



**THE DATASHEET OF  
UCW1E471MNL1GS**



# 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, (EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

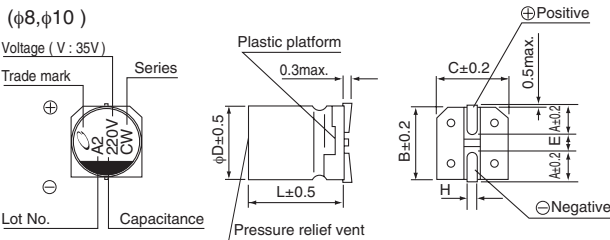
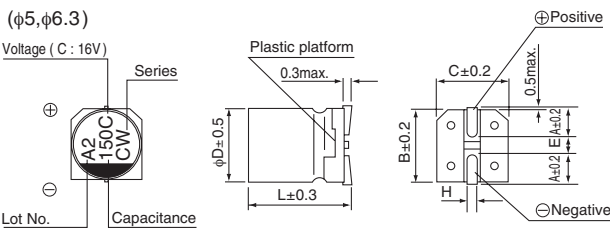


## Specifications

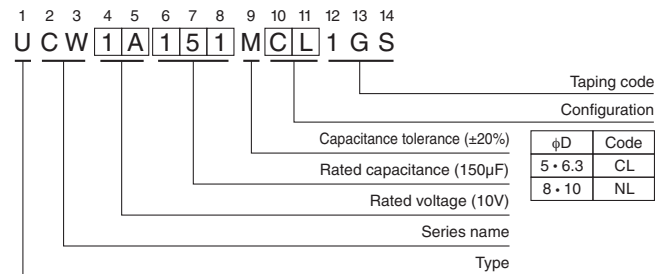
Item	Performance Characteristics						
Category Temperature Range	-25 to +105°C						
Rated Voltage Range	6.3 to 50V						
Rated Capacitance Range	10 to 470μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current 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.		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.		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.						

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

## Chip Type



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



φD × L	(mm)				
	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

## 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

● Dimension table in next page.

UCW

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	Impedance (Ω) max. (20°C/100kHz)	Rated Ripple (mA) (105°C/100kHz)	Part Number
6.3 (0J)	47	5×7	0.32	3	2.20	95	UCW0J470MCL1GS
	100	6.3×7	0.32	6.3	1.10	140	UCW0J101MCL1GS
	220	6.3×8.7	0.32	13.86	1.00	230	UCW0J221MCL1GS
	330	6.3×8.7	0.32	20.79	1.00	230	UCW0J331MCL1GS
	470	8×10	0.32	29.61	0.22	600	UCW0J471MNL1GS
10 (1A)	33	5×7	0.28	3.3	2.20	95	UCW1A330MCL1GS
	150	6.3×7	0.28	15	1.10	140	UCW1A151MCL1GS
16 (1C)	22	5×7	0.26	3.52	2.20	95	UCW1C220MCL1GS
	47	6.3×7	0.26	7.52	1.10	140	UCW1C470MCL1GS
	100	6.3×7	0.26	16	1.10	140	UCW1C101MCL1GS
	150	6.3×8.7	0.26	24	1.00	230	UCW1C151MCL1GS
	220	6.3×8.7	0.26	35.2	1.00	230	UCW1C221MCL1GS
	330	8×10	0.26	52.8	0.22	600	UCW1C331MNL1GS
	470	8×10	0.26	75.2	0.22	600	UCW1C471MNL1GS
25 (1E)	22	5×7	0.16	5.5	2.20	95	UCW1E220MCL1GS
	33	6.3×7	0.16	8.25	1.10	140	UCW1E330MCL1GS
	47	6.3×7	0.16	11.75	1.10	140	UCW1E470MCL1GS
	100	6.3×8.7	0.16	25	1.00	230	UCW1E101MCL1GS
	220	8×10	0.16	55	0.22	600	UCW1E221MNL1GS
	330	8×10	0.16	82.5	0.22	600	UCW1E331MNL1GS
	470	10×10	0.16	117.5	0.16	850	UCW1E471MNL1GS
35 (1V)	10	5×7	0.14	3.5	2.20	95	UCW1V100MCL1GS
	22	5×7	0.14	7.7	2.20	95	UCW1V220MCL1GS
	33	6.3×8.7	0.14	11.55	1.00	230	UCW1V330MCL1GS
	47	6.3×8.7	0.14	16.45	1.00	230	UCW1V470MCL1GS
	220	8×10	0.14	77	0.22	600	UCW1V221MNL1GS
	330	10×10	0.14	115.5	0.16	850	UCW1V331MNL1GS
50 (1H)	47	8×10	0.14	23.5	0.53	350	UCW1H470MNL1GS
	100	8×10	0.14	50	0.53	350	UCW1H101MNL1GS
	220	10×10	0.14	110	0.35	670	UCW1H221MNL1GS

• For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.






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