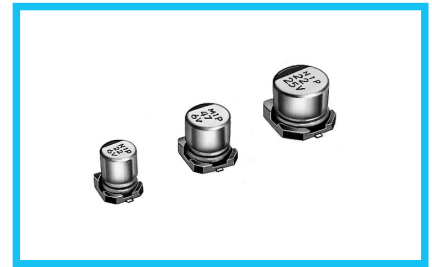


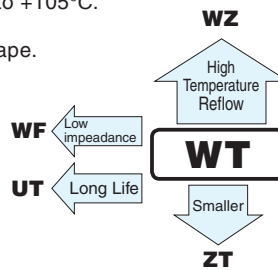
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

WT series Chip Type, Wide Temperature Range



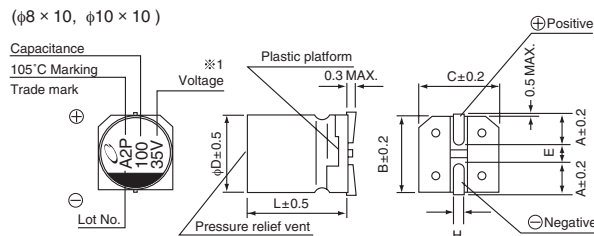
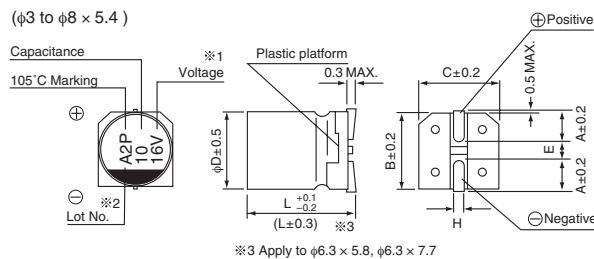
- Chip type operating over wide temperature range of to -55 to $+105^{\circ}\text{C}$.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).



Specifications

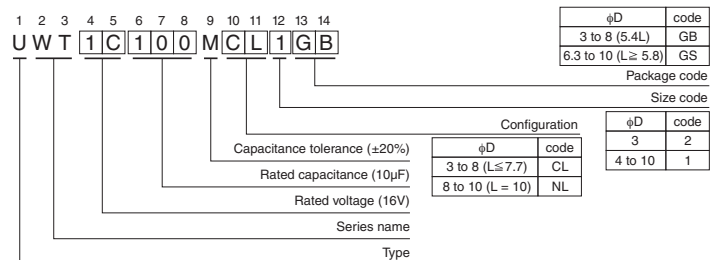
Item	Performance Characteristics								
Category Temperature Range	-55 to +105°C								
Rated Voltage Range	4 to 50V								
Rated Capacitance Range	0.1 to 1500μF								
Capacitance Tolerance	±20% at 120Hz, 20°C								
Leakage Current	After 2 minutes' application of rated voltage, leakage current 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



- ※1. Voltage mark for 6.3V is 「6V」. In case of marking for $\phi 3$ units, 「V」 for rated voltage is omitted.
 ※2. In case of marking for $\phi 3$ units. Lot No is expressed by a digit (month code).

Type numbering system (Example : 16V 10 μF)



$\phi D \times L$	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.8100D

■ Dimensions

Cap. (μF)	V	Code	4		6.3		10		16		25		35		50	
			0G		0J		1A		1C		1E		1V		1H	
0.1	0R1														4 × 5.4 (3)	1.0
0.22	R22														4 × 5.4 (3)	2.6
0.33	R33														4 × 5.4 (3)	3.2
0.47	R47														4 × 5.4 (3)	3.8
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 φ D × L (mm)	Rated ripple
1500	152	10 × 10	310	10 × 10	310											

Rated ripple current (mA rms) at 105°C 120Hz

() is also available with φ3mm upon request. In such a case, [2] will be put at 12th digit of type numbering system.

Size φ6.3 × 5.8 is available for capacitors marked. " • " In such a case, [6] will 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 UX(p.154), UJ(p.160) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.

Mouser Electronics

Authorized Distributor

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Nichicon:

<u>UWT1HR47MCL1GB</u>	<u>UWT1HR47MCL2GB</u>	<u>UWT1HR47MCR1GB</u>	<u>UWT1HR47MCR2GB</u>	<u>UWT1V100MCL1GB</u>
<u>UWT1V100MCR1GB</u>	<u>UWT1V101MCL1GS</u>	<u>UWT1V101MCR1GS</u>	<u>UWT1V220MCL1GB</u>	<u>UWT1V220MCR1GB</u>
<u>UWT1V221MNL1GS</u>	<u>UWT1V221MNR1GS</u>	<u>UWT1V2R2MCL2GB</u>	<u>UWT1V2R2MCR2GB</u>	<u>UWT1V330MCL1GB</u>
<u>UWT1V330MCR1GB</u>	<u>UWT1V331MNL1GS</u>	<u>UWT1V331MNR1GS</u>	<u>UWT1V3R3MCL2GB</u>	<u>UWT1V3R3MCR2GB</u>
<u>UWT1V470MCL1GS</u>	<u>UWT1V470MCR1GS</u>	<u>UWT1V4R7MCL1GB</u>	<u>UWT1V4R7MCR1GB</u>	<u>UWT1C100MCR2GB</u>
<u>UWT1C101MCL1GB</u>	<u>UWT1C101MCR1GB</u>	<u>UWT1C220MCL1GB</u>	<u>UWT1C220MCR1GB</u>	<u>UWT1C221MCL1GS</u>
<u>UWT1C221MCR1GS</u>	<u>UWT1C330MCL1GB</u>	<u>UWT1C330MCR1GB</u>	<u>UWT1C331MNL1GS</u>	<u>UWT1C331MNR1GS</u>
<u>UWT1C470MCL1GB</u>	<u>UWT1C470MCR1GB</u>	<u>UWT1C471MNL1GS</u>	<u>UWT1C471MNR1GS</u>	<u>UWT1C681MNL1GS</u>
<u>UWT1C681MNR1GS</u>	<u>UWT1E100MCL1GB</u>	<u>UWT1E100MCR1GB</u>	<u>UWT1E220MCL1GB</u>	<u>UWT1E220MCR1GB</u>
<u>UWT1E330MCL1GB</u>	<u>UWT1E330MCR1GB</u>	<u>UWT1E331MNL1GS</u>	<u>UWT1E331MNR1GS</u>	<u>UWT1E470MCL1GB</u>
<u>UWT1E470MCL6GS</u>	<u>UWT1E470MCR1GB</u>	<u>UWT1E470MCR6GS</u>	<u>UWT1E471MNL1GS</u>	<u>UWT1E471MNR1GS</u>
<u>UWT1E4R7MCL1GB</u>	<u>UWT1E4R7MCL2GB</u>	<u>UWT1E4R7MCR1GB</u>	<u>UWT1E4R7MCR2GB</u>	<u>UWT1H010MCL1GB</u>
<u>UWT1H010MCL2GB</u>	<u>UWT1H010MCR1GB</u>	<u>UWT1H010MCR2GB</u>	<u>UWT1H0R1MCL1GB</u>	<u>UWT1H0R1MCL2GB</u>
<u>UWT1H0R1MCR1GB</u>	<u>UWT1H0R1MCR2GB</u>	<u>UWT1H100MCL1GB</u>	<u>UWT1H100MCR1GB</u>	<u>UWT1H101MNL1GS</u>
<u>UWT1H101MNR1GS</u>	<u>UWT1H220MCL1GB</u>	<u>UWT1H220MCR1GB</u>	<u>UWT1H221MNL1GS</u>	<u>UWT1H221MNR1GS</u>
<u>UWT1H2R2MCL1GB</u>	<u>UWT1H2R2MCL2GB</u>	<u>UWT1H2R2MCR1GB</u>	<u>UWT1H2R2MCR2GB</u>	<u>UWT1H330MCL1GS</u>
<u>UWT1H330MCR1GS</u>	<u>UWT1H3R3MCL1GB</u>	<u>UWT1H3R3MCR1GB</u>	<u>UWT1H470MCL1GS</u>	<u>UWT1H470MCR1GS</u>
<u>UWT1H4R7MCL1GB</u>	<u>UWT1H4R7MCR1GB</u>	<u>UWT1HR22MCL1GB</u>	<u>UWT1HR22MCL2GB</u>	<u>UWT1HR22MCR1GB</u>
<u>UWT1HR22MCR2GB</u>	<u>UWT1HR33MCL1GB</u>	<u>UWT1HR33MCL2GB</u>	<u>UWT1HR33MCR1GB</u>	<u>UWT1HR33MCR2GB</u>
<u>UWT0G101MCL1GB</u>	<u>UWT0G101MCR1GB</u>	<u>UWT0G220MCL1GB</u>	<u>UWT0G220MCR1GB</u>	<u>UWT0G221MCL1GB</u>