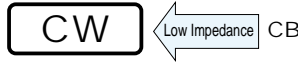


# ALUMINUM ELECTROLYTIC CAPACITORS

**CW** Chip Type, Low Impedance, Long Life Assurance series



- 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 (2002/95/EC).

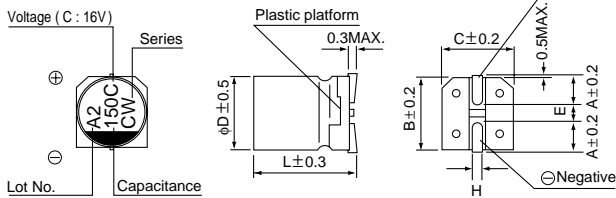


## Specifications

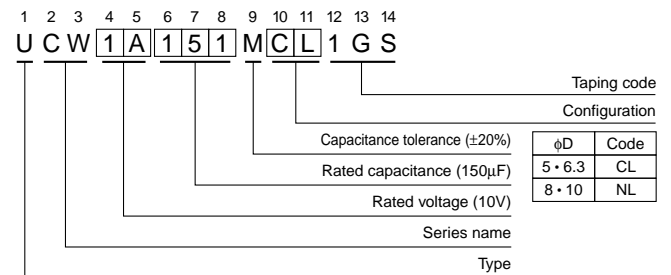
Item	Performance Characteristics							
Category Temperature Range	-25 to +105°C							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	10 to 470µF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (µA) , whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)	6.3	10	16	25	35	50	
Endurance	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	
	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.		Capacitance change					Within ±30% of the initial capacitance 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.		tan δ					300% or less than the initial specified value
	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.		Leakage current					Less than or equal to the initial specified value
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.		Capacitance change					Within ±10% of the initial capacitance value
			tan δ					Less than or equal to the initial specified value
Marking	Black print on the case top.		Leakage current					Less than or equal to the initial specified value

## Chip Type

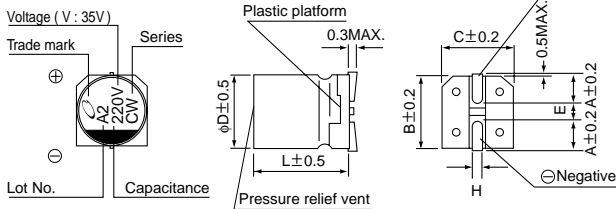
(φ5 to φ6.3)



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



(φ8 to φ10)



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.

## ■Dimensions

Cap. ( $\mu$ F)	V	6.3			10			16			25			35			50					
		Code			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 (mArms) 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.