

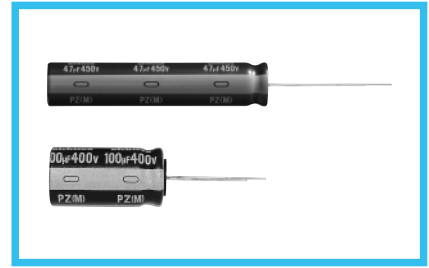
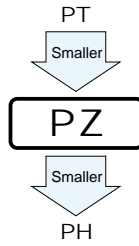
ALUMINUM ELECTROLYTIC CAPACITORS

PZ High Voltage, Smaller-sized series



Upgrade

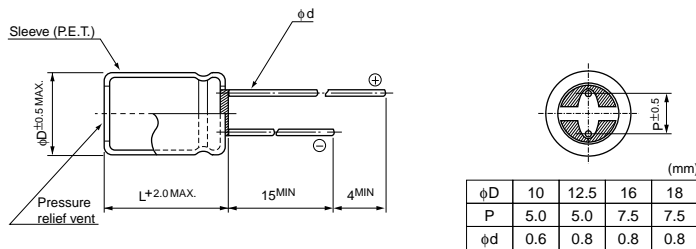
- High ripple current.
- Load life of 2000 hours at 105°C.
- Suited for ballast applications.
- Compliant to the RoHS directive (2002/95/EC).



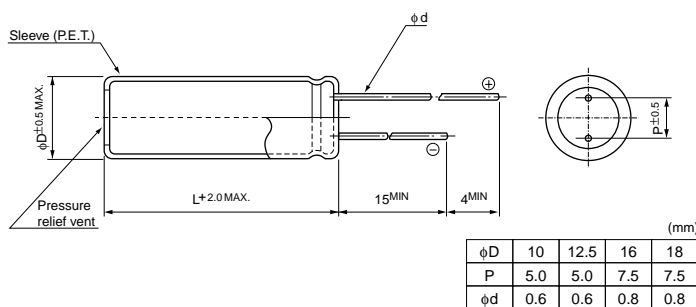
Specifications

Item	Performance Characteristics											
Category Temperature Range	-25 to +105°C											
Rated Voltage Range	200 to 450V											
Rated Capacitance Range	18 to 470μF											
Capacitance Tolerance	±20% at 120Hz, 20°C											
Leakage Current	After 1 minute's application of rated voltage, 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>200</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>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rated voltage (V)	200	250	400	420	450	tan δ (MAX.)	0.12	0.15	0.15	0.20
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tan δ (MAX.)	0.12	0.15	0.15	0.20	0.20							
Stability at Low Temperature	Measurement frequency : 120Hz											
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>200</td> <td>250</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>Impedance ratio ZT / Z20 (MAX.) Z-25°C / Z+20°C</td> <td>3</td> <td>3</td> <td>8</td> <td>8</td> <td>8</td> </tr> </table>	Rated voltage (V)	200	250	400	420	450	Impedance ratio ZT / Z20 (MAX.) Z-25°C / Z+20°C	3	3	8	8
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Impedance ratio ZT / Z20 (MAX.) Z-25°C / Z+20°C	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 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					
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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

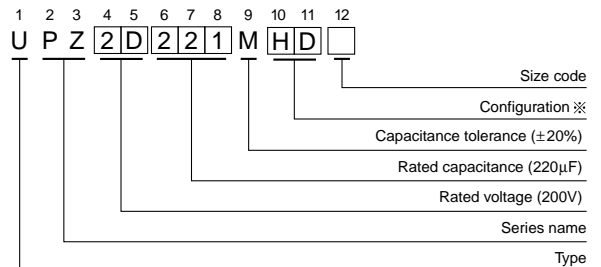


Pencil - shaped Type



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

Type numbering system (Example : 200V 220μF)



※ Configuration

Size code	Blank, 6	9
φ D	Pb-free leadwire	Pb-free PET sleeve
10	PD	ND
12.5 to 18	HD	NY

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.(μ F)	V Code	200		400		420		450	
		2D		2G		W6		2W	
18	180							10×31.5	180
22	220					10×31.5	200		
27	270			10×31.5	240				
33	330							12.5×31.5	280
39	390					12.5×31.5	310	12.5×35.5	320
47	470			12.5×31.5	370	12.5×35.5	360	12.5×40	380
56	560			12.5×35.5	420	12.5×40	430	16×31.5	440
68	680			12.5×40	480	16×31.5	510	16×35.5	490
82	820	10×31.5	400			16×35.5	570	16×40	550
								▲ 18×31.5	550
100	101			16×31.5	580	16×40	610	18×35.5	650
								▲ 18×31.5	610
120	121			16×35.5	670	18×35.5	660	18×40	740
				▲ 18×31.5	670				
150	151	12.5×31.5	620	16×40	770	18×40	710		
				▲ 18×35.5	770				
180	181	12.5×35.5	700	18×40	880				
220	221	12.5×40	800						
270	271	16×31.5	870						
330	331	16×35.5	1010						
		▲ 18×31.5	1010						
390	391	16×40	1130						
		▲ 18×35.5	1120						
470	471	18×40	1270					Case size ϕ D×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.

Pencil-shaped Type

Cap.(μ F)	V Code	200		250		400		450	
		2D		2E		2G		2W	
33	330							● 10×40	360
47	470					● 10×40	435	● 10×50	450
56	560					● 10×50	520		
82	820			● 10×40	610			● 12.5×50	730
100	101					● 12.5×50	770		
120	121	● 10×40	680	● 10×50	740				
150	151	● 10×50	830						
220	221			● 12.5×50	1140				
270	271	● 12.5×50	1265					Case size ϕ D×L (mm)	Rated ripple

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

● : In this case, [9] will be put at 12th digit of type numbering system.

● Frequency coefficient of rated ripple current

V	60Hz	120Hz	500Hz	1kHz	10kHz or more
200	0.80	1.00	1.20	1.30	1.40
400 to 450	0.80	1.00	1.25	1.40	1.50