



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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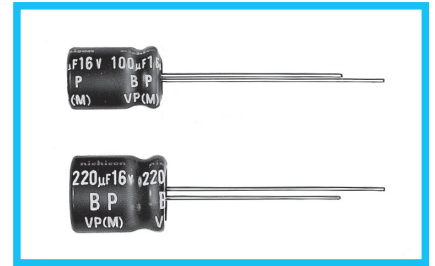
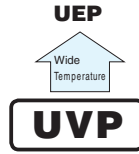
# UVP

Bi-Polarized



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

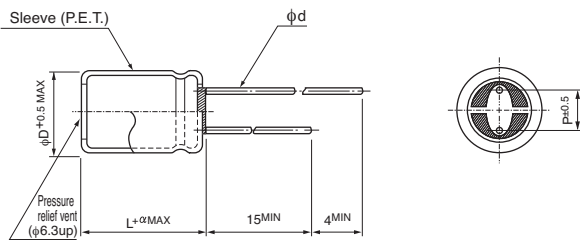
Values marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.



## 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 <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> <td>63</td> <td>100</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.26</td> <td>0.24</td> <td>0.22</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table>	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											
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 <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> <td>63</td> <td>100</td> </tr> <tr> <td rowspan="2">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> <td>2</td> <td>2</td> </tr> <tr> <td>ZT / Z20 (MAX.)</td> <td>10</td> <td>8</td> <td>6</td> <td>5</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	63	100	Impedance ratio	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	ZT / Z20 (MAX.)	10	8	6	5	4	4	3	3
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	ZT / Z20 (MAX.)	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. <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	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																							
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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.																													

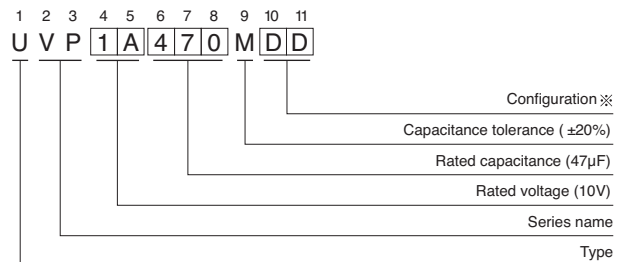
## Radial Lead Type



α		(mm)						
α	(L < 20)	1.5						
	(L ≥ 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.

● Dimension table in next page.



■ 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<sub>rms</sub>) 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