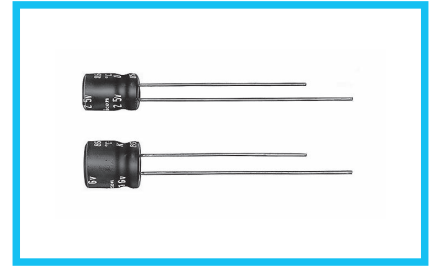


USP 7mmL, Bi-Polarized



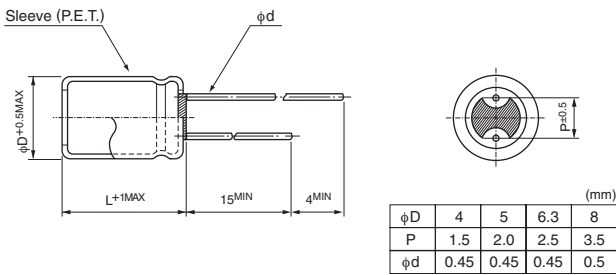
- Bi-polarized series with 7mm height.
- Extended capacitance range by an addition of $\phi 8$ product.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).



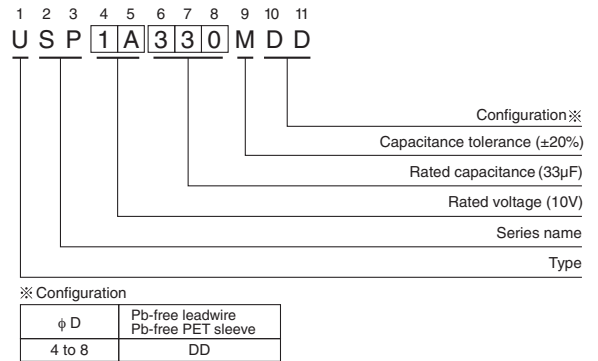
Specifications

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 at 20°C, leakage current is not more than 0.05CV or 10 (μ A), whichever is greater.						
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 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	Z-25°C / Z+20°C	4	3	2	2	2
	(MAX.)	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					
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)



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

● Dimension table in next page.

USP

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D \times L (mm)	tan δ	Leakage Current (μ A) (at 20°C after 2 minutes)	Rated Ripple (mArms) (85°C/120Hz)	Part Number
6.3 (0J)	33	5 \times 7	0.24	10.395	42	USP0J330MDD
	47	6.3 \times 7	0.24	14.805	58	USP0J470MDD
	100	8 \times 7	0.24	31.5	95	USP0J101MDD
	220	8 \times 7	0.24	69.3	140	USP0J221MDD
10 (1A)	10	4 \times 7	0.20	10	24	USP1A100MDD
	22	5 \times 7	0.20	11	40	USP1A220MDD
	33	6.3 \times 7	0.20	16.5	56	USP1A330MDD
	47	6.3 \times 7	0.20	23.5	67	USP1A470MDD
	100	8 \times 7	0.20	50	110	USP1A101MDD
16 (1C)	4.7	4 \times 7	0.16	10	18	USP1C4R7MDD
	10	5 \times 7	0.16	10	30	USP1C100MDD
	22	6.3 \times 7	0.16	17.6	51	USP1C220MDD
	33	6.3 \times 7	0.16	26.4	63	USP1C330MDD
	47	6.3 \times 7	0.16	37.6	75	USP1C470MDD
	100	8 \times 7	0.16	80	125	USP1C101MDD
25 (1E)	4.7	5 \times 7	0.16	10	21	USP1E4R7MDD
	10	6.3 \times 7	0.16	12.5	35	USP1E100MDD
	22	6.3 \times 7	0.16	27.5	53	USP1E220MDD
	33	8 \times 7	0.16	41.25	73	USP1E330MDD
	47	8 \times 7	0.16	58.75	87	USP1E470MDD
35 (1V)	3.3	4 \times 7	0.14	10	16	USP1V3R3MDD
	4.7	5 \times 7	0.14	10	22	USP1V4R7MDD
	10	6.3 \times 7	0.14	17.5	37	USP1V100MDD
	22	8 \times 7	0.14	38.5	62	USP1V220MDD
	33	8 \times 7	0.14	57.75	76	USP1V330MDD
50 (1H)	0.1	4 \times 7	0.12	10	1.0	USP1H0R1MDD
	0.22	4 \times 7	0.12	10	2.3	USP1HR22MDD
	0.33	4 \times 7	0.12	10	3.5	USP1HR33MDD
	0.47	4 \times 7	0.12	10	5.0	USP1HR47MDD
	1	4 \times 7	0.12	10	10	USP1H010MDD
	2.2	4 \times 7	0.12	10	14	USP1H2R2MDD
	3.3	5 \times 7	0.12	10	20	USP1H3R3MDD
	4.7	6.3 \times 7	0.12	11.75	27	USP1H4R7MDD
	10	8 \times 7	0.12	25	44	USP1H100MDD
	22	8 \times 7	0.12	55	65	USP1H220MDD

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

Please refer to page 18, 19 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.