

ALUMINUM ELECTROLYTIC CAPACITORS

AS

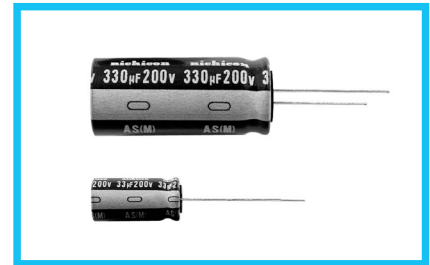
Wide Temperature Range, Miniature Type Permissible
Abnormal Voltage
series



Smaller



AS

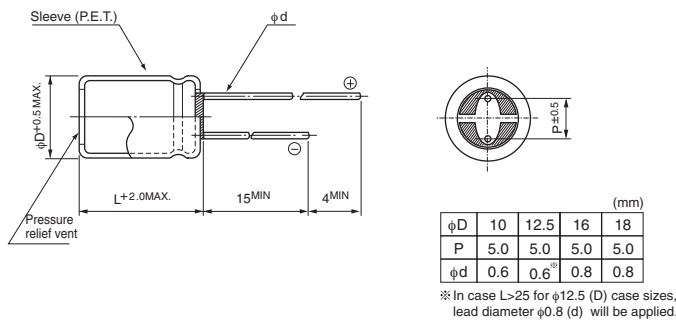


- Improved safety feature for abnormally excessive voltage.
- High ripple current product.
- Compliant to the RoHS directive (2011/65/EU).

Specifications

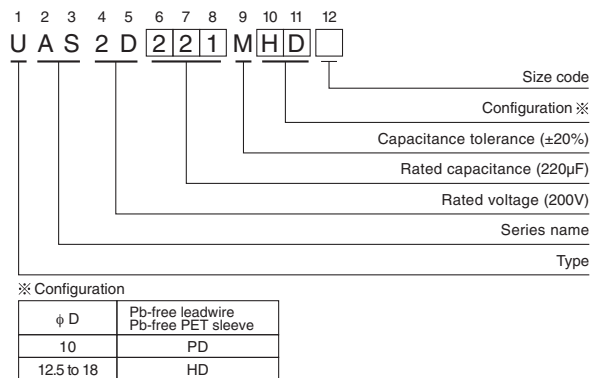
Item	Performance Characteristics												
Category Temperature Range	-40 to +105°C												
Rated Voltage Range	200V, 400V												
Rated Capacitance Range	4.7 to 330µF												
Capacitance Tolerance	±20% at 120Hz, 20°C												
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is 0.04CV+100 (µA) or less.												
Tangent of loss angle (tan δ)	<table border="1"> <tr> <th>Rated voltage (V)</th> <th>200</th> <th>400</th> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.15</td> <td>0.15</td> </tr> </table>	Rated voltage (V)	200	400	tan δ (MAX.)	0.15	0.15	Measurement frequency: 120Hz at 20°C					
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Stability at Low Temperature	<table border="1"> <tr> <th colspan="2">Rated voltage (V)</th> <th>200</th> <th>400</th> </tr> <tr> <td rowspan="2">Impedance ratio ZT / Z20 (MAX.)</td> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>8</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>6</td> <td>10</td> </tr> </table>	Rated voltage (V)		200	400	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	3	8	Z-40°C / Z+20°C	6	10	Measurement frequency : 120Hz
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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 leaving capacitors under no load at 105°C for 1000 hours they shall meet the specified values for the endurance characteristics listed above.												
Safety Performance	The pressure relief vent will operate in normal conditions, with no dangerous conditions such as flames, ignitions or dispersion of pieces of the capacitor and / or case.												
Marking	Printed with white color letter on dark brown sleeve.	<table border="1"> <tr> <th rowspan="3">voltage (V)</th> <th colspan="2">Test conditions</th> </tr> <tr> <th>Limited DC current</th> <th>Test Voltage</th> </tr> <tr> <td>200</td> <td>300VDC and 375VDC</td> </tr> <tr> <td>400</td> <td>2A (4A : 100µF or more)</td> <td>500VDC and 600VDC</td> </tr> </table>	voltage (V)	Test conditions		Limited DC current	Test Voltage	200	300VDC and 375VDC	400	2A (4A : 100µF or more)	500VDC and 600VDC	
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400	2A (4A : 100µF or more)	500VDC and 600VDC											

Radial Lead Type



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

Type numbering system (Example : 200V 220µF)



Dimensions

Cap. (µF)	Code	V	200 (2D)				400 (2G)					
			φ10	φ12.5	φ16	φ18	φ10	φ12.5	φ16	φ18		
4.7	4R7					10 × 9	60					
22	220						12.5 × 20	165				
27	270						12.5 × 25	200				
33	330	10 × 20	160						16 × 20	225		
39	390								16 × 25	255	▲18 × 20	255
47	470	10 × 25	195	▲12.5 × 20	195				16 × 25	290	▲18 × 20	280
56	560			12.5 × 20	210				16 × 31.5	340	▲18 × 25	320
68	680			12.5 × 25	320				16 × 35.5	385	▲18 × 25	360
82	820			12.5 × 25	360				16 × 40	435	▲18 × 31.5	430
100	101			12.5 × 31.5	430	▲16 × 20	430				18 × 35.5	490
120	121										18 × 40	540
150	151					16 × 25	460	▲18 × 20	460			
180	181					16 × 31.5	600	▲18 × 25	600			
220	221							18 × 31.5	710			
270	271							18 × 35.5	890			
330	331							18 × 40	910			

Frequency coefficient of rated ripple current

Frequency	50, 60Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.80	1.00	1.25	1.40	1.60

Rated ripple current (mArms) at 105°C 120Hz

- ▲ : In case of low profile type, [6] will be put at 12th digit of type numbering system. Please refer to page 20, 21, 22 about the formed or taped product spec.
- Please refer to page 4 for the minimum order quantity.

CAT.8100D