USP

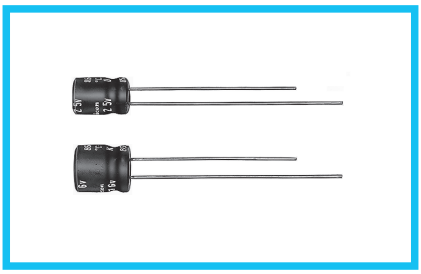
7mmL, Bi-Polarized

BP Bi-polarized

Anti-Solvent Feature

- Bi-polarized series with 7mm height.
- Extended capacitance range by an addition of φ8 product.
- Compliant to the RoHS directive (2011/65/EU).

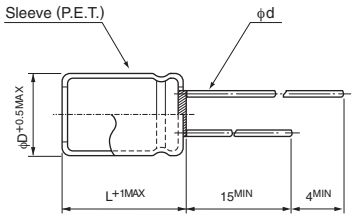
USP Bi-polarized USA

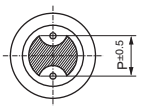


■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +85˚C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	0.1 to 220μF
Capacitance Tolerance	±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 (μA), 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 / 2 ZT / Z20 (MAX.) Z−40˚C / Z+20˚C: 8 / 6 / 4 / 4 / 3 / 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 ±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





(mm)

φD	4	5	6.3	8
P	1.5	2.0	2.5	3.5
φd	0.45	0.45	0.45	0.5

Type numbering system (Example : 10V 33μF)

1	2	3	4	5	6	7	8	9	10	11
U	S	P	1	A	3	3	0	M	D	D

Configuration※
Capacitance tolerance (±20%)
Rated capacitance (33μF)
Rated voltage (10V)
Series name
Type

※Configuration

φD	Pb-free leadwire Pb-free PET sleeve
4 to 8	DD

■Dimensions

Cap.(μF) \ 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	16	5 × 7	20
4.7	4R7				4 × 7	18	5 × 7	21	5 × 7	22	6.3 × 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	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				Case size φD × L (mm)	Rated ripple
220	221	8 × 7	140									

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

● 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.