

ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UG

Chip Type, Higher Capacitance Range

series



For SMD



Anti-Solvent
Feature
(Through
100V only)



UG

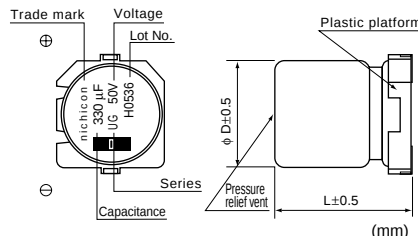
- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18, φ20)
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape and tray.
- Adapted to the RoHS directive (2002/95/EC).



Specifications

Item	Performance Characteristics												
Category Temperature Range	-40 to +85°C												
Rated Voltage Range	6.3 to 450V												
Rated Capacitance Range	4.7 to 10000μF												
Capacitance Tolerance	±20% at 120Hz, 20°C												
Leakage Current	Rated voltage (V)		6.3 to 100						160 to 450				
	—		After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.						I = 0.04CV+100 (μA) max.(1 minute's)				
tan δ	Rated voltage (V)		6.3	10	16	25	35	50	63	100	160 to 250	400・450	120Hz
	tan δ (MAX)		0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25	20°C
	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	160 to 250	400・450	120Hz
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	5	4	3	2	2	2	2	2	3	6	
		Z-40°C / Z+20°C	12	10	8	5	4	3	3	3	6	10	
Endurance	After 2000 hours' application of rated voltage at 85°C, capacitors meet the characteristic requirements listed at right.						Capacitance change		Within ±20% of initial value				
							tan δ		200% or less of initial specified value				
							Leakage current		Initial specified value or less				
Shelf Life	After storing the capacitors under no load at 85°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.												

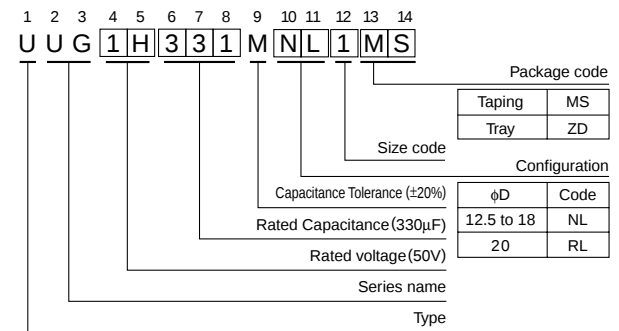
Chip Type



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, □ will be put at the 11th digit of type numbering system. Please ask for details.

Type numbering system (Example : 50V 330μF)



Dimensions

V		6.3	10	16	25	35	50
Cap. (μF)		0J	1A	1C	1E	1V	1H
220	221						12.5 × 13.5 450
330	331						12.5 × 13.5 520
470	471				12.5 × 13.5 550	12.5 × 13.5 580	● 16 × 16.5 740
1000	102		12.5 × 13.5 620	12.5 × 13.5 710	12.5 × 16 820	● 16 × 16.5 1000	18 × 21.5 1150
2200	222	12.5 × 16 890	12.5 × 16 960	● 16 × 16.5 1150	△ 18 × 16.5 1350	18 × 21.5 1550	
3300	332	● 16 × 16.5 1200	16 × 16.5 1300	△ 18 × 16.5 1450	18 × 21.5 1700		
4700	472	16 × 16.5 1400	△ 18 × 16.5 1500	18 × 21.5 1750			
6800	682	△ 18 × 16.5 1650	18 × 21.5 1850				
10000	103	18 × 21.5 2000	20 × 21.5 2200				

V		63	100	160	200	250	400	450
Cap. (μF)		1J	2A	2C	2D	2E	2G	2W
4.7	4R7						12.5 × 13.5 115	12.5 × 13.5 115
10	100					12.5 × 13.5 150	● 16 × 16.5 140	● 16 × 16.5 140
22	220				12.5 × 13.5 235	12.5 × 16 240	△ 18 × 16.5 280	16 × 21.5 275
33	330				12.5 × 16 310	● 16 × 16.5 340	18 × 21.5 350	18 × 21.5 345
47	470			12.5 × 16 370	● 16 × 16.5 415	△ 18 × 16.5 415	20 × 21.5 430	
68	680		12.5 × 13.5 350	● 16 × 16.5 500	△ 18 × 16.5 505	★ 18 × 21.5 490		
100	101	12.5 × 13.5 370	12.5 × 16 440	△ 18 × 16.5 590	18 × 21.5 590			
220	221	12.5 × 16 580	△ 18 × 16.5 665					
330	331	● 16 × 16.5 680	18 × 21.5 825					
470	471	△ 18 × 16.5 850						

Size φ12.5×21 is available for capacitors marked, "●". Size φ16×21.5L is available for capacitors marked, "△". Size φ20×16.5L is available for capacitors marked, "★".

※ In this case, □ will be put at 12th digit of type numbering system.

Rated Ripple (mArms) at 85°C 120Hz

Frequency coefficient of rated ripple current

V	Cap. (μF)	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
6.3 to 100	Less than 68	100 to 470	0.75	1.00	1.35	1.57	2.00
		1000 to 10000	0.80	1.00	1.23	1.34	1.50
		4.7 to 100	0.85	1.00	1.10	1.13	1.15
160 to 450	4.7 to 100		0.80	1.00	1.25	1.40	1.60

- 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.8100W