



**THE DATASHEET OF
UCA2V470MHD1TN**



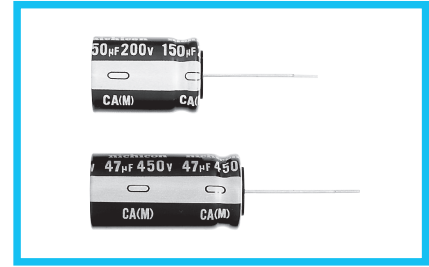
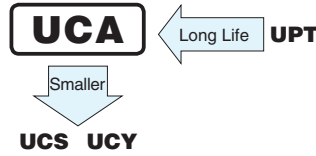
UCA

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 power supply and ballast application.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Products which are scheduled to be discontinued.
Not recommended for new designs.

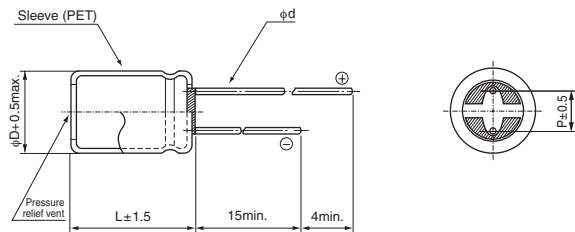


Specifications

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 at 20°C, 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> <th>Rated voltage (V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> <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> </table>	Rated voltage (V)	160	200	250	350	400	450	tan δ (max.)	0.15	0.15	0.15	0.20	0.20
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Stability at Low Temperature	Measurement frequency : 120Hz													
	<table border="1"> <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> <tr> <td>Impedance ratio (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> </table>	Rated voltage (V)	160	200	250	350	400	450	Impedance ratio (max.) $Z(-25°C)/Z(+20°C)$	3	3	3	6	6
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Impedance ratio (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"> <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.													

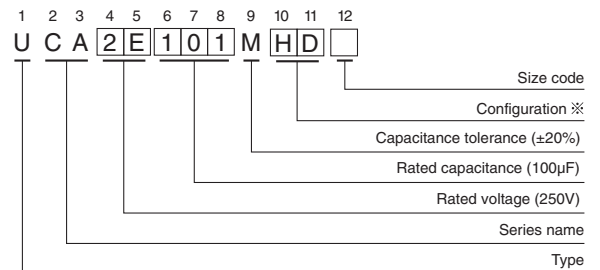
※ I : Leakage Current (µA), C : Rated Capacitance (µF), V : Rated Voltage (V)

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

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 the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

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

• 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 1 minute)	Rated Ripple (mArms) (105°C/100kHz)	Part Number
160 (2C)	10	10×16	0.15	164	250	UCA2C100MPD
	22	10×20	0.15	240.8	500	UCA2C220MPD
	33	10×20	0.15	311.2	565	UCA2C330MPD
	47	12.5×20	0.15	400.8	725	UCA2C470MHD
	68	12.5×25	0.15	535.2	950	UCA2C680MHD
	68	16×20	0.15	535.2	970	UCA2C680MHD6
	100	16×25	0.15	740	1280	UCA2C101MHD
	100	18×20	0.15	740	1180	UCA2C101MHD6
	150	16×30.5	0.15	1060	1360	UCA2C151MHD
	150	18×25	0.15	1060	1360	UCA2C151MHD6
	220	16×30.5	0.15	1508	1400	UCA2C221MHD
	220	18×25	0.15	1508	1400	UCA2C221MHD6
200 (2D)	10	10×16	0.15	180	250	UCA2D100MPD
	22	10×20	0.15	276	500	UCA2D220MPD
	33	12.5×20	0.15	364	600	UCA2D330MHD
	47	12.5×20	0.15	476	780	UCA2D470MHD
	68	12.5×25	0.15	644	950	UCA2D680MHD
	68	16×20	0.15	644	970	UCA2D680MHD6
	100	16×25	0.15	900	1280	UCA2D101MHD
	100	18×20	0.15	900	1180	UCA2D101MHD6
	150	16×30.5	0.15	1300	1360	UCA2D151MHD
	150	18×25	0.15	1300	1360	UCA2D151MHD6
	220	18×30.5	0.15	1860	1700	UCA2D221MHD
	250 (2E)	10	10×20	0.15	200	300
22		12.5×20	0.15	320	600	UCA2E220MHD
33		12.5×20	0.15	430	630	UCA2E330MHD
47		12.5×25	0.15	570	720	UCA2E470MHD
47		16×20	0.15	570	750	UCA2E470MHD6
68		16×25	0.15	780	1000	UCA2E680MHD
68		18×20	0.15	780	920	UCA2E680MHD6
100		16×30.5	0.15	1100	1400	UCA2E101MHD
100		18×25	0.15	1100	1345	UCA2E101MHD6
150		18×30.5	0.15	1600	1500	UCA2E151MHD
350 (2V)	6.8	10×16	0.20	195.2	220	UCA2V6R8MPD
	10	10×20	0.20	240	280	UCA2V100MPD
	22	12.5×20	0.20	408	350	UCA2V220MHD
	33	16×20	0.20	562	600	UCA2V330MHD
	47	16×25	0.20	758	700	UCA2V470MHD
	47	18×20	0.20	758	750	UCA2V470MHD6
	68	16×30.5	0.20	1052	1100	UCA2V680MHD
	68	18×25	0.20	1052	875	UCA2V680MHD6

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 (μ F)	Case Size ϕ D \times L (mm)	$\tan \delta$	Leakage Current (μ A) (at 20°C after 1 minute)	Rated Ripple (mArms) (105°C/100kHz)	Part Number
400 (2G)	6.8	10 \times 16	0.20	208.8	220	UCA2G6R8MPD
	10	10 \times 20	0.20	260	280	UCA2G100MPD
	22	12.5 \times 20	0.20	452	430	UCA2G220MHD
	22	16 \times 20	0.20	452	600	UCA2G220MHD6
	33	16 \times 25	0.20	628	640	UCA2G330MHD
	33	18 \times 20	0.20	628	640	UCA2G330MHD6
	47	16 \times 30.5	0.20	852	840	UCA2G470MHD
	47	18 \times 25	0.20	852	840	UCA2G470MHD6
	68	18 \times 30.5	0.20	1188	1000	UCA2G680MHD
450 (2W)	6.8	10 \times 20	0.20	222.4	150	UCA2W6R8MPD
	10	12.5 \times 20	0.20	280	320	UCA2W100MHD
	22	16 \times 25	0.20	496	560	UCA2W220MHD
	22	18 \times 20	0.20	496	560	UCA2W220MHD6
	33	16 \times 30.5	0.20	694	700	UCA2W330MHD
	33	18 \times 25	0.20	694	700	UCA2W330MHD6
	47	18 \times 30.5	0.20	946	900	UCA2W470MHD

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.

- For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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