

# ALUMINUM ELECTROLYTIC CAPACITORS

# UCW

Chip Type, Low Impedance,  
Long Life Assurance



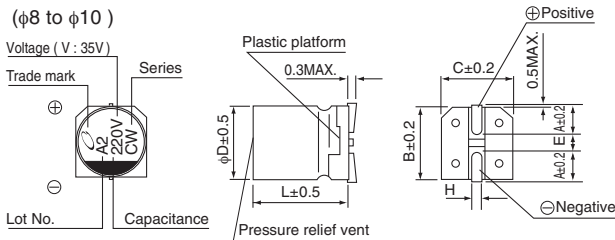
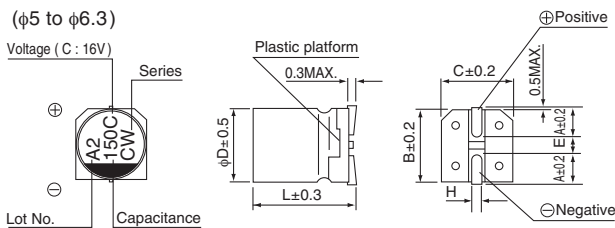
- Chip type with load life of 7000 hours at +105°C.  
Low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



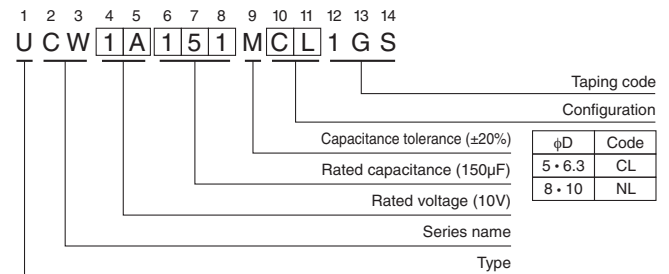
## Specifications

Item	Performance Characteristics												
Category Temperature Range	-25 to +105°C												
Rated Voltage Range	6.3 to 50V												
Rated Capacitance Range	10 to 470μF												
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												
	Rated voltage (V)	6.3	10	16	25	35	50						
	tan δ (MAX.)	0.32	0.28	0.26	0.16	0.14	0.14						
Stability at Low Temperature	Measurement frequency : 120Hz												
	Rated voltage (V)	6.3	10	16	25	35	50						
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2						
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 7000 hours 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
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												
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
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												
Marking	Black print on the case top.												

## Chip Type



## Type numbering system (Example : 10V 150μF)



(mm)

φD × L	5 × 7	6.3 × 7	6.3 × 8.7	8 × 10	10 × 10
A	2.1	2.4	2.4	2.9	3.2
B	5.3	6.6	6.6	8.3	10.3
C	5.3	6.6	6.6	8.3	10.3
E	1.3	2.2	2.2	3.1	4.5
L	7.0	7.0	8.7	10	10
H	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

Voltage

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

•Dimension table in next page.

## UCW

### ■ Dimensions

Cap. ( $\mu$ F)	V Code	6.3			10			16			25			35			50		
		0J			1A			1C			1E			1V			1H		
10	100													5 × 7	2.2	95			
22	220							5 × 7	2.2	95	5 × 7	2.2	95	5 × 7	2.2	95			
33	330				5 × 7	2.2	95				6.3 × 7	1.1	140	6.3 × 8.7	1.0	230			
47	470	5 × 7	2.2	95				6.3 × 7	1.1	140	6.3 × 7	1.1	140	6.3 × 8.7	1.0	230	8 × 10	0.53	350
100	101	6.3 × 7	1.1	140				6.3 × 7	1.1	140	6.3 × 8.7	1.0	230				8 × 10	0.53	350
150	151				6.3 × 7	1.1	140	6.3 × 8.7	1.0	230									
220	221	6.3 × 8.7	1.0	230				6.3 × 8.7	1.0	230	8 × 10	0.22	600	8 × 10	0.22	600	10 × 10	0.35	670
330	331	6.3 × 8.7	1.0	230				8 × 10	0.22	600	8 × 10	0.22	600	10 × 10	0.16	850	Case size $\phi$ D × L (mm)	Impedance	Rated ripple
470	471	8 × 10	0.22	600				8 × 10	0.22	600	10 × 10	0.16	850						

Max. impedance ( $\Omega$ ) at 20°C 100kHz,  
Rated ripple current (mA rms) at 105°C 100kHz

### ● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

- 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.