ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

ZR series

3.95mmL MAX. Chip Type

For SMD | Smaller | Anti-Solvent Feature

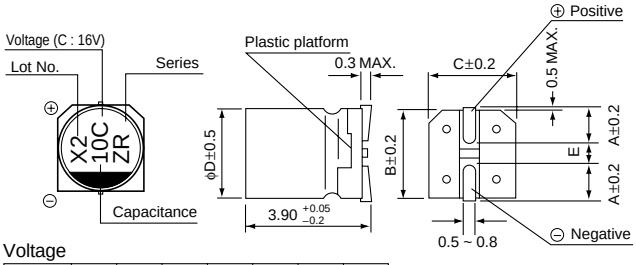
- Chip type with 3.95mmLMAX height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2002/95/EC).

ZS (Smaller) → ZR → (Smaller) ZD

■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	
	Impedance ratio ZT / Z20 (MAX.) 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; Leakage current: Initial specified value or less							
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.								
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



(mm)

φD	4	5	6.3
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E	1.0	1.3	2.2

Voltage

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

Type numbering system (Example : 16V 10μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	Z	R	1	C	1	0	0	M	C	L	1	G	B

Taping code
Configuration
Capacitance tolerance (±20%)
Rated Capacitance (10μF)
Rated voltage (16V)
Series name
Type

■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	16	4	18	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	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											Case size φD (mm)	Rated ripple

Rated Ripple (mArms) 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 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.