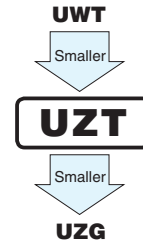


## UZT 4.5mmL Chip Type, Wide Temperature Range



- 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 (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

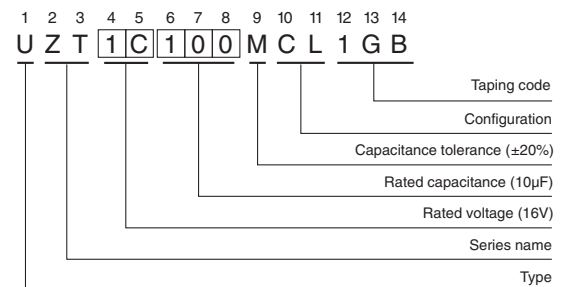
### Specifications

Item	Performance Characteristics																														
Category Temperature Range	$-40$ to $+105^{\circ}\text{C}$																														
Rated Voltage Range	6.3 to 50V																														
Rated Capacitance Range	1 to $100\mu\text{F}$																														
Capacitance Tolerance	$\pm 20\%$ at 120Hz, $20^{\circ}\text{C}$																														
Leakage Current	After 2 minutes' application of rated voltage at $20^{\circ}\text{C}$ , leakage current is not more than $0.01\text{CV}$ or $3(\mu\text{A})$ , whichever is greater.																														
Tangent of loss angle (tan $\delta$ )	Measurement frequency : 120Hz at $20^{\circ}\text{C}$																														
	Rated voltage (V)	6.3	10	16	25	35	50																								
Stability at Low Temperature	Measurement frequency : 120Hz																														
	Rated voltage (V)	6.3	10	16	25	35	50																								
	Impedance ratio ZT / Z20 (MAX.)	Z $-25^{\circ}\text{C}$ / Z $+20^{\circ}\text{C}$	6	5	3	3	3	3																							
Endurance	The specifications listed at right shall be met when the capacitors are restored to $20^{\circ}\text{C}$ after the rated voltage is applied for 1000 hours at $105^{\circ}\text{C}$ .		<table border="1"> <tr> <td>Capacitance change</td> <td colspan="5">Within <math>\pm 25\%</math> of the initial capacitance value (16V or less)</td> </tr> <tr> <td>tan <math>\delta</math></td> <td colspan="5">Within <math>\pm 20\%</math> of the initial capacitance value (25V or more)</td> </tr> <tr> <td>Leakage current</td> <td colspan="5">300% or less than initial specified value</td> </tr> <tr> <td></td> <td colspan="5">Less than or equal to the initial specified value</td> </tr> </table>					Capacitance change	Within $\pm 25\%$ of the initial capacitance value (16V or less)					tan $\delta$	Within $\pm 20\%$ of the initial capacitance value (25V or more)					Leakage current	300% or less than initial specified value						Less than or equal to the initial specified value				
	Capacitance change	Within $\pm 25\%$ of the initial capacitance value (16V or less)																													
tan $\delta$	Within $\pm 20\%$ of the initial capacitance value (25V or more)																														
Leakage current	300% or less than initial specified value																														
	Less than or equal to the initial specified value																														
Shelf Life	After storing the capacitors under no load at $105^{\circ}\text{C}$ for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at $20^{\circ}\text{C}$ , 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 $250^{\circ}\text{C}$ . The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to $20^{\circ}\text{C}$ .		<table border="1"> <tr> <td>Capacitance change</td> <td colspan="5">Within <math>\pm 10\%</math> of the initial capacitance value</td> </tr> <tr> <td>tan <math>\delta</math></td> <td colspan="5">Less than or equal to the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="5">Less than or equal to the initial specified value</td> </tr> </table>					Capacitance change	Within $\pm 10\%$ of the initial capacitance value					tan $\delta$	Less than or equal to the initial specified value					Leakage current	Less than or equal to the initial specified value										
	Capacitance change	Within $\pm 10\%$ of the initial capacitance value																													
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 $10\mu\text{F}$ )



### Dimensions

Cap. ( $\mu\text{F}$ )	Code	6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
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  $105^{\circ}\text{C}$  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 UUX(p.170), UUU(p.176) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.