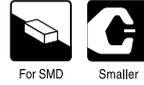
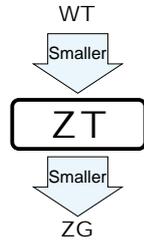


# ALUMINUM ELECTROLYTIC CAPACITORS

**ZT** series 4.5mmL Chip Type, Wide Temperature Range



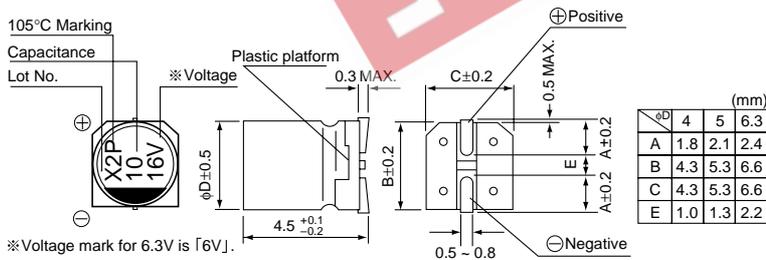
- Chip type with 4.5mm height, operating over wide temperature range of  $-40 \sim +105^{\circ}\text{C}$ .
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2002/95/EC).



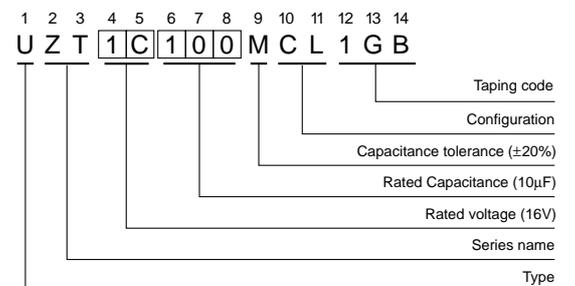
## Specifications

Item	Performance Characteristics					
Category Temperature Range	$-40 \sim +105^{\circ}\text{C}$					
Rated Voltage Range	6.3 ~ 50V					
Rated Capacitance Range	0.1 ~ 100 $\mu\text{F}$					
Capacitance Tolerance	$\pm 20\%$ at 120Hz, $20^{\circ}\text{C}$					
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 ( $\mu\text{A}$ ), whichever is greater.					
tan $\delta$	Measurement frequency : 120Hz, Temperature : $20^{\circ}\text{C}$					
	Rated voltage (V)	6.3	10	16	25	35
Stability at Low Temperature	Measurement frequency : 120Hz					
	Impedance ratio	Z- $25^{\circ}\text{C}$ / Z+ $20^{\circ}\text{C}$	6	5	3	3
Endurance	After 1000 hours' application of rated voltage at $105^{\circ}\text{C}$ , capacitors meet the characteristic requirements listed at right.					
	Capacitance change	Within $\pm 25\%$ of initial value (16V or less) Within $\pm 20\%$ of initial value (25V or more)				
Shelf Life	After storing the capacitors under no load at $105^{\circ}\text{C}$ for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at $20^{\circ}\text{C}$ , they will meet the specified value for endurance characteristics listed above.					
	Capacitance change	Within $\pm 10\%$ of initial value				
Resistance to soldering heat	The capacitors shall be kept on the hot plate maintained at $250^{\circ}\text{C}$ for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.					
	tan $\delta$	Initial specified value or less				
Marking	Black print on the case top.					
	Leakage current	Initial specified value or less				

## Chip Type



## Type numbering system (Example : 16V 10 $\mu\text{F}$ )



## Dimensions

Cap. ( $\mu\text{F}$ )	Code	V		6.3		10		16		25		35		50	
		0J	1A	1C	1E	1V	1H								
0.1	0R1													4	0.9
0.22	R22													4	2.2
0.33	R33													4	2.8
0.47	R47													4	3.3
1	010													4	5.4
2.2	2R2													4	9.6
3.3	3R3													4	12
4.7	4R7								4	11	4	13	5	16	
10	100					4	16	5	20	5	22	6.3	26		
22	220	4	19	5	24	5	26	6.3	33	6.3	36				
33	330	5	26	5	30	6.3	35	6.3	42						
47	470	5	32	6.3	40	6.3	44								
100	101	6.3	52											Case size $\phi D$ (mm)	Rated ripple

Rated Ripple (mArms) at  $105^{\circ}\text{C}$  120Hz

## 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, 26.
- Please select UX(p.74), UJ(p.76) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.