

ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

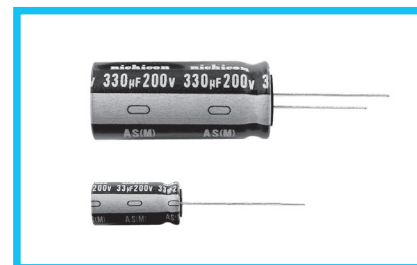
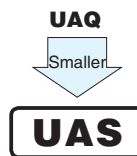
UAS

Wide Temperature Range, Miniature Type Permissible Abnormal Voltage



Smaller

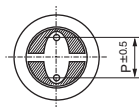
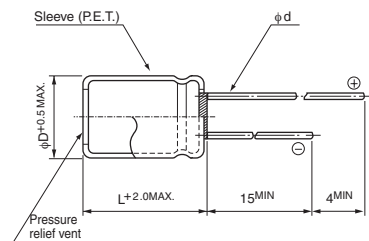
- Improved safety feature for abnormally excessive voltage.
- High ripple current product.
- Compliant to the RoHS directive (2011/65/EU).



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><tr><td>Rated voltage (V)</td><td>200</td><td>400</td></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><tr><td colspan="2">Rated voltage (V)</td><td>200</td><td>400</td></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><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 conditons such as flames, ignitions or dispersion of pieces of the capacitor and / or case.														
	voltage (V)	Test conditions													
		Limited DC current		Test Voltage											
		200	4A (5A : 330μF)	300VDC and 375VDC											
	400	2A (4A : 100μF or more)	500VDC and 600VDC												
Marking	Printed with white color letter on dark brown sleeve.														

Radial Lead Type



	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 φ12.5 (D) case sizes, lead diameter φ0.8 (d) will be applied.

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

Type numbering system (Example : 200V 220µF)

1	2	3	4	5	6	7	8	9	10	11	12
U	A	S	2	D	2	2	1	M	H	D	
Series name			Rated voltage (200V)			Rated capacitance (220μF)			Capacitance tolerance (±20%)		
Configuration ※			Size code			Type					

※ Configuration

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

Dimensions

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