



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!



## Contact us

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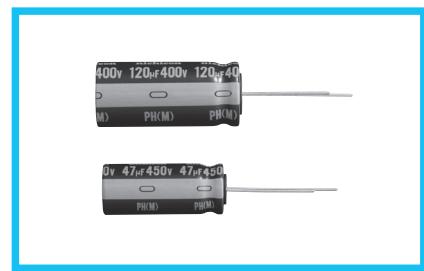
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

## UPH

High Voltage, Miniature-sized



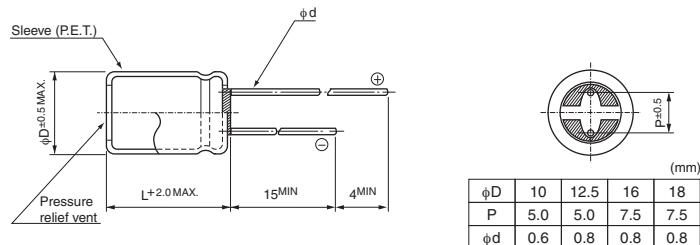
- High ripple current.
- Load life of 2000 hours at 105°C.
- Suited for ballast applications.
- Compliant to the RoHS directive (2011/65/EU).



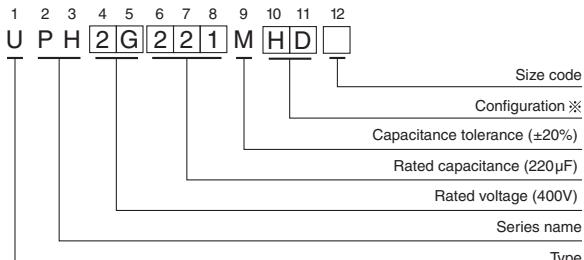
## ■ Specifications

Item	Performance Characteristics											
Category Temperature Range	-25 to +105°C											
Rated Voltage Range	400 to 450V											
Rated Capacitance Range	27 to 220μF											
Capacitance Tolerance	±20% at 120Hz, 20°C											
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.04CV+100 (μA).											
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C <table border="1"> <tr> <th>Rated voltage (V)</th> <th>400</th> <th>420</th> <th>450</th> </tr> <tr> <th>tan δ (MAX.)</th> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </table>				Rated voltage (V)	400	420	450	tan δ (MAX.)	0.15	0.20	0.20
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Stability at Low Temperature	Measurement frequency : 120Hz <table border="1"> <tr> <th>Rated voltage (V)</th> <th>400</th> <th>420</th> <th>450</th> </tr> <tr> <th>Impedance ratio ZT / Z20 (MAX.)   Z-25°C / Z+20°C</th> <td>8</td> <td>8</td> <td>8</td> </tr> </table>				Rated voltage (V)	400	420	450	Impedance ratio ZT / Z20 (MAX.)   Z-25°C / Z+20°C	8	8	8
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Impedance ratio ZT / Z20 (MAX.)   Z-25°C / Z+20°C	8	8	8									
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 2000 hours at 105°C, the peak voltage shall not exceed the rated voltage.											
	<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 105°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 dark brown sleeve.											

## ■ Radial Lead Type



## Type numbering system (Example : 400V 220μF)



※ Configuration	
φ D	Pb-free leadwire Pb-free PET sleeve
10	PD
12.5 to 18	HD

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

## ■ Dimensions

Cap Code	V	400		420		450	
		2G	W6	W6	2W	W6	2W
27	270					10×31.5	300
33	330	10×31.5	330	10×31.5	320		
47	470					12.5×31.5	430
56	560	12.5×31.5	470	12.5×31.5	460	12.5×35.5	490
68	680	12.5×33.5	540			12.5×40	560
82	820	12.5×40	620			16×31.5	640
100	101	16×31.5	710	16×31.5	690	16×35.5	730
120	121	16×35.5	800	16×35.5	780	16×40	820
		▲18×31.5		800	▲18×31.5	800	
150	151	16×40	920	18×35.5	920	18×40	970
		▲18×31.5		890			
180	181	18×40	1060	18×40	1040	18×46	1090
220	221	18×46	1200			Case size φD × L (mm)	Rated ripple

Rated ripple current (mA rms) at 105°C 120Hz

▲: In this case, [6] will be put at 12th digit of type numbering system.

## • Frequency coefficient of rated ripple current

Frequency	60Hz	120Hz	500Hz	1kHz	10kHz or more
Coefficient	0.80	1.00	1.25	1.40	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.