ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UN series

Chip Type, Bi-Polarized, Higher Capacitance Range

For SMD | Bi-polarized | Anti-Solvent Feature

- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18, φ20)
- Designed for surface mounting on high density PC board.
- Bi-polarized series for operations over wide temperature range of −55 to +105°C.
- Applicable to automatic mounting machine fed with carrier tape and tray.
- Compliant to the RoHS directive (2002/95/EC).

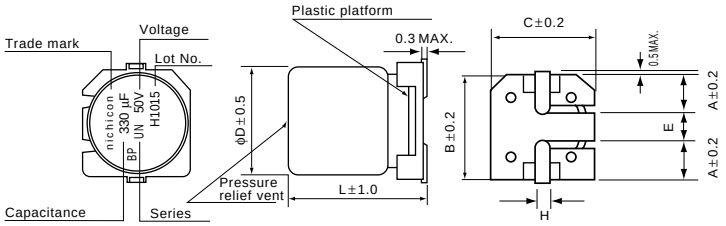


UN | Bi-polarized | UJ

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 100V
Rated Capacitance Range	22 to 3300μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV 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 / 63 / 100 tan δ (MAX.): 0.26 / 0.22 / 0.18 / 0.16 / 0.14 / 0.12 / 0.10 / 0.09 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 / 100 Impedance ratio ZT / Z20 (MAX.) Z−25°C / Z+20°C: 5 / 4 / 3 / 2 / 2 / 2 / 2 / 2 Impedance ratio ZT / Z20 (MAX.) Z−40°C / Z+20°C: 10 / 8 / 6 / 4 / 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 2000 hours at 105°C with the polarity inverted every 250 hours. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% 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.
Marking	Black print on the case top.

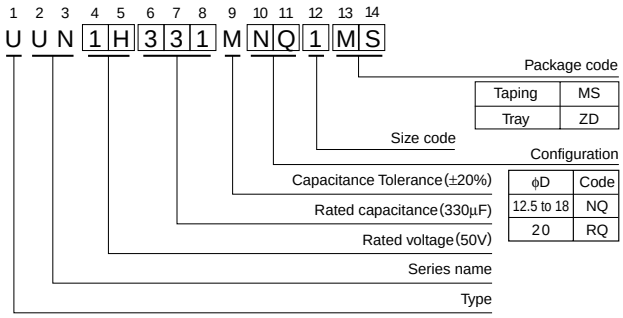
■Chip Type



(mm)

φD	12.5×13.5	12.5×16	16×16.5	16×21.5	18×16.5	18×21.5	20×21.5
A	4.8	4.8	5.4	5.4	6.4	6.4	6.2
B	13.6	13.6	17.1	17.1	19.1	19.1	21.1
C	13.6	13.6	17.1	17.1	19.1	19.1	21.1
E	4.0	4.0	6.3	6.3	6.3	6.3	8.8
L	13.5	16.0	16.5	21.5	16.5	21.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.3 to 1.7

Type numbering system (Example : 50V 330μF)



● Dimension table in next page.

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UN series

■Dimensions

(μF) Cap. \ V	6.3		10		16		25		35		50		63		100	
Code	0J		1A		1C		1E		1V		1H		1J		2A	
22 / 220															12.5×13.5	100
33 / 330															12.5×16	150
47 / 470											12.5×13.5	130	12.5×13.5	140	16×16.5	180
100 / 101									12.5×13.5	180	12.5×16	230	16×16.5	270	18×21.5	310
220 / 221							12.5×13.5	270	16×16.5	330	18×16.5	400	18×21.5	440		
											▲16×21.5	400				
330 / 331					12.5×13.5	310	16×16.5	370	18×16.5	450	18×21.5	540	20×21.5	590		
									▲16×21.5	450						
470 / 471	12.5×13.5	270	12.5×13.5	340	16×16.5	420	16×16.5	490	18×21.5	590	20×21.5	640				
1000 / 102	12.5×16	500	16×16.5	600	18×16.5	670	18×21.5	780								
					▲16×21.5	670										
2200 / 222	18×16.5	740	18×21.5	830												
	▲16×21.5	740														
3300 / 332	18×21.5	920													Case size φD×L (mm)	Rated ripple

※ In this case, 6 will be put at 12th digit of type numbering system, "▲"

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

●Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
22 to 47	0.75	1.00	1.35	1.57	2.00
100 to 470	0.80	1.00	1.23	1.34	1.50
1000 to 3300	0.85	1.00	1.10	1.13	1.15

- 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.

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