ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUJ

Chip Type, Higher Capacitance Range

For SMD | Long Life

- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18)
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UUJ → Bi-Polarized → UUN



■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C (10 to 100V), −40 to +105°C (160 to 450V)
Rated Voltage Range	10 to 450V
Rated Capacitance Range	3.3 to 6800μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	Rated voltage (V): 10 to 100 — After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA). / 160 to 450 — I = 0.04CV+100 (μA) max. (1 minute's at 20°C)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C

Rated voltage (V)	10	16	25	35	50	63	100	160 to 250	400・450
tan δ (max.)	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.15	0.20

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18)

Stability at Low Temperature — Measurement frequency: 120Hz

Rated voltage (V)		10	16	25	35	50	63	100	160 to 250	400・450
Impedance ratio (max.)	Z(−25°C) / Z(+20°C)	4	3	2	2	2	2	2	3	6
	Z(−40°C) / Z(+20°C)	8	6	4	3	3	3	3	6	10

Endurance

The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 105°C.

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

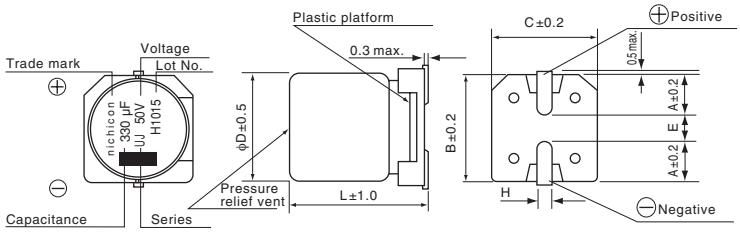
After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

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	12.5×21	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.15	5.15	5.65	5.65	6.65	6.65
B	13.6	13.6	13.6	17.1	17.1	19.1	19.1
C	13.6	13.6	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(3.3)	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	16.0	21.0	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	1.0 to 1.4

Type numbering system (Example : 50V 330μF)

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

- 1–3: Type
- 4–5: Series name
- 6–8: Rated voltage (50V)
- 9–11: Rated capacitance (330μF)
- 12: Capacitance Tolerance (±20%)
- 13: Configuration
- 14: Size code
- Taping code

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

● Frequency coefficient of rated ripple current

V	Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
10 to 100	47 to 68	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 6800	0.85	1.00	1.10	1.13	1.15
160 to 450	3.3 to 100	0.80	1.00	1.25	1.40	1.60

● Dimension table in next page.

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■ 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
10 (1A)	1000	12.5×16	0.22	300	500	UUJ1A102MNJ1MS
	2200	16×16.5	0.24	660	810	UUJ1A222MNJ1MS
	2200	12.5×21	0.24	660	810	UUJ1A222MNJ6MS
	3300	18×16.5	0.26	990	1000	UUJ1A332MNJ1MS
	3300	16×21.5	0.26	990	1000	UUJ1A332MNJ6MS
	4700	18×21.5	0.28	1410	1200	UUJ1A472MNJ1MS
	6800	18×21.5	0.32	2040	1450	UUJ1A682MNJ6MS
16 (1C)	470	12.5×13.5	0.18	225.6	360	UUJ1C471MNJ1MS
	1000	16×16.5	0.18	480	630	UUJ1C102MNJ1MS
	1000	12.5×21	0.18	480	630	UUJ1C102MNJ6MS
	2200	18×16.5	0.20	1056	930	UUJ1C222MNJ1MS
	2200	16×21.5	0.20	1056	930	UUJ1C222MNJ6MS
	3300	18×21.5	0.22	1584	1150	UUJ1C332MNJ1MS
25 (1E)	330	12.5×13.5	0.16	247.5	320	UUJ1E331MNJ1MS
	470	12.5×16	0.16	352.5	400	UUJ1E471MNJ1MS
	1000	18×16.5	0.16	750	700	UUJ1E102MNJ1MS
	1000	16×21.5	0.16	750	700	UUJ1E102MNJ6MS
	2200	18×21.5	0.18	1650	1050	UUJ1E222MNJ1MS
35 (1V)	220	12.5×13.5	0.14	231	280	UUJ1V221MNJ1MS
	330	12.5×16	0.14	346.5	360	UUJ1V331MNJ1MS
	470	16×16.5	0.14	493.5	490	UUJ1V471MNJ1MS
	470	12.5×21	0.14	493.5	490	UUJ1V471MNJ6MS
	1000	18×16.5	0.14	1050	750	UUJ1V102MNJ1MS
	1000	16×21.5	0.14	1050	750	UUJ1V102MNJ6MS
	2200	18×21.5	0.16	2310	1150	UUJ1V222MNJ6MS
50 (1H)	220	12.5×16	0.12	330	320	UUJ1H221MNJ1MS
	330	16×16.5	0.12	495	440	UUJ1H331MNJ1MS
	330	12.5×21	0.12	495	440	UUJ1H331MNJ6MS
	470	18×16.5	0.12	705	550	UUJ1H471MNJ1MS
	470	16×21.5	0.12	705	550	UUJ1H471MNJ6MS
	1000	18×21.5	0.12	1500	820	UUJ1H102MNJ1MS
63 (1J)	68	12.5×13.5	0.10	128.52	175	UUJ1J680MNJ1MS
	100	12.5×16	0.10	189	225	UUJ1J101MNJ1MS
	220	16×16.5	0.10	415.8	385	UUJ1J221MNJ1MS
	220	12.5×21	0.10	415.8	385	UUJ1J221MNJ6MS
	330	18×16.5	0.10	623.7	490	UUJ1J331MNJ1MS
	330	16×21.5	0.10	623.7	490	UUJ1J331MNJ6MS
	470	18×21.5	0.10	888.3	590	UUJ1J471MNJ1MS

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■ 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
100 (2A)	47	12.5×13.5	0.08	141	160	UUJ2A470MNJ1MS
	68	12.5×16	0.08	204	205	UUJ2A680MNJ1MS
	100	16×16.5	0.08	300	285	UUJ2A101MNJ1MS
	100	12.5×21	0.08	300	285	UUJ2A101MNJ6MS
	220	18×16.5	0.08	660	440	UUJ2A221MNJ1MS
	220	16×21.5	0.08	660	440	UUJ2A221MNJ6MS
	330	18×21.5	0.08	990	500	UUJ2A331MNJ6MS
160 (2C)	33	12.5×13.5	0.15	311.2	95	UUJ2C330MNJ1MS
	47	16×16.5	0.15	400.8	260	UUJ2C470MNJ1MS
	47	12.5×21	0.15	400.8	260	UUJ2C470MNJ6MS
	68	18×16.5	0.15	535.2	320	UUJ2C680MNJ1MS
	68	16×21.5	0.15	535.2	320	UUJ2C680MNJ6MS
	100	16×21.5	0.15	740	380	UUJ2C101MNJ1MS
200 (2D)	10	12.5×13.5	0.15	180	80	UUJ2D100MNJ1MS
	22	12.5×16	0.15	276	105	UUJ2D220MNJ1MS
	33	16×16.5	0.15	364	220	UUJ2D330MNJ1MS
	33	12.5×21	0.15	364	220	UUJ2D330MNJ6MS
	47	18×16.5	0.15	476	270	UUJ2D470MNJ1MS
	47	16×21.5	0.15	476	270	UUJ2D470MNJ6MS
	68	18×21.5	0.15	644	330	UUJ2D680MNJ1MS
	100	18×21.5	0.15	900	410	UUJ2D101MNJ6MS
250 (2E)	4.7	12.5×13.5	0.15	147	65	UUJ2E4R7MNJ1MS
	10	12.5×16	0.15	200	105	UUJ2E100MNJ1MS
	22	16×16.5	0.15	320	180	UUJ2E220MNJ1MS
	22	12.5×21	0.15	320	180	UUJ2E220MNJ6MS
	33	18×16.5	0.15	430	230	UUJ2E330MNJ1MS
	33	16×21.5	0.15	430	230	UUJ2E330MNJ6MS
	47	18×21.5	0.15	570	280	UUJ2E470MNJ1MS
	68	18×21.5	0.15	780	340	UUJ2E680MNJ6MS
400 (2G)	4.7	12.5×16	0.20	175.2	50	UUJ2G4R7MNJ1MS
	10	16×16.5	0.20	260	85	UUJ2G100MNJ1MS
	22	18×21.5	0.20	452	130	UUJ2G220MNJ1MS
	33	18×21.5	0.20	628	160	UUJ2G330MNJ6MS
450 (2W)	3.3	12.5×13.5	0.20	159.4	40	UUJ2W3R3MNJ1MS
	4.7	12.5×16	0.20	184.6	50	UUJ2W4R7MNJ1MS
	10	16×16.5	0.20	280	85	UUJ2W100MNJ1MS
	22	18×21.5	0.20	496	130	UUJ2W220MNJ1MS
	33	18×21.5	0.20	694	160	UUJ2W330MNJ6MS

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