ALUMINUM ELECTROLYTIC CAPACITORS

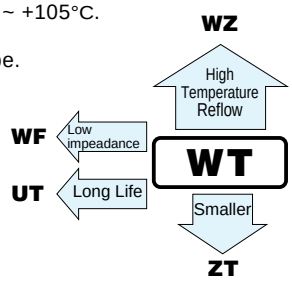
nichicon

WT Chip Type, Wide Temperature Range

series

For SMD | Smaller | Anti-Solvent Feature

- Chip type operating over wide temperature range of to –55 ~ +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2002/95/EC).



■Specifications

Item	Performance Characteristics
Category Temperature Range	–55 ~ +105°C
Rated Voltage Range	4 ~ 50V
Rated Capacitance Range	0.1 ~ 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.
tan δ	Measurement frequency : 120Hz, Temperature : 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 — After 1000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right.

Capacitance change	Within ±25% of initial value for capacitors of φ3mm unit, and 16V or less. Within ±20% of initial value for capacitors of 25V or more.
tan δ	200% or less of initial specified value
Leakage current	Initial specified value or less

Shelf Life — After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for endurance characteristics listed above.

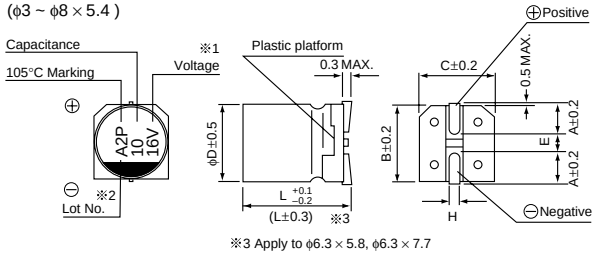
Resistance to soldering heat — The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.

Capacitance change	Within ±10% of initial value
tan δ	Initial specified value or less
Leakage current	Initial specified value or less

Marking — Black print on the case top.

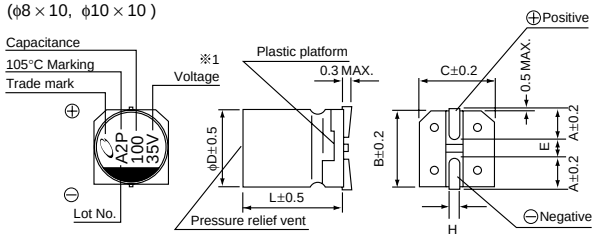
■Chip Type

(φ3 ~ φ8 × 5.4)



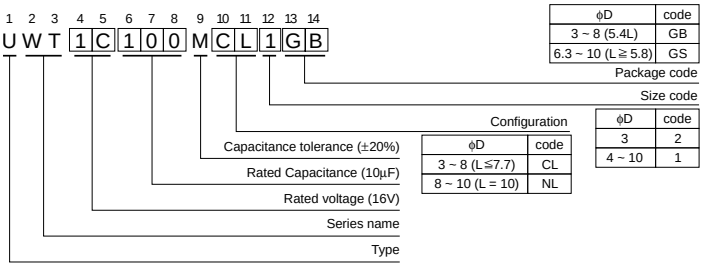
※3 Apply to φ6.3 × 5.8, φ6.3 × 7.7

(φ8 × 10, φ10 × 10)



※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)



(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 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.8 ~ 1.1	0.8 ~ 1.1

● Dimension table in next page.

WT series

■Dimensions

φD×L (mm)

Cap. (μF) \ V	4		6.3		10		16		25		35		50	
Code	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	Rated ripple
1500	152	10×10	310	10×10	310										

Rated Ripple (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~
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 24.
- Recommended land size, soldering by reflow are given in page 25
- Please select UX(p.66), UJ(p.68) series if high C/V products are reqired.
- Please refer to page 3 for the minimum order quantity.