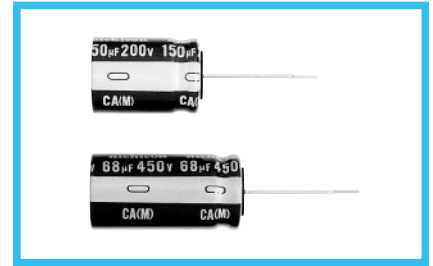
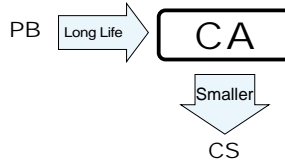


ALUMINUM ELECTROLYTIC CAPACITORS

CA series Miniature Sized, High Ripple Current, Long Life



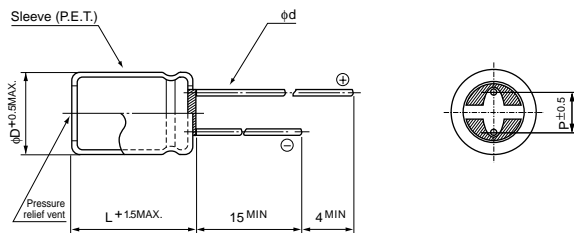
- High ripple current and Long Life product withstanding load life of 12000 hours(10000 hours for $\phi D=10$) at +105°C.
- Suited for ballast application.
- Compliant to the RoHS directive (2002/95/EC).



Specifications

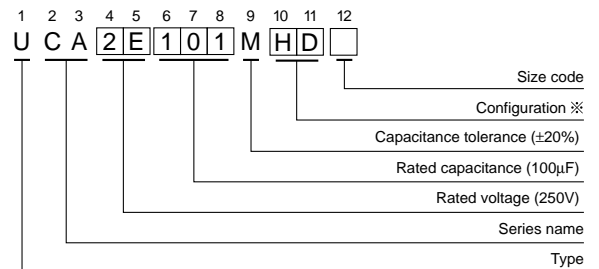
Item	Performance Characteristics													
Category Temperature Range	-25 to +105°C													
Rated Voltage Range	160 to 450V													
Rated Capacitance Range	6.8 to 220µF													
Capacitance Tolerance	±20% at 120Hz, 20°C													
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.04CV+100 (µA)													
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C													
	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ (MAX.)</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> </tr> </tbody> </table>	Rated voltage (V)	160	200	250	350	400	450	tan δ (MAX.)	0.15	0.15	0.15	0.20	0.20
Rated voltage (V)	160	200	250	350	400	450								
tan δ (MAX.)	0.15	0.15	0.15	0.20	0.20	0.20								
Stability at Low Temperature	Measurement frequency : 120Hz													
	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Impedance ratio ZT / Z20 (MAX.) Z-25°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> <td>6</td> <td>6</td> </tr> </tbody> </table>	Rated voltage (V)	160	200	250	350	400	450	Impedance ratio ZT / Z20 (MAX.) Z-25°C / Z+20°C	3	3	3	6	6
Rated voltage (V)	160	200	250	350	400	450								
Impedance ratio ZT / Z20 (MAX.) Z-25°C / Z+20°C	3	3	3	6	6	6								
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 12000 hours (10000 hours for $\phi D=10$) at 105°C, the peak voltage shall not exceed the rated voltage.</p> <table border="1"> <tbody> <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> </tbody> </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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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.													

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

Type numbering system (Example : 250V 100µF)



※ Configuration

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

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

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	160		200		250		350		400		450	
			2C		2D		2E		2V		2G		2W	
6.8	6R8								10 × 16	220	10 × 16	220	10 × 20	150
10	100		10 × 16	250	10 × 16	250	10 × 20	300	10 × 20	280	10 × 20	280	12.5 × 20	320
22	220		10 × 20	500	10 × 20	500	12.5 × 20	600	12.5 × 20	350	12.5 × 20	430	16 × 25	560
		▲	16 × 20		16 × 20		18 × 20		18 × 20		600		18 × 20	560
33	330		10 × 20	565	12.5 × 20	600	12.5 × 20	630	16 × 20	600	16 × 25	640	16 × 31.5	700
		▲	18 × 20		18 × 20		18 × 25		18 × 25		640		18 × 25	700
47	470		12.5 × 20	725	12.5 × 20	780	12.5 × 25	720	16 × 25	700	16 × 31.5	840	18 × 31.5	900
		▲	16 × 20		16 × 20		18 × 20		18 × 20		750			
68	680		12.5 × 25	950	12.5 × 25	950	16 × 25	1000	16 × 31.5	1100	18 × 31.5	1000		
		▲	16 × 20	970	16 × 20	970	18 × 20	920	18 × 25	875				
100	101		16 × 25	1280	16 × 25	1280	16 × 31.5	1400						
		▲	18 × 20	1180	18 × 20	1180	18 × 25	1345						
150	151		16 × 31.5	1360	16 × 31.5	1360	18 × 31.5	1500						
		▲	18 × 25	1360	18 × 25	1360								
220	221		16 × 31.5	1400	18 × 31.5	1700							Case size ϕ D × L (mm)	※
		▲	18 × 25	1400										

※ : Rated ripple current (mA rms) at 105°C 100kHz

▲ : In this case, 6 will be put at 12th digit of type numbering system.

• Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	1kHz	10kHz	100kHz or more
Coefficient	0.40	0.50	0.80	0.90	1.00