ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UN series

Chip Type, Bi-Polarized, Higher Capacitance Range

For SMD | BP Bi-polarized | Anti-Solvent Feature

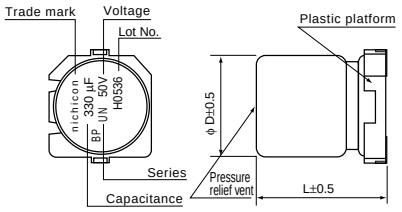
- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18, φ20)
- Designed for surface mounting on high density PC board.
- Bi-polarized series for operations over wide temperature range of –55 to +105°C.
- Applicable to automatic mounting machine using carrier tape and tray.
- Adapted to 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)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	120Hz 20°C
	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	Rated voltage (V)	6.3	10	16	25	35	50	63	100	120Hz
	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 initial value; tan δ: 200% or less of 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 after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.									
Marking	Black print on the case top.									

■Chip Type



(mm)

φD	12.5	16	18	20
A	4.0	4.5	5.0	5.0
B	13.6	17.1	19.1	21.1
C	16.0	19.5	21.5	23.5
E	8.0	10.5	11.5	13.5
H	2.5	3.75	3.75	3.75

The lead terminal structure : The same bent lead type (refer to p.76) that is currently used on 10mm diameter and smaller parts, is also available upon request.
In this case of the bent lead type, [O] will be put at the 11th digit of type numbering system. Please ask for details.

Type numbering system (Example : 50V 330μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	N	1	H	3	3	1	M	N	L	1	M	S

Package code: Taping MS; Tray ZD
Size code
Configuration: φD 12.5 to 18 → NL; 20 → RL
Capacitance Tolerance (±20%)
Rated Capacitance (330μF)
Rated voltage (50V)
Series name
Type

■Dimensions

(μF) Cap. \ V	6.3	10	16	25	35	50	63	100
Code	0J	1A	1C	1E	1V	1H	1J	2A
22 (221)								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 ▲16×21.5 400	18×21.5 440	
330 (331)			12.5×13.5 310	16×16.5 370	18×16.5 450 ▲16×21.5 450	18×21.5 540	20×21.5 590	
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 ▲16×21.5 670	18×21.5 780				
2200 (222)	18×16.5 740 ▲16×21.5 740	18×21.5 830						
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 (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
less than 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.

CAT.8100X