ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUN

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)
- 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.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



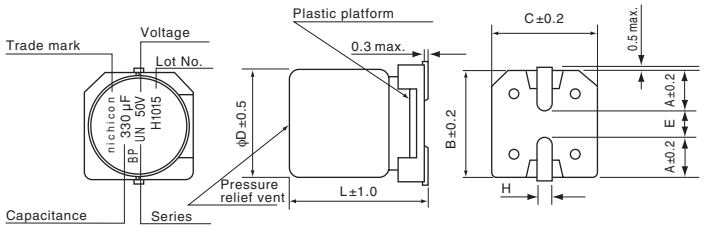
UUN ← Bi-polarized → UUJ

■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 at 20°C, 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 (max.) Z(−25°C) / Z(+20°C): 5 / 4 / 3 / 2 / 2 / 2 / 2 / 2 Impedance ratio (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.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



(mm)

φD	12.5×13.5	12.5×16	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.15	5.65	5.65	6.65	6.65
B	13.6	13.6	17.1	17.1	19.1	19.1
C	13.6	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	16.0	16.5	21.5	16.5	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

Please contact us for the dimensions for NQ.

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	J	1	M	S

- Package code
- Size code
- Configuration
- Capacitance Tolerance (±20%)
- Rated capacitance (330μF)
- Rated voltage (50V)
- Series name
- Type

Code	Remarks
NJ	Standard Style
NQ	Products which are scheduled to be discontinued. Not recommended for new designs.

※ There are also some products that can be manufactured as vibration resistant products.

● 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

● Dimension table in next page.

UUN

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	470	12.5×13.5	0.26	88.83	270	UUN0J471MNJ1MS
	1000	12.5×16	0.26	189	500	UUN0J102MNJ1MS
	2200	18×16.5	0.28	415.8	740	UUN0J222MNJ1MS
	2200	16×21.5	0.28	415.8	740	UUN0J222MNJ6MS
	3300	18×21.5	0.30	623.7	920	UUN0J332MNJ1MS
10 (1A)	470	12.5×13.5	0.22	141	340	UUN1A471MNJ1MS
	1000	16×16.5	0.22	300	600	UUN1A102MNJ1MS
	2200	18×21.5	0.24	660	830	UUN1A222MNJ1MS
16 (1C)	330	12.5×13.5	0.18	158.4	310	UUN1C331MNJ1MS
	470	16×16.5	0.18	225.6	420	UUN1C471MNJ1MS
	1000	18×16.5	0.18	480	670	UUN1C102MNJ1MS
	1000	16×21.5	0.18	480	670	UUN1C102MNJ6MS
25 (1E)	220	12.5×13.5	0.16	165	270	UUN1E221MNJ1MS
	330	16×16.5	0.16	247.5	370	UUN1E331MNJ1MS
	470	16×16.5	0.16	352.5	490	UUN1E471MNJ1MS
	1000	18×21.5	0.16	750	780	UUN1E102MNJ1MS
35 (1V)	100	12.5×13.5	0.14	105	180	UUN1V101MNJ1MS
	220	16×16.5	0.14	231	330	UUN1V221MNJ1MS
	330	18×16.5	0.14	346.5	450	UUN1V331MNJ1MS
	330	16×21.5	0.14	346.5	450	UUN1V331MNJ6MS
	470	18×21.5	0.14	493.5	590	UUN1V471MNJ1MS
50 (1H)	47	12.5×13.5	0.12	70.5	130	UUN1H470MNJ1MS
	100	12.5×16	0.12	150	230	UUN1H101MNJ1MS
	220	18×16.5	0.12	330	400	UUN1H221MNJ1MS
	220	16×21.5	0.12	330	400	UUN1H221MNJ6MS
	330	18×21.5	0.12	495	540	UUN1H331MNJ1MS
	470	18×21.5	0.12	705	640	UUN1H471MNJ6MS
63 (1J)	47	12.5×13.5	0.10	88.83	140	UUN1J470MNJ1MS
	100	16×16.5	0.10	189	270	UUN1J101MNJ1MS
	220	18×21.5	0.10	415.8	440	UUN1J221MNJ1MS
	330	18×21.5	0.10	623.7	590	UUN1J331MNJ6MS
100 (2A)	22	12.5× 13.5	0.09	66	100	UUN2A220MNJ1MS
	33	12.5× 16	0.09	99	150	UUN2A330MNJ1MS
	47	16× 16.5	0.09	141	180	UUN2A470MNJ1MS
	100	18× 21.5	0.09	300	310	UUN2A101MNJ1MS

• For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.