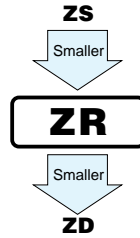


# ALUMINUM ELECTROLYTIC CAPACITORS

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



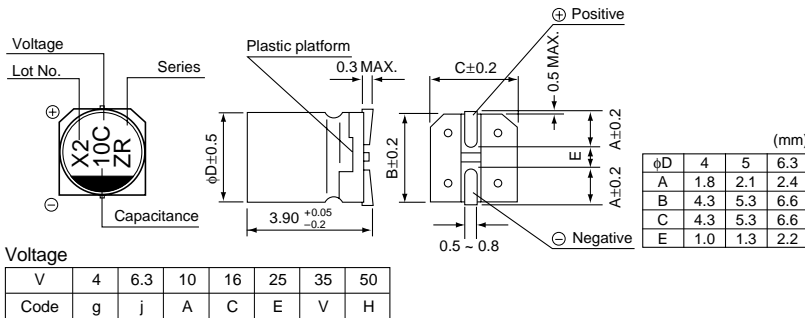
- Chip type with 3.95mmLMAX height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.



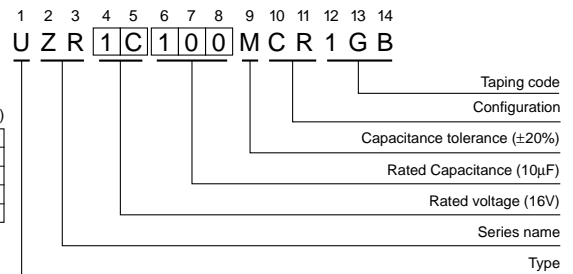
## Specifications

Item	Performance Characteristics										
Category Temperature Range	-40 ~ +85°C										
Rated Voltage Range	4 ~ 50V										
Rated Capacitance Range	0.1 ~ 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.										
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			2
		Z-40°C / Z+20°C	15	8	8	4	4	3			3
Endurance	After 1000 hours' application of rated voltage at 85°C, capacitors meet the characteristic requirements listed at right.								Capacitance change	Within ±30% of initial value	
									tan δ	300% or less of initial specified value	
Shelf Life	After leaving capacitors under no load at 85°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°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 ±10% of initial value	
									tan δ	Initial specified value or less	
									Leakage current	Initial specified value or less	
Marking	Black print on the case top.										

## Chip Type



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



## Dimensions

Cap. (μF)	V		4		6.3		10		16		25		35		50	
	Code		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														4	20
10	100														4	33
22	220														4	33
33	330	4	28	5	37	5	41	6.3	49	6.3	52					
47	470	4	33	5	45	6.3	52	6.3	58							
100	101	5	56	6.3	70											
220	221	6.3	96													

Rated Ripple (mA rms) at 85°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 22.
- Recommended land size are given in page 23
- Please refer to page 3 for the minimum order quantity.