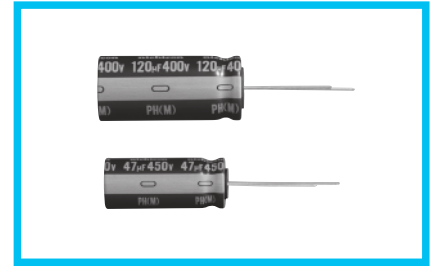
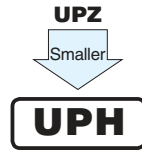


# UPH

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,(EU)2015/863).

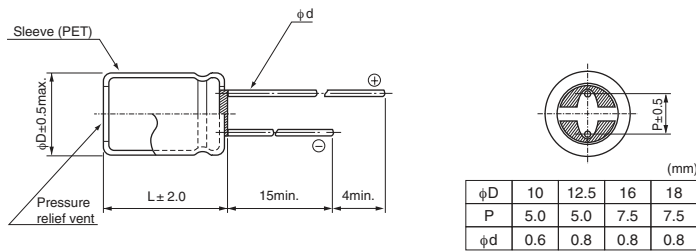


## Specifications

Item	Performance Characteristics								
Category Temperature Range	-40 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> <td>Rated voltage (V)</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>tan δ (max.)</td> <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
Rated voltage (V)	400	420	450						
tan δ (max.)	0.15	0.20	0.20						
Stability at Low Temperature	Measurement frequency : 120Hz								
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>Impedance ratio (max.)</td> <td>Z(-25°C) / Z(+20°C)</td> <td>8</td> <td>8</td> <td>8</td> </tr> </table>	Rated voltage (V)	400	420	450	Impedance ratio (max.)	Z(-25°C) / Z(+20°C)	8	8
Rated voltage (V)	400	420	450						
Impedance ratio (max.)	Z(-25°C) / Z(+20°C)	8	8	8					
Endurance	<p>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.</p> <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		
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 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.								

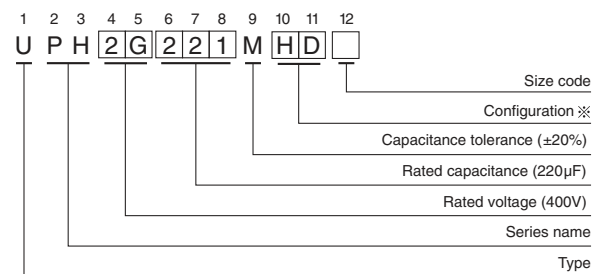
※ I : Leakage Current (µA), C : Rated Capacitance (µF), V : Rated Voltage (V)

## Radial Lead Type



- Please refer to the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

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



### ※ Configuration

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

## 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

● Dimension table in next page.

UPH

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20°C after 1 minute)	Rated Ripple (mArms) (105°C/120Hz)	Part Number
400 (2G)	33	10×31.5	0.15	628	330	UPH2G330MPD
	56	12.5×31.5	0.15	996	470	UPH2G560MHD
	68	12.5×35.5	0.15	1188	540	UPH2G680MHD
	82	12.5×40	0.15	1412	620	UPH2G820MHD
	100	16×31.5	0.15	1700	710	UPH2G101MHD
	120	16×35.5	0.15	2020	800	UPH2G121MHD
	150	16×40	0.15	2500	920	UPH2G151MHD
	150	18×31.5	0.15	2500	890	UPH2G151MHD6
	180	18×40	0.15	2980	1060	UPH2G181MHD
	220	18×46	0.15	3620	1200	UPH2G221MHD
420 (W6)	33	10×31.5	0.20	654.4	320	UPHW6330MPD
	56	12.5×31.5	0.20	1040.8	460	UPHW6560MHD
	100	16×31.5	0.20	1780	690	UPHW6101MHD
	120	16×35.5	0.20	2116	780	UPHW6121MHD
	120	18×31.5	0.20	2116	800	UPHW6121MHD6
	150	18×35.5	0.20	2620	920	UPHW6151MHD
	180	18×40	0.20	3124	1040	UPHW6181MHD
450 (2W)	27	10×31.5	0.20	586	300	UPH2W270MPD
	47	12.5×31.5	0.20	946	430	UPH2W470MHD
	56	12.5×35.5	0.20	1108	490	UPH2W560MHD
	68	12.5×40	0.20	1324	560	UPH2W680MHD
	82	16×31.5	0.20	1576	640	UPH2W820MHD
	100	16×35.5	0.20	1900	730	UPH2W101MHD
	120	16×40	0.20	2260	820	UPH2W121MHD
	120	18×31.5	0.20	2260	800	UPH2W121MHD6
	150	18×40	0.20	2800	970	UPH2W151MHD
	180	18×46	0.20	3340	1090	UPH2W181MHD

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.

- For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.