ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

CB

Chip Type, Long Life Assurance series

For SMD | Long Life | Anti-Solvent Feature

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

CB — Long Life — UL

Low Impedance — CW

■Specifications

Item	Performance Characteristics
Category Temperature Range	−25 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	0.1 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.03 CV or 4 (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	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.

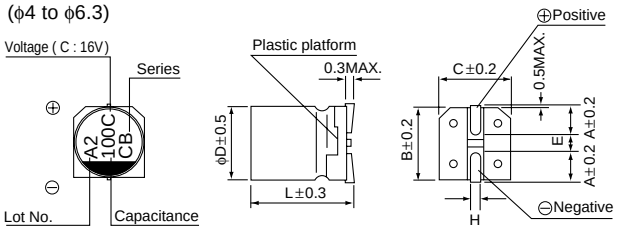
Resistance to soldering heat — The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

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

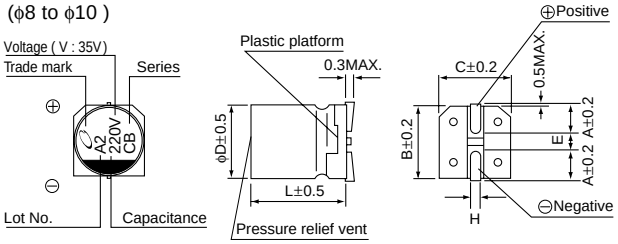
Marking — Black print on the case top.

■Chip Type

(φ4 to φ6.3)



(φ8 to φ10)



Type numbering system (Example : 16V 100μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	C	B	1	C	1	0	1	M	C	L	1	G	S

- 1 2 3 : Type
- 4 5 : Series name
- 6 7 8 : Rated voltage (16V)
- 9 10 11 : Rated capacitance (100μF)
- 12 : Capacitance tolerance (±20%)
- 13 : Configuration
- 14 : Taping code

φD	Code
4 to 6.3	CL
8・10	NL

(mm)

φD × L	4 × 7	5 × 7	6.3 × 7	6.3 × 8.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	7.0	7.0	7.0	8.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 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.

CB series

■Dimensions

Cap.(μF) \ V	Code	6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
0.1	0R1									4×7	1.0		
0.22	R22									4×7	2.6		
0.33	R33									4×7	3.2		
0.47	R47									4×7	3.8		
1	010									4×7	6.2		
2.2	2R2									4×7	11		
3.3	3R3									4×7	14		
4.7	4R7									4×7	15		
10	100					4×7	18			5×7	25		
22	220	4×7	22			5×7	30			6.3×7	42		
33	330			5×7	35			6.3×7	48	6.3×8.7	57	8×10	77
47	470	5×7	36			6.3×7	50	6.3×8.7	63			8×10	92
100	101	6.3×7	60			6.3×8.7	81	8×10	116			10×10	151
220	221	6.3×8.7	101	8×10	141					10×10	216		
330	331	8×10	160										
470	471					10×10	254					Case size φD×L (mm)	Rated ripple
1000	102	10×10	313										

Rated ripple current (mArms) at 105°C 120Hz

●Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- 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.