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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

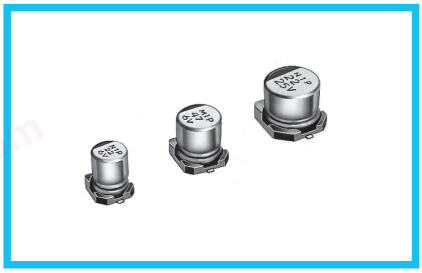
UWT

Chip Type, Wide Temperature Range

For SMD　Smaller

- Chip type operating over wide temperature range of to −55 to +105°C.
- 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.

UWZ
High Temperature Reflow
UWT
Smaller
UZT



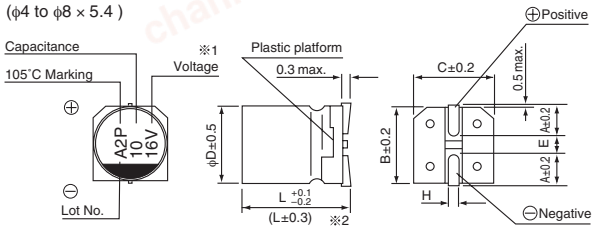
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	4 to 50V
Rated Capacitance Range	1 to 1500μF
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 0.01CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.40 / 0.30 / 0.24 / 0.20 / 0.16 / 0.14 / 0.14
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 7 / 4 / 3 / 2 / 2 / 2 / 2 Z(−40°C) / Z(+20°C): 15 / 8 / 8 / 4 / 4 / 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 1000 hours at 105°C. Capacitance change: Within ±25% of the initial capacitance value for capacitors of 16V or less. Within ±20% of the initial capacitance value for capacitors of 25V or more. 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.
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)

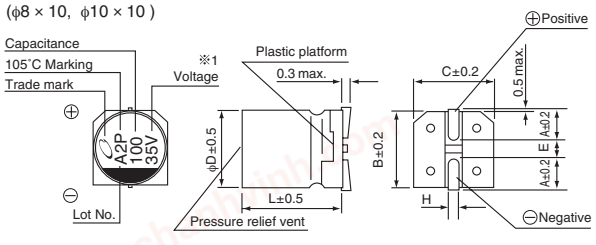
■Chip Type

(φ4 to φ8 × 5.4)



※2 Apply to φ6.3 × 5.8, φ6.3 × 7.7

(φ8 × 10, φ10 × 10)



※1. Voltage mark for 6.3V is 「6V」.

Type numbering system (Example : 16V 10μF)

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

φD	code
4 to 8 (5.4L)	GB
6.3 to 10 (L≧ 5.8)	GS

Taping code
Size code
Configuration

φD	code
4 to 8 (L≦7.7)	CL
8 to 10 (L = 10)	NL

Capacitance tolerance (±20%)
Rated capacitance (10μF)
Rated voltage (16V)
Series name
Type

(mm)

φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	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	0.5 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
4 (0G)	22	4×5.4	0.40	3	22	UWT0G220MCL1GB
	33	5×5.4	0.40	3	30	UWT0G330MCL1GB
	47	5×5.4	0.40	3	36	UWT0G470MCL1GB
	100	6.3×5.4	0.40	4	60	UWT0G101MCL1GB
	150	6.3×5.8	0.40	6	86	UWT0G151MCL1GS
	220	6.3×5.8	0.40	8.8	91	UWT0G221MCL6GS
	330	6.3×7.7	0.40	13.2	105	UWT0G331MCL1GS
	470	8×10	0.40	18.8	210	UWT0G471MNL1GS
	680	8×10	0.40	27.2	210	UWT0G681MNL1GS
	1000	8×10	0.40	40	230	UWT0G102MNL1GS
	1500	10×10	0.40	60	310	UWT0G152MNL1GS
6.3 (0J)	22	4×5.4	0.30	3	22	UWT0J220MCL1GB
	33	5×5.4	0.30	3	30	UWT0J330MCL1GB
	47	5×5.4	0.30	3	36	UWT0J470MCL1GB
	100	6.3×5.4	0.30	6.3	60	UWT0J101MCL1GB
	150	6.3×5.8	0.30	9.45	86	UWT0J151MCL1GS
	220	6.3×5.8	0.30	13.86	91	UWT0J221MCL6GS
	330	6.3×7.7	0.30	20.79	105	UWT0J331MCL1GS
	470	8×10	0.30	29.61	210	UWT0J471MNL1GS
	680	8×10	0.30	42.84	210	UWT0J681MNL1GS
	1000	8×10	0.30	63	230	UWT0J102MNL1GS
	1500	10×10	0.30	94.5	310	UWT0J152MNL1GS
10 (1A)	22	5×5.4	0.24	3	27	UWT1A220MCL1GB
	33	5×5.4	0.24	3.3	35	UWT1A330MCL1GB
	47	6.3×5.4	0.24	4.7	46	UWT1A470MCL1GB
	100	6.3×5.4	0.24	10	60	UWT1A101MCL1GB
	150	6.3×5.8	0.24	15	86	UWT1A151MCL1GS
	220	6.3×7.7	0.24	22	105	UWT1A221MCL1GS
	330	8×10	0.24	33	195	UWT1A331MNL1GS
	470	8×10	0.24	47	210	UWT1A471MNL1GS
	680	10×10	0.24	68	310	UWT1A681MNL1GS
	1000	10×10	0.24	100	310	UWT1A102MNL1GS
16 (1C)	10	4×5.4	0.20	3	18	UWT1C100MCL1GB
	22	5×5.4	0.20	3.52	30	UWT1C220MCL1GB
	33	6.3×5.4	0.20	5.28	40	UWT1C330MCL1GB
	47	6.3×5.4	0.20	7.52	50	UWT1C470MCL1GB
	100	6.3×5.4	0.20	16	60	UWT1C101MCL1GB
	150	6.3×7.7	0.20	24	95	UWT1C151MCL1GS
	220	6.3×7.7	0.20	35.2	105	UWT1C221MCL1GS
	330	8×10	0.20	52.8	195	UWT1C331MNL1GS
	470	8×10	0.20	75.2	230	UWT1C471MNL1GS
	680	10×10	0.20	108.8	310	UWT1C681MNL1GS

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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
25 (1E)	4.7	4×5.4	0.16	3	13	UWT1E4R7MCL1GB
	10	5×5.4	0.16	3	23	UWT1E100MCL1GB
	22	6.3×5.4	0.16	5.5	38	UWT1E220MCL1GB
	33	6.3×5.4	0.16	8.25	48	UWT1E330MCL1GB
	47	6.3×5.8	0.16	11.75	59	UWT1E470MCL6GS
	100	6.3×7.7	0.16	25	91	UWT1E101MCL1GS
	150	8×10	0.16	37.5	140	UWT1E151MNL1GS
	220	8×10	0.16	55	155	UWT1E221MNL1GS
	330	8×10	0.16	82.5	190	UWT1E331MNL1GS
	470	10×10	0.16	117.5	300	UWT1E471MNL1GS
35 (1V)	4.7	4×5.4	0.14	3	15	UWT1V4R7MCL1GB
	10	5×5.4	0.14	3.5	25	UWT1V100MCL1GB
	22	6.3×5.4	0.14	7.7	42	UWT1V220MCL1GB
	33	6.3×5.8	0.14	11.55	52	UWT1V330MCL6GS
	47	6.3×5.8	0.14	16.45	63	UWT1V470MCL1GS
	100	6.3×7.7	0.14	35	84	UWT1V101MCL1GS
	150	8×10	0.14	52.5	155	UWT1V151MNL1GS
	220	8×10	0.14	77	190	UWT1V221MNL1GS
	330	10×10	0.14	115.5	300	UWT1V331MNL1GS
50 (1H)	1	4×5.4	0.14	3	6.2	UWT1H010MCL1GB
	2.2	4×5.4	0.14	3	11	UWT1H2R2MCL1GB
	3.3	4×5.4	0.14	3	14	UWT1H3R3MCL1GB
	4.7	5×5.4	0.14	3	19	UWT1H4R7MCL1GB
	10	6.3×5.4	0.14	5	30	UWT1H100MCL1GB
	22	6.3×5.8	0.14	11	45	UWT1H220MCL6GS
	33	6.3×7.7	0.14	16.5	60	UWT1H330MCL1GS
	47	6.3×7.7	0.14	23.5	63	UWT1H470MCL1GS
	100	8×10	0.14	50	140	UWT1H101MNL1GS
	150	10×10	0.14	75	180	UWT1H151MNL1GS
	220	10×10	0.14	110	220	UWT1H221MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUX, UUJ series if high C/V products are required.