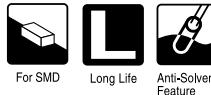


# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

**UA** series

6mmL Chip Type, Long Life Assurance



- Chip type with load life of 3000 to 5000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- Compliant to the RoHS directive (2011/65/EU).

UL Long Life UA Long Life UT

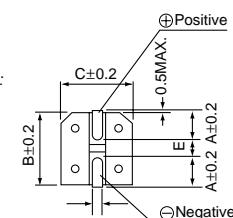
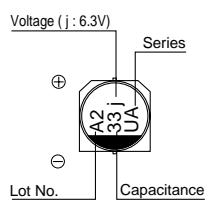


## ■ Specifications

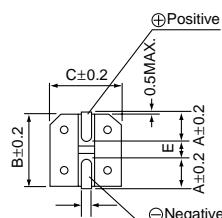
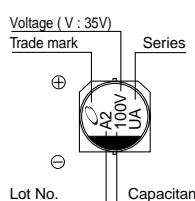
Item	Performance Characteristics																											
Category Temperature Range	-55 to +105°C																											
Rated Voltage Range	6.3 to 50V																											
Rated Capacitance Range	0.1 to 1000μF																											
Capacitance Tolerance	±20% at 120Hz, 20°C																											
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.																											
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C <table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.28</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.13</td> <td>0.12</td> </tr> </table>							Rated voltage (V)	6.3	10	16	25	35	50	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.13	0.12							
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Stability at Low Temperature	Measurement frequency : 120Hz <table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Impedance ratio Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>ZT / Z20 (MAX.) Z-55°C / Z+20°C</td> <td>10</td> <td>7</td> <td>5</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>							Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio Z-25°C / Z+20°C	4	3	2	2	2	2	ZT / Z20 (MAX.) Z-55°C / Z+20°C	10	7	5	3	3	3
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Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (3000 hours for φD = 4, 5 and 6.3) at 105°C. <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>300% 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 ±30% of the initial capacitance value	tan δ	300% 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.																											
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>Less than or equal to 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 ±10% of the initial capacitance value	tan δ	Less than or equal to 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																											
Marking	Black print on the case top.																											

## ■ Chip Type

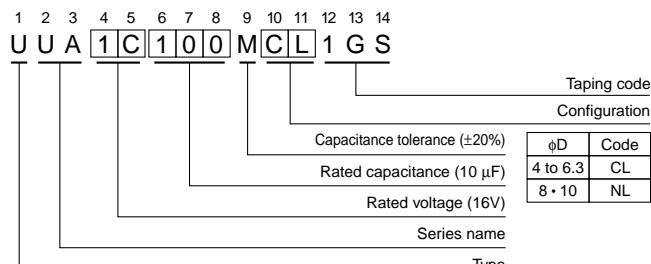
(φ4 to φ6.3)



(φ8 × 10, φ10 × 10)



## Type numbering system (Example : 16V 10μF)



Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Dimension table in next page.

CAT.8100C

## UA series

## ■Dimensions

Cap.( $\mu$ F)	V	6.3		10		16		25		35		50	
		Code	0J	Code	1A	Code	1C	Code	1E	Code	1V	Code	1H
0.1	0R1												4×5.8 1
0.22	R22												4×5.8 2.6
0.33	R33												4×5.8 3.2
0.47	R47												4×5.8 5
1	010												4×5.8 8
2.2	2R2												4×5.8 12
3.3	3R3												4×5.8 17
4.7	4R7												4×5.8 22
10	100						4×5.8 18		5×5.8 27		5×5.8 27		6.3×5.8 32
22	220	4×5.8 22	5×5.8 30	5×5.8 30	5×5.8 30	6.3×5.8 48	6.3×5.8 50	6.3×5.8 63	6.3×5.8 8×10	6.3×5.8 92	6.3×5.8 151	6.3×7.7 10×10	58
33	330	5×5.8 35	5×5.8 35	6.3×5.8 50	6.3×5.8 50	6.3×7.7 63	6.3×7.7 70	6.3×7.7 8×10	6.3×7.7 92	6.3×7.7 151	6.3×7.7 10×10	8×10 140	
47	470	5×5.8 38	6.3×5.8 50	6.3×5.8 50	6.3×5.8 50	6.3×7.7 63	6.3×7.7 70	6.3×7.7 8×10	6.3×7.7 92	6.3×7.7 151	6.3×7.7 10×10	8×10 170	
100	101	6.3×5.8 69	6.3×7.7 81	6.3×7.7 81	6.3×7.7 81	8×10 116	8×10 116	10×10 151	10×10 151	10×10 151	10×10 151	10×10 310	
220	221	6.3×7.7 120	8×10 141	10×10 216	10×10 216	10×10 320	10×10 320	10×10 375	10×10 375	10×10 375	10×10 375	10×10 375	
330	331	8×10 290	10×10 290	10×10 290	10×10 290	10×10 450	10×10 450	10×10 450	10×10 450	10×10 450	10×10 450	10×10 450	
470	471	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	10×10 320	
1000	102	10×10 410											Case size ΦD×L(mm) Rated ripple

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

## ● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.