

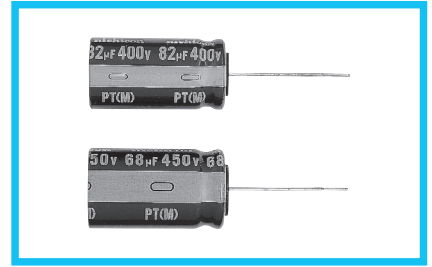
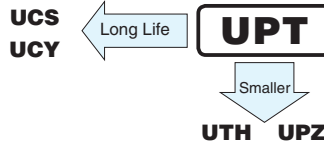
# ALUMINUM ELECTROLYTIC CAPACITORS

## UPT

Miniature Sized, High Ripple Current, Long Life



- High ripple current.
- Suited for ballast application.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

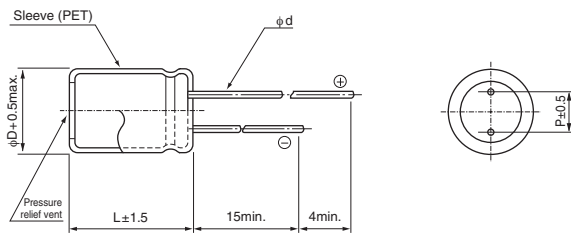


### Specifications

Item	Performance Characteristics															
Category Temperature Range	-40 to +105°C															
Rated Voltage Range	200 to 450V															
Rated Capacitance Range	15 to 390µF															
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 0.06CV+10 (µA)															
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C															
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>200</td> <td>220</td> <td>250</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>tan δ (max.)</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rated voltage (V)	200	220	250	400	420	450	tan δ (max.)	0.12	0.12	0.12	0.15	0.20	0.20	
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Stability at Low Temperature	Measurement frequency : 120Hz															
	<table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>200</td> <td>220</td> <td>250</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>3</td> <td>3</td> <td>3</td> <td>8</td> <td>8</td> <td>8</td> </tr> </table>	Rated voltage (V)		200	220	250	400	420	450	Impedance ratio (max.)	Z(-25°C) / Z(+20°C)	3	3	3	8	8
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Impedance ratio (max.)	Z(-25°C) / Z(+20°C)	3	3	3	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 5000 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									
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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

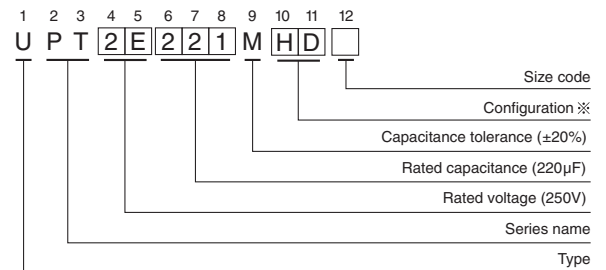


	(mm)			
φD	10	12.5	16	18
P	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.8	0.8

※ In case L > 25 for the φ12.5 dia. unit, lead dia. φ d = 0.8mm.

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

### Type numbering system (Example : 250V 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	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.80	1.00	1.25	1.40	1.60

● Dimension table in next page.

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## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	Rated Ripple (mArms) (105°C/120Hz)	Part Number
200 (2D)	68	10×30.5	0.12	826	350	UPT2D680MPD
	82	12.5×25	0.12	994	410	UPT2D820MHD
	100	12.5×30.5	0.12	1210	480	UPT2D101MHD
	120	12.5×30.5	0.12	1450	530	UPT2D121MHD
	150	12.5×35.5	0.12	1810	620	UPT2D151MHD
	180	12.5×40	0.12	2170	700	UPT2D181MHD
	220	16×30.5	0.12	2650	760	UPT2D221MHD
	220	18×30.5	0.12	2650	810	UPT2D221MHD6
	270	16×35.5	0.12	3250	880	UPT2D271MHD
	270	18×30.5	0.12	3250	870	UPT2D271MHD6
	330	18×35.5	0.12	3970	1010	UPT2D331MHD
	390	18×40	0.12	4690	1130	UPT2D391MHD
220 (2P)	56	10×30.5	0.12	749.2	290	UPT2P560MPD
	68	12.5×25	0.12	907.6	340	UPT2P680MHD
	82	12.5×30.5	0.12	1092.4	390	UPT2P820MHD
	100	12.5×30.5	0.12	1330	430	UPT2P101MHD
	120	12.5×35.5	0.12	1594	490	UPT2P121MHD
	150	12.5×40	0.12	1990	580	UPT2P151MHD
	180	16×30.5	0.12	2386	670	UPT2P181MHD
	220	16×35.5	0.12	2914	770	UPT2P221MHD
	220	18×30.5	0.12	2914	770	UPT2P221MHD6
	270	16×40	0.12	3574	880	UPT2P271MHD
	270	18×35.5	0.12	3574	880	UPT2P271MHD6
	330	18×40	0.12	4366	1010	UPT2P331MHD
250 (2E)	47	10×30.5	0.12	715	270	UPT2E470MPD
	56	12.5×25	0.12	850	310	UPT2E560MHD
	68	12.5×30.5	0.12	1030	360	UPT2E680MHD
	82	12.5×30.5	0.12	1240	400	UPT2E820MHD
	100	12.5×35.5	0.12	1510	460	UPT2E101MHD
	120	12.5×40	0.12	1810	530	UPT2E121MHD
	150	16×30.5	0.12	2260	620	UPT2E151MHD
	180	16×35.5	0.12	2710	720	UPT2E181MHD
	180	18×30.5	0.12	2710	720	UPT2E181MHD6
	220	16×40	0.12	3310	830	UPT2E221MHD
	220	18×35.5	0.12	3310	830	UPT2E221MHD6
	270	18×40	0.12	4060	950	UPT2E271MHD

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.

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## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	Rated Ripple (mArms) (105°C/120Hz)	Part Number
400 (2G)	22	10×30.5	0.15	538	210	UPT2G220MPD
	27	12.5×25	0.15	658	240	UPT2G270MHD
	33	12.5×30.5	0.15	802	290	UPT2G330MHD
	39	12.5×30.5	0.15	946	320	UPT2G390MHD
	47	12.5×35.5	0.15	1138	370	UPT2G470MHD
	56	12.5×40	0.15	1354	420	UPT2G560MHD
	68	16×30.5	0.15	1642	460	UPT2G680MHD
	82	16×30.5	0.15	1978	500	UPT2G820MHD
	100	16×35.5	0.15	2410	580	UPT2G101MHD
	100	18×30.5	0.15	2410	580	UPT2G101MHD6
	120	16×40	0.15	2890	660	UPT2G121MHD
	120	18×35.5	0.15	2890	670	UPT2G121MHD6
	150	18×40	0.15	3610	770	UPT2G151MHD
420 (W6)	18	10×30.5	0.20	463.6	170	UPTW6180MPD
	22	12.5×25	0.20	564.4	200	UPTW6220MHD
	27	12.5×30.5	0.20	690.4	240	UPTW6270MHD
	33	12.5×30.5	0.20	841.6	270	UPTW6330MHD
	39	12.5×35.5	0.20	992.8	310	UPTW6390MHD
	47	12.5×40	0.20	1194.4	360	UPTW6470MHD
	56	16×30.5	0.20	1421.2	430	UPTW6560MHD
	68	16×35.5	0.20	1723.6	510	UPTW6680MHD
	68	18×30.5	0.20	1723.6	510	UPTW6680MHD6
	82	16×40	0.20	2076.4	570	UPTW6820MHD
	82	18×30.5	0.20	2076.4	570	UPTW6820MHD6
	100	18×35.5	0.20	2530	610	UPTW6101MHD
	120	18×40	0.20	3034	660	UPTW6121MHD
450 (2W)	15	10×30.5	0.20	415	150	UPT2W150MPD
	18	12.5×25	0.20	496	180	UPT2W180MHD
	22	12.5×30.5	0.20	604	220	UPT2W220MHD
	27	12.5×30.5	0.20	739	250	UPT2W270MHD
	33	12.5×35.5	0.20	901	280	UPT2W330MHD
	39	12.5×40	0.20	1063	320	UPT2W390MHD
	47	16×30.5	0.20	1279	380	UPT2W470MHD
	56	16×35.5	0.20	1522	440	UPT2W560MHD
	68	16×40	0.20	1846	490	UPT2W680MHD
	68	18×30.5	0.20	1846	480	UPT2W680MHD6
	82	18×35.5	0.20	2224	550	UPT2W820MHD
	100	18×40	0.20	2710	650	UPT2W101MHD

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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.