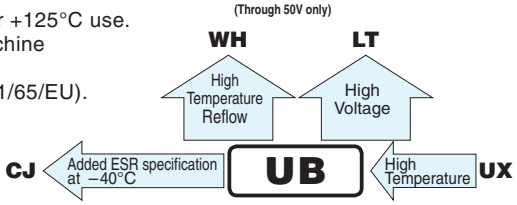
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UB Chip Type, High Reliability series

For SMD | Long Life | Anti-Solvent Feature (Through 50V only)

- Chip type, high temperature range, for +125°C use.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	10 to 400V
Rated Capacitance Range	1 to 330μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	Rated voltage (V): 10 to 50 / 160 to 400 Leakage Current: After 1 minute's application of rated voltage, leakage current is not more than 0.03CV (μA). / I = 0.04CV+100 (μA) max.(1 minute's)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C

Rated voltage (V)	10	16	25	35	50	160	200	250	400
tan δ (MAX.)	0.32	0.24	0.21	0.18	0.18	0.30	0.30	0.30	0.30

Stability at Low Temperature — Measurement frequency : 120Hz

Rated voltage (V)		10	16	25	35	50	160	200	250	400
Impedance ratio ZT / Z20 (MAX.)	Z−40°C / Z+20°C	12	8	6	4	4	8	8	8	12

Endurance

The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours (1000 hours for φ8 × 6.2) at 125°C.

Capacitance change	Within ±30% of the initial capacitance value
tan δ	300% or less than the intial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life

After storing the capacitors under no load at 125°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

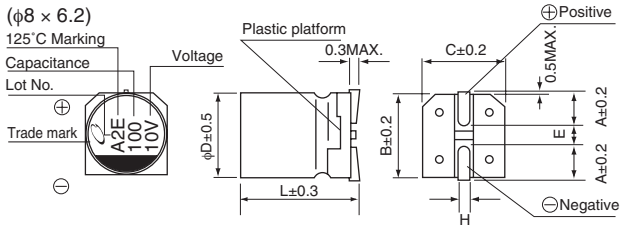
The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

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

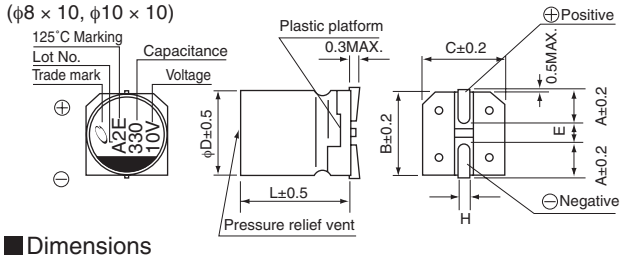
Marking: Black print on the case top.

■Chip Type

(φ8 × 6.2)



(φ8 × 10, φ10 × 10)



(mm)

φD × L	8 × 6.2	8 × 10	10 × 10
A	3.3	2.9	3.2
B	8.3	8.3	10.3
C	8.3	8.3	10.3
E	2.3	3.1	4.5
L	6.2	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Type numbering system (Example : 10V 100μF)

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

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

φD × L	Code
8 × 6.2	CL
8 × 10	NL
10 × 10	NL

- 13 14: Taping code

■Dimensions

Cap.(μF) \ V	Code	10 V		16 V		25 V		35 V		50 V	
		1A		1C		1E		1V		1H	
10	100									8 × 6.2	24
22	220									8 × 6.2	38
33	330							8 × 6.2	44	8 × 10	46
47	470					8 × 6.2	48	8 × 10	52	10 × 10	58
100	101	8 × 6.2	58	8 × 10	66	8 × 10	74	10 × 10	80		
220	221	8 × 10	90	10 × 10	102	10 × 10	116			Case size φD × L (mm)	Rated ripple
330	331	10 × 10	112								

Cap.(μF) \ V	Code	160 V		200 V		250 V		400 V	
		2C		2D		2E		2G	
1	010							8 × 10	26
1.8	1R8							8 × 10	27
2.2	2R2							10 × 10	36
3.3	3R3					8 × 10	28	10 × 10	38
4.7	4R7			8 × 10	36	10 × 10	59		
6.8	6R8	8 × 10	42	10 × 10	59			Case size φD × L (mm)	Rated ripple
10	100	10 × 10	59	10 × 10	59				

Rated ripple current (mArms) at 125°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.