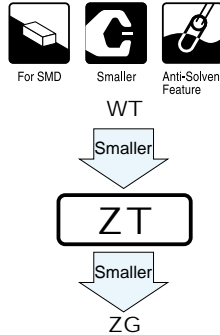


ALUMINUM ELECTROLYTIC CAPACITORS

ZT series 4.5mmL Chip Type, Wide Temperature Range

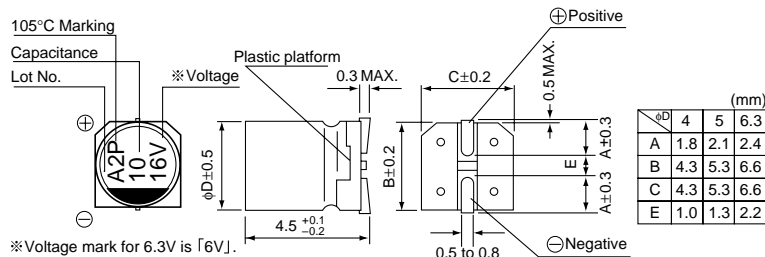


- Chip type with 4.5mm height, operating over wide temperature range of -40 to $+105^{\circ}\text{C}$.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC).

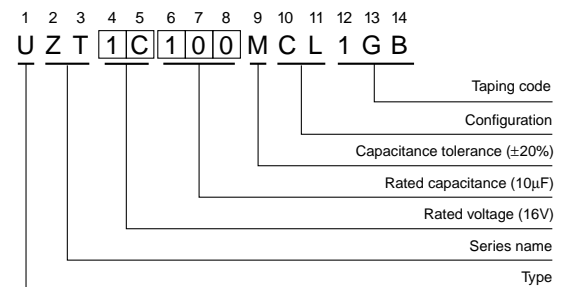
Specifications

Item	Performance Characteristics							
Category Temperature Range	-40 to $+105^{\circ}\text{C}$							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	0.1 to $100\mu\text{F}$							
Capacitance Tolerance	$\pm 20\%$ 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 ($\tan \delta$)	Measurement frequency : 120Hz at 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Impedance ratio	Z- 25°C / Z+ 20°C	6	5	3	3	3	3
	ZT / Z20 (MAX.)	Z- 40°C / Z+ 20°C	10	10	6	6	4	4
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 $\pm 25\%$ of the initial capacitance value (16V or less)				
			$\tan \delta$	300% or less than 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.		Leakage current	Less than or equal to the initial specified value				
			Capacitance change	Within $\pm 10\%$ of the initial capacitance value				
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 .		$\tan \delta$	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



Type numbering system (Example : 16V 10 μF)



Dimensions

Cap. (μF)	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												

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

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.110), UJ(p.116) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.