ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

ZD 3.0mmL Chip Type series

For SMD | Smaller | Anti-Solvent Feature

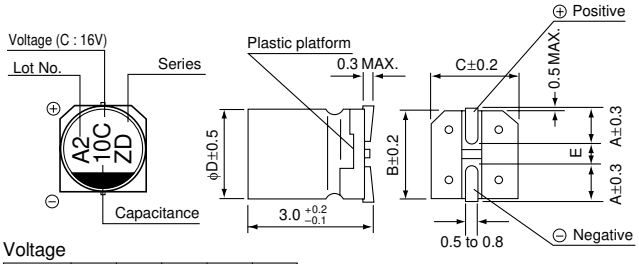
- Chip type with 3.0mmL height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).

ZR Smaller ZD

■Specifications

Item	Performance Characteristics						
Category Temperature Range	−40 to +85°C						
Rated Voltage Range	4 to 25V						
Rated Capacitance Range	2.2 to 100µF						
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	120Hz 20°C
	tan δ (MAX.)	0.50	0.40	0.30	0.24	0.19	
Stability at Low Temperature	Rated voltage (V)	4	6.3	10	16	25	120Hz
	Impedance ratio ZT / Z20 (MAX.) Z−25°C / Z+20°C	7	4	3	2	2	
	Impedance ratio ZT / Z20 (MAX.) Z−40°C / Z+20°C	15	8	8	4	4	
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



(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
Code	g	j	A	C	E

Type numbering system (Example : 16V 10µF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	Z	D	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	Code	4		6.3		10		16		25	
		0G		0J		1A		1C		1E	
2.2	2R2									4	7
3.3	3R3									4	11
4.7	4R7									4	16
5.6	5R6									5	18
6.8	6R8									5	20
10	100							5	23	6.3	27
22	220	4	20	5	28	5	33	6.3	37		
33	330	5	28	5	37	6.3	41				
47	470	5	33	6.3	45					Case size φD (mm)	Rated ripple
100	101	6.3	56	6.3	70						

Rated ripple current (mArms) 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.