

**ZR** 3.95mmL MAX. Chip Type  
series



For SMD

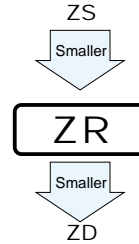


Smaller



Anti-Solvent Feature

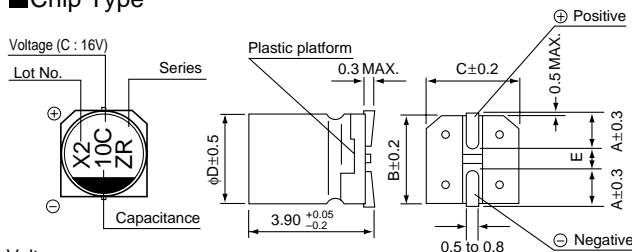
- Chip type with 3.95mmLMAX height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC).



## Specifications

Item	Performance Characteristics									
Category Temperature Range	-40 to +85°C									
Rated Voltage Range	4 to 50V									
Rated Capacitance Range	0.1 to 220μF									
Capacitance Tolerance	±20% at 120Hz, 20°C									
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (μA) , whichever is greater.									
Tangent of loss angle (tan δ)	Rated voltage (V)	4	6.3	10	16	25	35	50	120Hz 20°C	
	tan δ (MAX.)	0.50	0.30	0.24	0.19	0.16	0.14	0.14		
Stability at Low Temperature	Rated voltage (V)	4	6.3	10	16	25	35	50	120Hz	
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	7	4	3	2	2	2		
		Z-40°C / Z+20°C	15	8	8	4	4	3		
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 85°C.				Capacitance change		Within ±30% of the initial capacitance value			
					tan δ		300% or less than the initial specified value			
					Leakage current		Less than or equal to the initial specified value			
Shelf Life	After storing the capacitors under no load at 85°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.									
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.				Capacitance change		Within ±10% of the initial capacitance value			
					tan δ		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.									

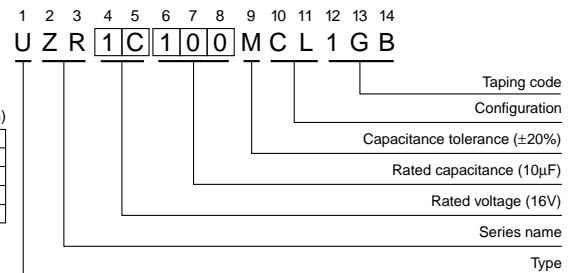
## Chip Type



Voltage

V	4	6.3	10	16	25	35	50
Code	g	j	A	C	E	V	H

## Type numbering system (Example : 16V 10μF)



## Dimensions

V	4	6.3	10	16	25	35	50
Cap. (μF)	0G	0J	1A	1C	1E	1V	1H
0.1	0R1						4 1.0
0.22	R22						4 2.0
0.33	R33						4 2.8
0.47	R47						4 4.0
1	010						4 8.4
2.2	2R2						4 13
3.3	3R3						4 17
4.7	4R7						5 20
10	100			4 23	5 27	5 29	6.3 33
22	220	4 28	5 33	5 37	6.3 42	6.3 46	
33	330	4 37	5 41	6.3 49	6.3 52		
47	470	4 45	6.3 52	6.3 58			
100	101	5 56	6.3 70				
220	221	6.3 96					

Rated ripple current (mA) at 85°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 refer to page 3 for the minimum order quantity.

CAT.8100Z