

ALUMINUM ELECTROLYTIC CAPACITORS

nichicon



Chip Type, Low Impedance
series



For SMD



Low Impedance



Anti-Solvent
Feature

NEW

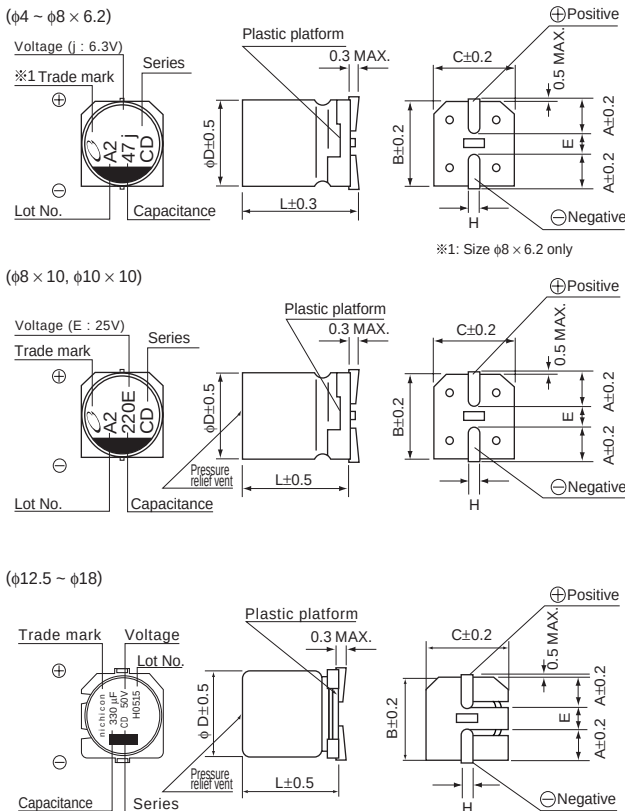
- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2002/95/EC).



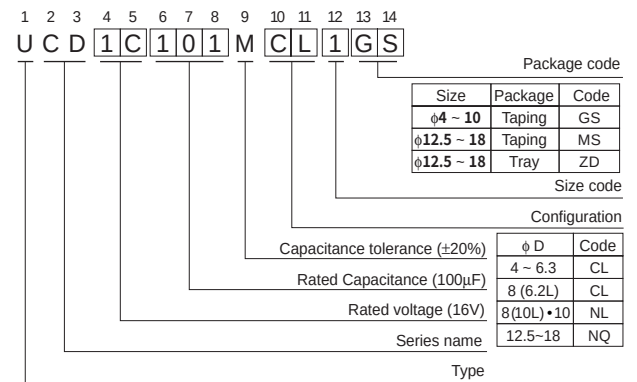
Specifications

Item	Performance Characteristics									
Category Temperature Range	- 55 ~ +105°C									
Rated Voltage Range	6.3 ~ 100V									
Rated Capacitance Range	1 ~ 6800μF									
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.									
tan δ	Measurement frequency : 120Hz, Temperature : 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
Stability at Low Temperature	Measurement frequency : 120Hz									
	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
	Impeccance ratio ZT / Z20 (MAX.)	Z—25°C / Z+20°C	2	2	2	2	2	2	2	2
		Z—40°C / Z+20°C	3	3	3	3	3	3	3	3
		Z—55°C / Z+20°C	4	4	4	3	3	3	3	3
Endurance	After 5000 hours' (2000 hours for L < 10 mm: 50V or less, and for L ≤ 10mm: 63V or more) application of rated voltage at 105°C, capacitors meet the characteristics requirements listed at right.				Capacitance Change		Within ± 30% of initial value for capacitors			
					tan δ		200% or less initial specified value 300% or less initial specified value for 63V or more			
					Leakage current		Initial specified value or less			
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for endurance characteristics listed above.									
Resistance to soldering heat	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristics requirements listed at right.				Capacitance Change		Within ± 10% of initial value			
					tan δ		Initial specified value or less			
					Leakage current		Initial specified value or less			
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 × 10
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5
L	5.8	5.8	5.8	7.7	6.2	10	10
H	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.8 ~ 1.1	0.8 ~ 1.1

φD × L	12.5 × 13.5	16 × 16.5	18 × 16.5
A	4.8	5.4	6.4
B	13.6	17.1	19.1
C	13.6	17.1	19.1
E	4.0	6.3	6.3
L	13.5	16.5	16.5
H	1.0 ~ 1.4	1.0 ~ 1.4	1.0 ~ 1.4

Voltage

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

CAT.8100U



■ Dimensions

V Cap. (μF) Code	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 0.70 160	● 5 × 5.8 1.50 90 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 5 × 5.8 0.70 160	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 5 × 5.8 0.70 160	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 × 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 × 5.8 0.36 240	6.3 × 7.7 0.32 290 ● 8 × 6.2 0.26 300	● 6.3 × 7.7 0.32 290 8 × 10 0.16 600	8 × 10 0.32 350
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	10 × 10 0.16 700
220	221	6.3 × 5.8 0.36 240	6.3 × 7.7 0.32 290 ● 8 × 6.2 0.26 300	6.3 × 7.7 0.32 290 ● 8 × 6.2 0.26 300	8 × 10 0.16 600	8 × 10 0.16 600	10 × 10 0.16 700
330	331	6.3 × 7.7 0.32 290 ● 8 × 6.2 0.26 300	8 × 10 0.16 600	8 × 10 0.16 600	8 × 10 0.16 600	10 × 10 0.08 850	12.5 × 13.5 0.12 900
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	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		12.5 × 13.5 0.08 1100	16 × 16.5 0.073 1610
1000	102	8 × 10 0.16 600	10 × 10 0.08 850		12.5 × 13.5 0.08 1100	16 × 16.5 0.035 1800	
1500	152	10 × 10 0.08 850		12.5 × 13.5 0.08 1100		16 × 16.5 0.035 1800	
2200	222		12.5 × 13.5 0.08 1100		16 × 16.5 0.035 1800		
3300	332	12.5 × 13.5 0.08 1100		16 × 16.5 0.035 1800	18 × 16.5 0.033 2060		
4700	472		16 × 16.5 0.035 1800	18 × 16.5 0.033 2060			
6800	682	16 × 16.5 0.035 1800					φD × L Impedance Rated ripple

V Cap. (μF) Code	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 × 6.2 1.20 120	8 × 10 1.30 130	8 × 10 1.30 130
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		φD × L Impedance Rated ripple

Max. impedance (Ω) at 20°C 100kHz, Rated Ripple (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~
Coefficient	0.35	0.50	0.64	0.83	1.00

- Taping specifications are given in page 24.
- Recommended land size, soldering by reflow are given in page 25.
- Please refer to page 3 for the minimum order quantity.