ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUL

Chip Type, Long Life Assurance

For SMD | Long Life



- Chip type with load life of 5000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCB ← Long Life | **UUL** | Long Life → UUA

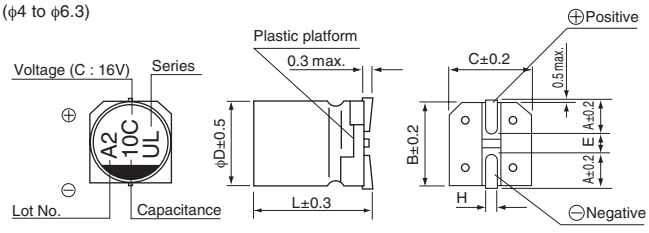
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (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 tan δ (max.) 0.32 / 0.24 / 0.20 / 0.16 / 0.13 / 0.12
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V) 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C) 4 / 3 / 2 / 2 / 2 / 2 Z(−40°C) / Z(+20°C) 10 / 7 / 5 / 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 5000 hours at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% 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.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

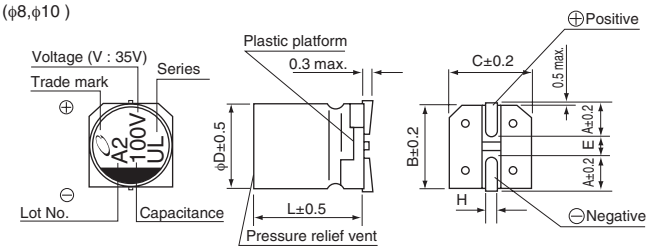
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ4 to φ6.3)



(φ8,φ10)



Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

Type numbering system (Example : 16V 100μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	L	1	C	1	0	1	M	C	L	1	G	S

- 14: Taping code
- 10, 11: Configuration
- 9: Capacitance tolerance (±20%)
- 5 to 8: Rated capacitance (100μF)
- 4, 5: Rated voltage (16V)
- 3: Series name
- 1 to 3: Type

φD	Code
4 to 6.3	CL
8・10	NL

(mm)

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● 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 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	33	5×5.8	0.32	3	35	UUL0J330MCL1GS
	47	5×5.8	0.32	3	36	UUL0J470MCL1GS
	100	6.3×5.8	0.32	6.3	60	UUL0J101MCL1GS
	220	6.3×7.7	0.32	13.86	101	UUL0J221MCL1GS
	330	8×10	0.32	20.79	160	UUL0J331MNL1GS
	470	10×10	0.32	29.61	254	UUL0J471MNL1GS
	1000	10×10	0.32	63	313	UUL0J102MNL1GS
10 (1A)	22	5×5.8	0.24	3	30	UUL1A220MCL1GS
	33	5×5.8	0.24	3.3	35	UUL1A330MCL1GS
	47	6.3×5.8	0.24	4.7	50	UUL1A470MCL1GS
	100	6.3×7.7	0.24	10	81	UUL1A101MCL1GS
	220	8×10	0.24	22	141	UUL1A221MNL1GS
	330	10×10	0.24	33	238	UUL1A331MNL1GS
	470	10×10	0.24	47	254	UUL1A471MNL1GS
16 (1C)	10	4×5.8	0.20	3	18	UUL1C100MCL1GS
	22	5×5.8	0.20	3.52	30	UUL1C220MCL1GS
	33	6.3×5.8	0.20	5.28	48	UUL1C330MCL1GS
	47	6.3×5.8	0.20	7.52	50	UUL1C470MCL1GS
	100	6.3×7.7	0.20	16	81	UUL1C101MCL1GS
	220	10×10	0.20	35.2	216	UUL1C221MNL1GS
	330	10×10	0.20	52.8	238	UUL1C331MNL1GS
	470	10×10	0.20	75.2	254	UUL1C471MNL1GS
25 (1E)	10	5×5.8	0.16	3	25	UUL1E100MCL1GS
	22	6.3×5.8	0.16	5.5	42	UUL1E220MCL1GS
	33	6.3×5.8	0.16	8.25	48	UUL1E330MCL1GS
	47	6.3×7.7	0.16	11.75	63	UUL1E470MCL1GS
	100	8×10	0.16	25	116	UUL1E101MNL1GS
	220	10×10	0.16	55	216	UUL1E221MNL1GS
	330	10×10	0.16	82.5	238	UUL1E331MNL1GS
35 (1V)	4.7	4×5.8	0.13	3	15	UUL1V4R7MCL1GS
	10	5×5.8	0.13	3.5	25	UUL1V100MCL1GS
	22	6.3×5.8	0.13	7.7	42	UUL1V220MCL1GS
	33	6.3×7.7	0.13	11.55	57	UUL1V330MCL1GS
	47	8×10	0.13	16.45	92	UUL1V470MNL1GS
	100	10×10	0.13	35	151	UUL1V101MNL1GS
	220	10×10	0.13	77	216	UUL1V221MNL1GS
50 (1H)	1	4×5.8	0.12	3	6.2	UUL1H010MCL1GS
	2.2	4×5.8	0.12	3	11	UUL1H2R2MCL1GS
	3.3	4×5.8	0.12	3	14	UUL1H3R3MCL1GS
	4.7	5×5.8	0.12	3	19	UUL1H4R7MCL1GS
	10	6.3×5.8	0.12	5	30	UUL1H100MCL1GS
	22	6.3×7.7	0.12	11	49	UUL1H220MCL1GS
	33	8×10	0.12	16.5	77	UUL1H330MNL1GS
	47	8×10	0.12	23.5	92	UUL1H470MNL1GS
	100	10×10	0.12	50	151	UUL1H101MNL1GS

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