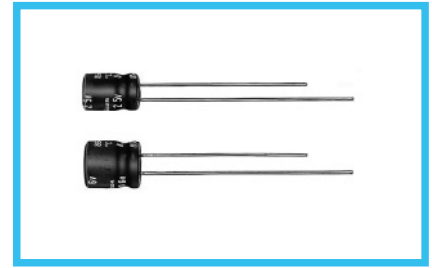
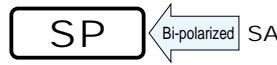


ALUMINUM ELECTROLYTIC CAPACITORS

SP 7mmL, Bi-Polarized
series



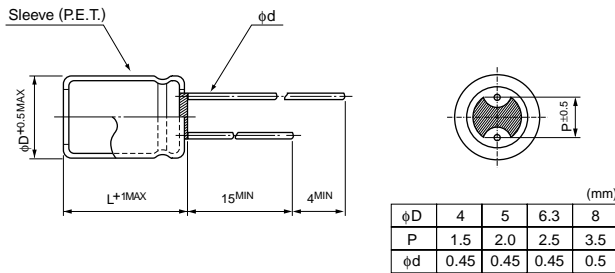
- Bi-polarized series with 7mm height.
- Extended capacitance range by an addition of $\phi 8$ product.
- Compliant to the RoHS directive (2002/95/EC).



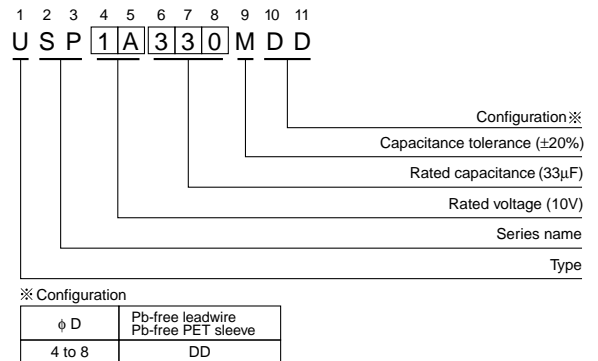
Specifications

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.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C							
	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	
Stability at Low Temperature	Measurement frequency : 120 Hz							
	Rated voltage (V)	6.3	10	16	25	35	50	
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	
		Z-40°C / Z+20°C	8	6	4	4	3	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C with the polarity inverted every 250 hours.		Capacitance change					Within $\pm 20\%$ of the initial capacitance value
			tan δ					200% or less than the initial specified value
			Leakage current					Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the 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	6.3		10		16		25		35		50	
		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	27
10	100			4 × 7	24	5 × 7	30	6.3 × 7	35	6.3 × 7	37	8 × 7	44
22	220			5 × 7	40	6.3 × 7	51	6.3 × 7	53	6.3 × 7	57	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

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

Rated ripple current (mArms) at 85°C 120Hz