

ALUMINUM ELECTROLYTIC CAPACITORS

UCD Chip Type, Low Impedance



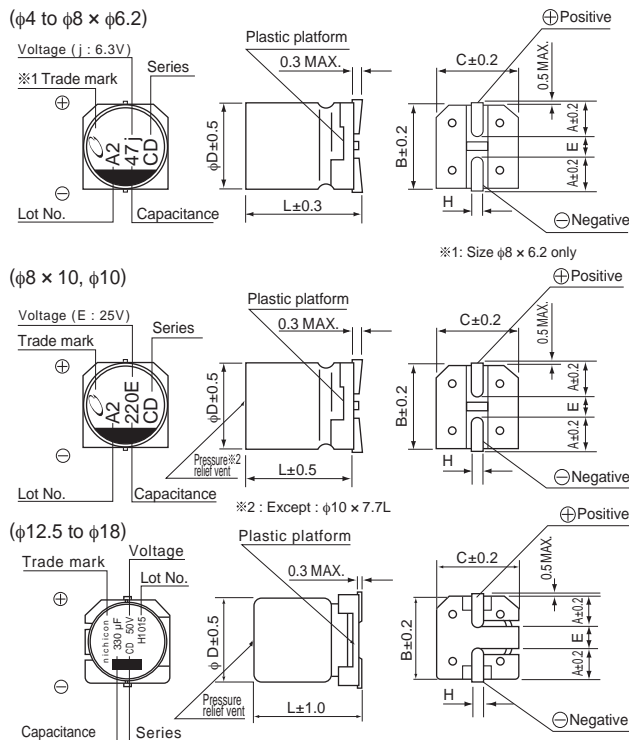
- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



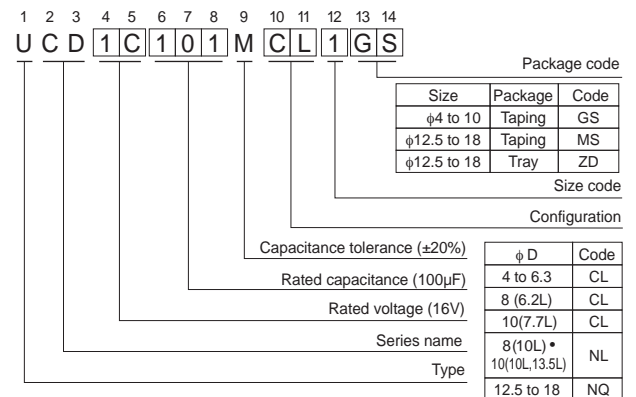
Specifications

Item	Performance Characteristics									
Category Temperature Range	- 55 to +105°C									
Rated Voltage Range	6.3 to 100V									
Rated Capacitance Range	1 to 3300F									
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	63	80	100
	tan δ (MAX.)	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07
For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF.										
Stability at Low Temperature	Measurement frequency : 120Hz									
	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
	Impedance ratio Z-25°C / Z+20°C	2	2	2	2	2	2	2	2	2
	ZT / Z20 (MAX.)	3	3	3	3	3	3	3	3	3
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 (2000 hours for L < 10 mm: 50V or less, and for L ≤ 10mm: 63V or more) at 105°C.									
	Capacitance Change	Within ± 30% of the initial capacitance value								
	tan δ	200% or less than the initial specified value 300% or less than the initial specified value for 63V or more								
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.									
	Capacitance Change	Within ± 10% of the initial capacitance value								
	tan δ	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	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 : 16V 100µF)



φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 7.7	10 × 10	(mm)
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	4.5	
L	5.8	5.8	5.8	7.7	6.2	10	7.7	10	
H	0.5 to 0.8	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	0.8 to 1.1	
φD × L	10 × 13.5	12.5 × 13.5	16 × 16.5	18 × 16.5					
A	3.2	4.8	5.4	6.4					
B	10.3	13.6	17.1	19.1					
C	10.3	13.6	17.1	19.1					
E	4.5	4.0	6.3	6.3					
L	13.5	13.5	16.5	16.5					
H	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4					

Voltage	6.3	10	16	25	35	50	63	80	100
Code	j	A	C	E	V	H	J	K	2A

• Dimension table in next page.

UCD

■ Dimensions

Cap. (μF)	Code	6.3			10			16			25			35			50										
		0J			1A			1C			1E			1V			1H										
1	010																4 × 5.8	2.70	60								
2.2	2R2																4 × 5.8	2.70	60								
3.3	3R3																4 × 5.8	2.70	60								
4.7	4R7														4 × 5.8	1.35	90	4 × 5.8	2.70	60							
10	100							4 × 5.8	1.35	90	4 × 5.8	1.35	90	● 4 × 5.8	1.35	90	● 5 × 5.8	1.50	90	5 × 5.8	0.70	160	6.3 × 5.8	0.86	170		
15	150							4 × 5.8	1.35	90	5 × 5.8	0.70	160														
22	220	4 × 5.8	1.35	90	4 × 5.8	1.35	90	● 4 × 5.8	1.35	90	5 × 5.8	0.70	160	5 × 5.8	0.70	160	5 × 5.8	0.70	160	6.3 × 5.8	0.86	170					
27	270	4 × 5.8	1.35	90	5 × 5.8	0.70	160	5 × 5.8	0.70	160	6.3 × 5.8	0.36	240														
33	330	5 × 5.8	0.70	160	● 4 × 5.8	1.35	90	6.3 × 5.8	0.36	240	● 5 × 5.8	0.70	160	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 7.7	0.66	195	● 8 × 6.2	0.63	200		
47	470	● 4 × 5.8	1.35	90	6.3 × 5.8	0.36	240	● 5 × 5.8	0.70	160	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 7.7	0.66	195	● 8 × 6.2	0.63	200		
56	560	5 × 5.8	0.70	160	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240														
68	680	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 7.7	0.32	290								
100	101	● 5 × 5.8	0.70	160	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 7.7	0.32	290	● 6.3 × 7.7	0.32	290	8 × 10	0.32	350	6.3 × 7.7	0.32	290	● 8 × 6.2	0.26	300		
150	151	6.3 × 5.8	0.36	240	6.3 × 5.8	0.36	240	6.3 × 7.7	0.32	290	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	● 10 × 7.7	0.18	600		
220	221	6.3 × 5.8	0.36	240	6.3 × 7.7	0.32	290	6.3 × 7.7	0.32	290	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	● 10 × 7.7	0.18	600		
330	331	6.3 × 7.7	0.32	290	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	● 10 × 7.7	0.18	600		
390	391																								12.5 × 13.5	0.12	900
470	471	8 × 10	0.16	600	8 × 10	0.16	600	8 × 10	0.16	600	10 × 10	0.08	850	● 10 × 13.5	0.08	950	12.5 × 13.5	0.08	1100	16 × 16.5	0.073	1610					
680	681	8 × 10	0.16	600	10 × 10	0.08	850	10 × 10	0.08	850	10 × 13.5	0.08	950	12.5 × 13.5	0.08	1100	16 × 16.5	0.035	1800								
1000	102	8 × 10	0.16	600	10 × 10	0.08	850	10 × 13.5	0.08	950	12.5 × 13.5	0.08	1100														
1500	152	10 × 10	0.08	850	10 × 13.5	0.08	950	12.5 × 13.5	0.08	1100																	
2200	222	10 × 13.5	0.08	950	12.5 × 13.5	0.08	1100																				
3300	332	12.5 × 13.5	0.08	1100																							

Cap. (μF)	Code	63			80			100		
		1J			1K			2A		
3.3	3R3				5 × 5.8	5.00	25			
4.7	4R7	5 × 5.8	3.00	50	6.3 × 5.8	3.00	40			
10	100	6.3 × 5.8	1.50	80	6.3 × 7.7	2.40	60			
					● 8 × 6.2	2.40	60			
22	220	6.3 × 7.7	1.20	120	8 × 10	1.30	130	8 × 10	1.30	130
		● 8 × 6.2	1.20	120						
33	330	8 × 10	0.65	250	8 × 10	1.30	130	10 × 10	0.70	200
47	470	8 × 10	0.65	250	10 × 10	0.70	200	12.5 × 13.5	0.32	500
68	680	10 × 10	0.35	400	12.5 × 13.5	0.32	500	12.5 × 13.5	0.32	500
100	101	10 × 10	0.35	400	12.5 × 13.5	0.32	500	16 × 16.5	0.17	793
150	151	12.5 × 13.5	0.16	800	12.5 × 13.5	0.32	500	16 × 16.5	0.17	793
220	221	12.5 × 13.5	0.16	800				18 × 16.5	0.15	917
330	331				16 × 16.5	0.17	793	18 × 16.5	0.15	917
470	471	16 × 16.5	0.082	1410	18 × 16.5	0.15	917			
680	681	18 × 16.5	0.08	1690						

Max. Impedance (Ω) at 20°C 100kHz, Rated ripple current (mA rms) at 105°C 100kHz

●: In this case, [6] will be put at 12th digit of type numbering system.

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz 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.