ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUG

Chip Type, Higher Capacitance Range

For SMD

Anti-Solvent Feature (Through 100V only)

- 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 compliant. Please contact us for details.

UUJ
Wide Temperature
UUG

■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 at 20°C, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.	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)	6.3	10	16	25	35	50	63	100	160 to 250	400・450
tan δ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25

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)		6.3	10	16	25	35	50	63	100	160 to 250	400・450
Impedance ratio (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

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 85°C.

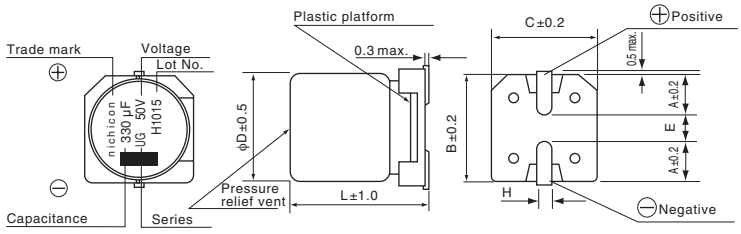
Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life: After storing the capacitors under no load at 85°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

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	G	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

V	Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
6.3 to 100	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 10000	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

● 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) (85℃/120Hz)	Part Number
6.3 (0J)	2200	12.5×16	0.30	415.8	890	UUG0J222MNJ1MS
	3300	16×16.5	0.32	623.7	1200	UUG0J332MNJ1MS
	3300	12.5×21	0.32	623.7	1200	UUG0J332MNJ6MS
	4700	16×16.5	0.34	888.3	1400	UUG0J472MNJ1MS
	6800	18×16.5	0.38	1285.2	1650	UUG0J682MNJ1MS
	6800	16×21.5	0.38	1285.2	1650	UUG0J682MNJ6MS
	10000	18×21.5	0.46	1890	2000	UUG0J103MNJ1MS
10 (1A)	1000	12.5×13.5	0.24	300	620	UUG1A102MNJ1MS
	2200	12.5×16	0.26	660	960	UUG1A222MNJ1MS
	3300	16×16.5	0.28	990	1300	UUG1A332MNJ1MS
	4700	18×16.5	0.30	1410	1500	UUG1A472MNJ1MS
	4700	16×21.5	0.30	1410	1500	UUG1A472MNJ6MS
	6800	18×21.5	0.34	2040	1850	UUG1A682MNJ1MS
	10000	18×21.5	0.42	3000	2200	UUG1A103MNJ6MS
16 (1C)	1000	12.5×13.5	0.20	480	710	UUG1C102MNJ1MS
	2200	16×16.5	0.22	1056	1150	UUG1C222MNJ1MS
	2200	12.5×21	0.22	1056	1150	UUG1C222MNJ6MS
	3300	18×16.5	0.24	1584	1450	UUG1C332MNJ1MS
	3300	16×21.5	0.24	1584	1450	UUG1C332MNJ6MS
	4700	18×21.5	0.26	2256	1750	UUG1C472MNJ1MS
25 (1E)	470	12.5×13.5	0.16	352.5	550	UUG1E471MNJ1MS
	1000	12.5×16	0.16	750	820	UUG1E102MNJ1MS
	2200	18×16.5	0.18	1650	1350	UUG1E222MNJ1MS
	2200	16×21.5	0.18	1650	1350	UUG1E222MNJ6MS
	3300	18×21.5	0.20	2475	1700	UUG1E332MNJ1MS
35 (1V)	470	12.5×13.5	0.14	493.5	580	UUG1V471MNJ1MS
	1000	16×16.5	0.14	1050	1000	UUG1V102MNJ1MS
	1000	12.5×21	0.14	1050	1000	UUG1V102MNJ6MS
	2200	18×21.5	0.16	2310	1550	UUG1V222MNJ1MS
50 (1H)	220	12.5×13.5	0.12	330	450	UUG1H221MNJ1MS
	330	12.5×13.5	0.12	495	520	UUG1H331MNJ1MS
	470	16×16.5	0.12	705	740	UUG1H471MNJ1MS
	470	12.5×21	0.12	705	740	UUG1H471MNJ6MS
	1000	18×21.5	0.12	1500	1150	UUG1H102MNJ1MS
63 (1J)	100	12.5×13.5	0.10	189	370	UUG1J101MNJ1MS
	220	12.5×16	0.10	415.8	580	UUG1J221MNJ1MS
	330	16×16.5	0.10	623.7	680	UUG1J331MNJ1MS
	330	12.5×21	0.10	623.7	680	UUG1J331MNJ6MS
	470	18×16.5	0.10	888.3	850	UUG1J471MNJ1MS
	470	16×21.5	0.10	888.3	850	UUG1J471MNJ6MS
100 (2A)	68	12.5×13.5	0.08	204	350	UUG2A680MNJ1MS
	100	12.5×16	0.08	300	440	UUG2A101MNJ1MS
	220	18×16.5	0.08	660	665	UUG2A221MNJ1MS
	220	16×21.5	0.08	660	665	UUG2A221MNJ6MS
	330	18×21.5	0.08	990	825	UUG2A331MNJ1MS

UUG

■ 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) (85℃/120Hz)	Part Number
160 (2C)	47	12.5×16	0.20	400.8	370	UUG2C470MNJ1MS
	68	16×16.5	0.20	535.2	500	UUG2C680MNJ1MS
	68	12.5×21	0.20	535.2	500	UUG2C680MNJ6MS
	100	18×16.5	0.20	740	590	UUG2C101MNJ1MS
	100	16×21.5	0.20	740	590	UUG2C101MNJ6MS
200 (2D)	22	12.5×13.5	0.20	276	235	UUG2D220MNJ1MS
	33	12.5×16	0.20	364	310	UUG2D330MNJ1MS
	47	16×16.5	0.20	476	415	UUG2D470MNJ1MS
	47	12.5×21	0.20	476	415	UUG2D470MNJ6MS
	68	18×16.5	0.20	644	505	UUG2D680MNJ1MS
	68	16×21.5	0.20	644	505	UUG2D680MNJ6MS
	100	18×21.5	0.20	900	590	UUG2D101MNJ1MS
250 (2E)	10	12.5×13.5	0.20	200	150	UUG2E100MNJ1MS
	22	12.5×16	0.20	320	240	UUG2E220MNJ1MS
	33	16×16.5	0.20	430	340	UUG2E330MNJ1MS
	33	12.5×21	0.20	430	340	UUG2E330MNJ6MS
	47	18×16.5	0.20	570	415	UUG2E470MNJ1MS
	47	16×21.5	0.20	570	415	UUG2E470MNJ6MS
	68	18×21.5	0.20	780	490	UUG2E680MNJ1MS
400 (2G)	4.7	12.5×13.5	0.25	175.2	115	UUG2G4R7MNJ1MS
	10	16×16.5	0.25	260	140	UUG2G100MNJ1MS
	10	12.5×21	0.25	260	140	UUG2G100MNJ6MS
	22	18×16.5	0.25	452	280	UUG2G220MNJ1MS
	22	16×21.5	0.25	452	280	UUG2G220MNJ6MS
	33	18×21.5	0.25	628	350	UUG2G330MNJ1MS
	47	18×21.5	0.25	852	430	UUG2G470MNJ6MS
450 (2W)	4.7	12.5×13.5	0.25	184.6	115	UUG2W4R7MNJ1MS
	10	16×16.5	0.25	280	140	UUG2W100MNJ1MS
	10	12.5×21	0.25	280	140	UUG2W100MNJ6MS
	22	16×21.5	0.25	496	275	UUG2W220MNJ1MS
	33	18×21.5	0.25	694	345	UUG2W330MNJ1MS

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