ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UWT Chip Type, Wide Temperature Range

For SMD   Smaller   Anti-Solvent Feature

- 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).
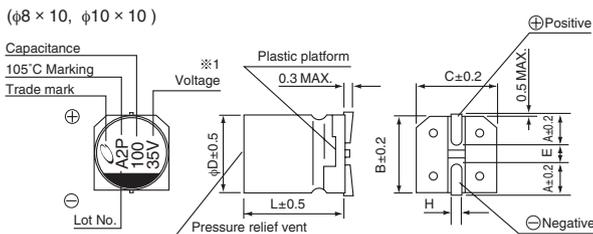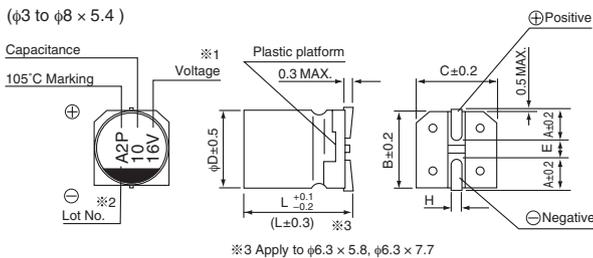- AEC-Q200 compliant. Please contact us for details.

Values marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.
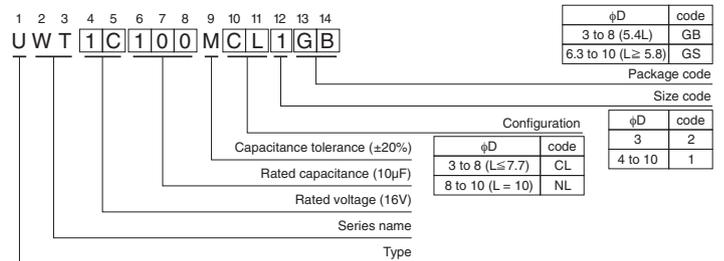
UWZ
High Temperature Reflow

UWF — Low impedeance
UUT — Long Life

UWT

Smaller

UZT
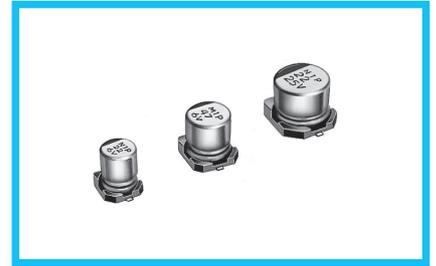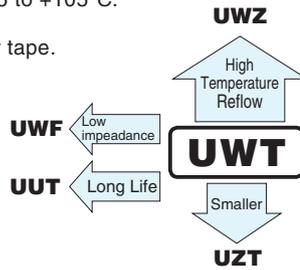
■Specifications

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 φ3mm unit, and 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.

■Chip Type

(φ3 to φ8 × 5.4)

Capacitance
105˚C Marking
⊕
A2P 10 16V
⊖ ※2
Lot No.

※1 Voltage
Plastic platform 0.3 MAX.
φD±0.5
B±0.2
L +0.1 −0.2
(L±0.3) ※3
C±0.2
0.5 MAX.
E A±0.2
A±0.2
H
⊕Positive
⊖Negative

※3 Apply to φ6.3 × 5.8, φ6.3 × 7.7

(φ8 × 10, φ10 × 10)

Capacitance
105˚C Marking
Trade mark
⊕
A2P 100 35V
⊖
Lot No.

※1 Voltage
Plastic platform 0.3 MAX.
φD±0.5
B±0.2
L±0.5
Pressure relief vent
C±0.2
0.5 MAX.
E A±0.2
A±0.2
H
⊕Positive
⊖Negative

※1. Voltage mark for 6.3V is 「6V」. In case of marking for φ3 units, "V" for rated voltage is omitted.
※2. In case of marking for φ3 units. Lot No is expressed by a digit (month code).

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
3 to 8 (5.4L)	GB
6.3 to 10 (L≧ 5.8)	GS

Package code
Size code

Configuration

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

φD	code
3	2
4 to 10	1

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

(mm)

φD × L	※ 3 × 5.4	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 5.8	6.3 × 7.7	8 × 5.4	8 × 10	10 × 10
A	1.5	1.8	2.1	2.4	2.4	2.4	3.3	2.9	3.2
B	3.3	4.3	5.3	6.6	6.6	6.6	8.3	8.3	10.3
C	3.3	4.3	5.3	6.6	6.6	6.6	8.3	8.3	10.3
E	0.8	1.0	1.3	2.2	2.2	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	5.4	5.8	7.7	5.4	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	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Dimension table in next page.

CAT.8100H

UWT

■ Dimensions

Cap. (µF)	Code	4 / 0G		6.3 / 0J		10 / 1A		16 / 1C		25 / 1E		35 / 1V		50 / 1H	
1	010													4×5.4(※3)	6.3(5.9)
2.2	2R2											※3×5.4	7.5	4×5.4(※3)	11(9)
3.3	3R3											※3×5.4	9	4×5.4	14
4.7	4R7									4×5.4(※3)	13(10)	4×5.4	15	5×5.4	19
10	100							4×5.4(※3)	18(14)	5×5.4	23	5×5.4	25	6.3×5.4	30
22	220	4×5.4	22	4×5.4	22	5×5.4	27	5×5.4	30	6.3×5.4	38	6.3×5.4	42	•8×5.4	51(45)
33	330	5×5.4	30	5×5.4	30	5×5.4	35	6.3×5.4	40	6.3×5.4	48	•8×5.4	59(52)	6.3×7.7	60
47	470	5×5.4	36	5×5.4	36	6.3×5.4	46	6.3×5.4	50	•8×5.4	66(59)	6.3×5.8	63	6.3×7.7	63
100	101	6.3×5.4	60	6.3×5.4	60	6.3×5.4	60	6.3×5.4	60	6.3×7.7	91	6.3×7.7	84	8×10	140
150	151	6.3×5.8	86	6.3×5.8	86	6.3×5.8	86	6.3×7.7	95	8×10	140	8×10	155	10×10	180
220	221	•8×5.4	102(91)	•8×5.4	102(91)	6.3×7.7	105	6.3×7.7	105	8×10	155	8×10	190	10×10	220
330	331	6.3×7.7	105	6.3×7.7	105	8×10	195	8×10	195	8×10	190	10×10	300		
470	471	8×10	210	8×10	210	8×10	210	8×10	230	10×10	300				
680	681	8×10	210	8×10	210	10×10	310	10×10	310						
1000	102	8×10	230	8×10	230	10×10	310							Case size	Rated ripple
1500	152	10×10	310	10×10	310									φD×L (mm)	

Rated ripple current (mArms) at 105°C 120Hz

(※3)：φ3 In such a case, ②will be put at 12th digit of type numbering system.

※ However, φ3 which are scheduled to be discontinued. Not recommended for new designs.

Size φ6.3×5.8 is available for capacitors marked. "•" In such a case, ⑥will be put at 12th digit of type numbering system.

● 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

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UUX(p.158), UUJ(p.164) series if high C/V products are reqired.
- Please refer to page 3 for the minimum order quantity.

Mouser Electronics

Authorized Distributor

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Nichicon:

UWT1HR47MCL1GB UWT1HR47MCL2GB UWT1V100MCL1GB UWT1V101MCL1GS UWT1V220MCL1GB
UWT1V221MNL1GS UWT1V2R2MCL2GB UWT1V330MCL1GB UWT1V331MNL1GS UWT1V3R3MCL2GB
UWT1V470MCL1GS UWT1C101MCL1GB UWT1C220MCL1GB UWT1C221MCL1GS UWT1C330MCL1GB
UWT1C331MNL1GS UWT1C470MCL1GB UWT1C471MNL1GS UWT1C681MNL1GS UWT1E100MCL1GB
UWT1E220MCL1GB UWT1E330MCL1GB UWT1E331MNL1GS UWT1E470MCL1GB UWT1E470MCL6GS
UWT1E471MNL1GS UWT1E4R7MCL1GB UWT1E4R7MCL2GB UWT1H010MCL1GB UWT1H010MCL2GB
UWT1H0R1MCL1GB UWT1H0R1MCL2GB UWT1H100MCL1GB UWT1H101MNL1GS UWT1H220MCL1GB
UWT1H221MNL1GS UWT1H2R2MCL1GB UWT1H2R2MCL2GB UWT1H330MCL1GS UWT1H3R3MCL1GB
UWT1H470MCL1GS UWT1H4R7MCL1GB UWT1HR22MCL1GB UWT1HR22MCL2GB UWT1HR33MCL1GB
UWT1HR33MCL2GB UWT0G101MCL1GB UWT0G220MCL1GB UWT0G221MCL1GB UWT0G330MCL1GB
UWT0G470MCL1GB UWT0J101MCL1GB UWT0J102MNL1GS UWT0J152MNL1GS UWT0J220MCL1GB
UWT0J221MCL1GB UWT0J330MCL1GB UWT0J331MCL1GS UWT0J470MCL1GB UWT0J471MNL1GS
UWT0J681MNL1GS UWT1A101MCL1GB UWT1A220MCL1GB UWT1A330MCL1GB UWT1A470MCL1GB
UWT1C100MCL1GB UWT1C100MCL2GB UWT1E221MNL1GS UWS1V470MCL1GS UWT0G151MCL1GS
UWT0G221MCL6GS UWT0G331MCL1GS UWT0G471MNL1GS UWT0G681MNL1GS UWT0G102MNL1GS
UWT0G152MNL1GS UWT0J151MCL1GS UWT0J221MCL6GS UWT1A151MCL1GS UWT1A221MCL1GS
UWT1A331MNL1GS UWT1A471MNL1GS UWT1A681MNL1GS UWT1A102MNL1GS UWT1C151MCL1GS
UWT1E101MCL1GS UWT1E151MNL1GS UWT1V330MCL6GS UWT1V151MNL1GS UWT1H6R8MCL1GB
UWT1H220MCL6GS UWT1H151MNL1GS UWT1V101MCS1GS