

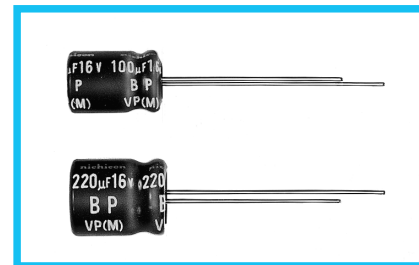
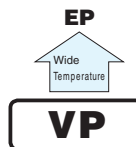


Bi-Polarized

series

Bi-polarized
Anti-Solvent
Feature

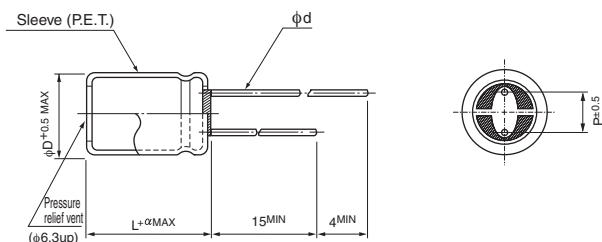
- Standard bi-polarized series for entertainment electronics.
- Compliant to the RoHS directive (2011/65/EU).



Specifications

Item	Performance Characteristics									
Category Temperature Range	-40 to +85°C									
Rated Voltage Range	6.3 to 100V									
Rated Capacitance Range	0.47 to 6800μF									
Capacitance Tolerance	± 20% at 120Hz, 20°C									
Leakage Current	After 5 minutes' application of rated voltage at 20°C, leakage current is not more than 0.03CV or 3 (μA), whichever is greater.									
Tangent of loss angle (tan δ)	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz at 20°C									
	Rated voltage (V)	6.3	10	16	25	35	50	63	100	
	tan δ (MAX.)	0.26	0.24	0.22	0.20	0.16	0.14	0.12	0.10	
Stability at Low Temperature	Measurement frequency : 120Hz									
	Rated voltage (V)		6.3	10	16	25	35	50	63	100
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2
		Z-40°C / Z+20°C	10	8	6	5	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.									

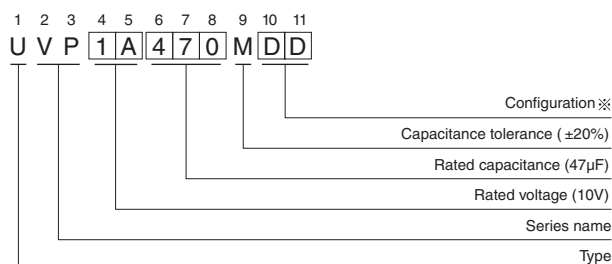
Radial Lead Type



α	(mm)								
	($L < 20$) 1.5								
	($L \geq 20$) 2.0	ϕD	5	6.3	8	10	12.5	16	18
		P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
		ϕd	0.5	0.5	0.6	0.6	0.6	0.8	0.8

- Please refer to page 20 about the end seal configuration.

Type numbering system (Example : 10V 47μF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 to 18	HD

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

■ Dimensions

Cap. (μF)	V Code	6.3		10		16		25		35		50		63		100	
		0J		1A		1C		1E		1V		1H		1J		2A	
0.47	R47											5 × 11	11			5 × 11	14
1	010											5 × 11	17			5 × 11	21
2.2	2R2											5 × 11	25			6.3 × 11	34
3.3	3R3											5 × 11	27	5 × 11	28	6.3 × 11	39
4.7	4R7									5 × 11	34	5 × 11	34	6.3 × 11	34	6.3 × 11	47
10	100					5 × 11	42	5 × 11	42	5 × 11	43	6.3 × 11	52	6.3 × 11	57	8 × 11.5	71
22	220			5 × 11	57	5 × 11	57	6.3 × 11	65	6.3 × 11	73	8 × 11.5	89	8 × 11.5	95	10 × 16	135
33	330	5 × 11	64	5 × 11	64	5 × 11	70	6.3 × 11	80	8 × 11.5	100	8 × 11.5	105	10 × 12.5	135	12.5 × 20	220
47	470	5 × 11	76	5 × 11	76	6.3 × 11	95	6.3 × 11	95	8 × 11.5	120	10 × 12.5	150	10 × 16	180	12.5 × 20	240
100	101	6.3 × 11	125	6.3 × 11	125	8 × 11.5	160	8 × 11.5	160	10 × 16	230	10 × 20	265	12.5 × 20	320	16 × 25	425
220	221	8 × 11.5	215	8 × 11.5	215	10 × 12.5	275	10 × 16	305	12.5 × 20	410	12.5 × 25	480	16 × 25	575	18 × 35.5	720
330	331	8 × 11.5	265	10 × 16	345	10 × 16	375	12.5 × 20	450	12.5 × 20	505	16 × 25	650	16 × 31.5	655		
470	471	10 × 12.5	370	10 × 16	410	10 × 20	485	12.5 × 20	540	12.5 × 25	655	16 × 31.5	835	18 × 35.5	965		
1000	102	10 × 20	650	12.5 × 20	720	12.5 × 25	855	16 × 25	950	16 × 31.5	1140						
2200	222	12.5 × 25	1160	16 × 25	1280	16 × 31.5	1510	18 × 35.5	1620								
3300	332	16 × 25	1570	16 × 31.5	1690	18 × 35.5	1980										
4700	472	16 × 31.5	2020	18 × 35.5	2160												
6800	682	18 × 35.5	2600													Case size φD × L (mm)	Rated ripple

Rated ripple current (mA rms) at 85°C 120Hz

● Frequency coefficient of rated ripple current

Cap. (μF)	Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
0.47 to 47		0.75	1.00	1.35	1.57	2.00
100 to 470		0.80	1.00	1.23	1.34	1.50
1000 to 6800		0.85	1.00	1.10	1.13	1.15