

UB series

Chip Type, High Reliability



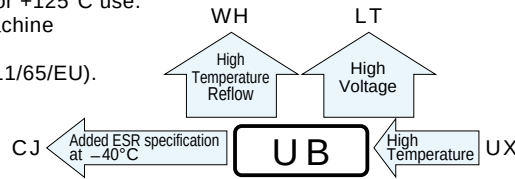
For SMD



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).

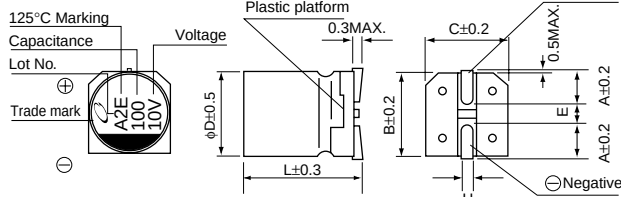


Specifications

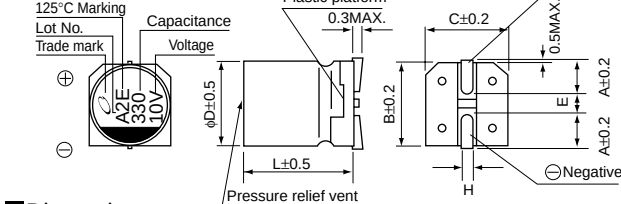
Item	Performance Characteristics										
Category Temperature Range	-40 to +125°C										
Rated Voltage Range	10 to 400V										
Rated Capacitance Range	1 to 330μF										
Capacitance Tolerance	± 20% at 120Hz, 20°C										
Leakage Current	Rated voltage (V)		10 to 50					160 to 400			
	Leakage 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
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 initial 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

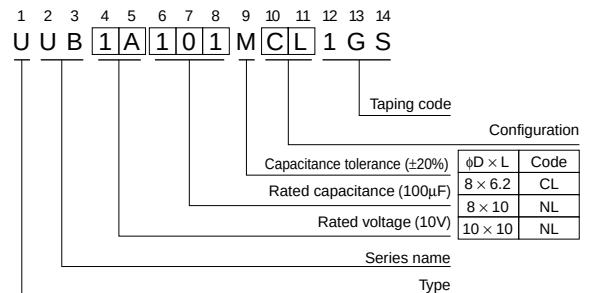
(φ8 × 6.2)



(φ8 × 10, φ10 × 10)



Type numbering system (Example : 10V 100μF)



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

Series name	Type
Capacitance tolerance (±20%)	
Rated capacitance (100μF)	
Rated voltage (10V)	

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

Dimensions

Cap.(μF)	V	10	16	25	35	50
	Code	1A	1C	1E	1V	1H
10	100					8 × 6.2 24
22	220					8 × 6.2 38
33	330					8 × 10 46
47	470					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		
330	331	10 × 10 112				Case size φD × L (mm) Rated ripple

Cap.(μF)	V	160	200	250	400
	Code	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		
10	100	10 × 10 59	10 × 10 59		Case size φD × L (mm) Rated ripple

Rated ripple current (mA rms) 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.