



3.95mmL MAX. Chip Type,  
Wide Temperature Range  
series



- Chip type with 3.95mmLMAX 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).

ZT  
Smaller

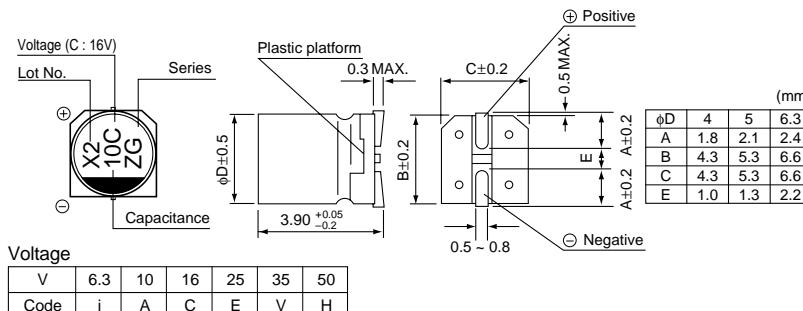
ZG



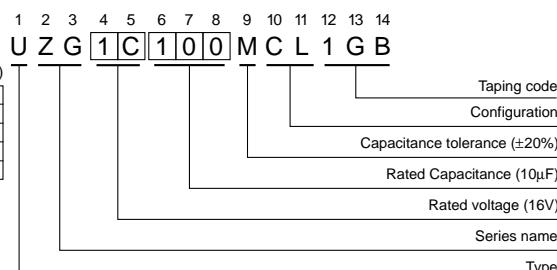
## ■ Specifications

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 0.01 CV or 3 ( $\mu\text{A}$ ), whichever is greater.								
tan $\delta$	Rated voltage (V)	6.3	10	16	25	35	50	120Hz $20^{\circ}\text{C}$	
	tan $\delta$ (MAX.)	0.38	0.32	0.20	0.16	0.14	0.14		
Stability at Low Temperature	Rated voltage (V)	6.3	10	16	25	35	50	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	4		
Endurance	After 1000 hours' application of rated voltage at $105^{\circ}\text{C}$ , capacitors meet the characteristic requirements listed at right.				Capacitance change	Within $\pm 30\%$ of initial value			
					tan $\delta$	300% or less of initial specified value			
Shelf Life	After leaving capacitors under no load at $105^{\circ}\text{C}$ for 1000 hours, they meet the specified value for endurance characteristics listed above.				Leakage current	Initial specified value or less			
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.				Capacitance change	Within $\pm 10\%$ of initial value			
					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	
		0R1	0J	1A	1C	1E	1V	1H		
0.1									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	16
10		100				4	16	5	20	5
22		220	4	19	5	24	5	26	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 (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
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 24.
- Recommended land size are given in page 25.
- Please contact us for the soldering by reflow.
- Please refer to page 3 for the minimum order quantity.