

ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

RZ series Compact & Low-Profile Sized, Wide Temperature Range



Smaller

Anti-Solvent
Feature
(Through
100V only)

- Very small case sizes same as RS series, but operating over wide temperature range of -55 (-40) $\sim +105^{\circ}\text{C}$.
- Adapted to the RoHS directive (2002/95/EC).

RZ



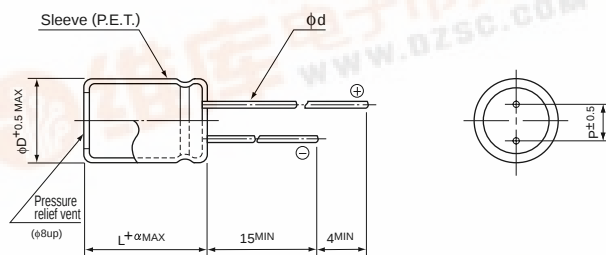
RS



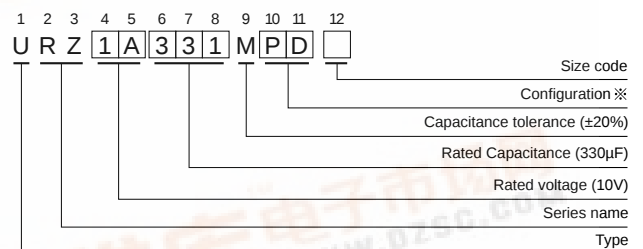
Specifications

Item	Performance Characteristics													
Category Temperature Range	-55 ~ +105°C (6.3 ~ 100V) , -40 ~ +105°C (160 ~ 400V)													
Rated Voltage Range	6.3 ~ 400V													
Rated Capacitance Range	0.1 ~ 10000μF													
Capacitance Tolerance	±20% at 120Hz, 20°C													
Leakage Current	Rated voltage (V)	6.3 ~ 100							160 ~ 400					
	_____	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater. After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.							After 1 minute's application of rated voltage, I = 0.04CV+100 (μA) or less					
tan δ	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz, Temperature : 20°C													
	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	400	
	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.20	0.20	0.25	
Stability at Low Temperature	Measurement frequency : 120Hz													
	Rated voltage (V)		6.3	10	16	25	35	50	63	100	160	200	250	400
	Impedance ratio	Z-25°C / Z+20°C	5	4	3	2	2	2	2	2	3	3	3	6
	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	10	8	6	4	3	3	3	3	4	4	6	10
Endurance	After 1000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right.								Capacitance change		Within ±20% of initial value			
									tan δ		200% or less of initial specified value			
									Leakage current		Initial specified value or less			
Shelf Life	After storing the capacitors under no load at 105°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.													
Marking	Printed with white color letter on black sleeve.													

Radial Lead Type



α	$(\phi D < 20)$ 1.5								
	$(\phi D \geq 20)$ 2.0								
ϕD	5	6.3	8	10	12.5	16	18	20	(mm)
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	
ϕd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	

Type numbering system (Example : 10V 330 μF)

※ Configuration

ϕD	Pb-free leadwire Pb-free PET sleeve
5 ~ 6.3	DD
8 ~ 10	PD
12.5 ~ 18	HD
20	RD

- Please refer to page 21 about the end seal configuration.



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■Dimensions

V		6.3		10		16		25		35		50	
Cap.(μF)	Code	0J		1A		1C		1E		1V		1H	
0.1	0R1											5×9	1.1
0.22	R22											5×9	2.3
0.33	R33											5×9	3.5
0.47	R47											5×9	5
1	010											5×9	12
2.2	2R2											5×9	18
3.3	3R3											5×9	25
4.7	4R7							5×9	20	5×9	25	5×9	30
10	100					5×9	30	5×9	35	5×9	40	5×9	46
22	220	5×9	25	5×9	40	5×9	50	5×9	55	5×9	60	5×9	65
33	330	5×9	40	5×9	55	5×9	60	5×9	70	5×9	75	6.3×9	85
47	470	5×9	55	5×9	65	5×9	70	5×9	80	6.3×9	95	6.3×9	100
100	101	5×9	90	5×9	95	6.3×9	115	6.3×9	130	8×9	155	10×9	170
220	221	6.3×9	145	6.3×9	155	8×9	205	10×9	220	10×9	235	10×12.5	290
330	331	6.3×9	180	8×9	210	10×9	240	10×9	270	10×12.5	340	12.5×12.5	370
470	471	8×9	235	8×9	275	10×9	290	10×12.5	370	12.5×12.5	420	16×15	540
1000	102	10×9	370	10×12.5	450	12.5×12.5	520	12.5×15	590	16×15	720	18×20	830
2200	222	12.5×15	635	12.5×15	690	16×15	830	18×15	970	18×20	1110	20×25	1250
3300	332	16×15	860	16×15	940	18×15	1050	18×20	1220	20×25	1430		
4700	472	16×15	1010	18×15	1120	18×20	1260	18×25	1470				
6800	682	18×15	1200	18×20	1330	18×25	1560						
10000	103	18×20	1450	18×25	1700							Case size φD×L (mm)	Rated ripple

V		63		100		160		200		250		400	
Cap.(μF)	Code	1J		2A		2C		2D		2E		2G	
0.1	0R1			5×9	1.2								
0.22	R22			5×9	3								
0.33	R33			5×9	4.5								
0.47	R47			5×9	6.5								
1	010			5×9	12								
2.2	2R2			5×9	17								
3.3	3R3			5×9	25								
4.7	4R7			6.3×9	32								
10	100	5×9	42	6.3×9	50							16×15	100
22	220	6.3×9	71	8×9	93					16×15	200	●18×15	200
33	330	8×9	100	10×9	130			16×15	250	●18×15	250	18×20	250
47	470	8×9	120	10×12.5	165	16×15	300	●18×15	300	△18×20	300	★18×25	300
68	680					●18×15	350	△18×20	350	18×20	350	20×25	350
100	101	10×9	215	12.5×15	265	△18×20	420	★18×25	420	18×25	420		
150	151					★18×25	510	18×25	510				
220	221	12.5×12.5	335	16×15	440	20×25	550						
330	331	12.5×15	510	18×15	540								
470	471	16×15	640									Case size φD×L (mm)	Rated ripple

Rated Ripple (mArms) at 105°C 120Hz

Size φ16×20 is available for capacitors marked "●"
Size φ20×15 is available for capacitors marked "△"
Size φ20×20 is available for capacitors marked "★"

●Frequency coefficient of rated ripple current

V	Frequency		50Hz	120Hz	300Hz	1 kHz	10kHz ~
	Cap.(μF)	~ 47					
		100 ~ 470					
		1000 ~					
6.3 ~ 100	~ 47		0.75	1.00	1.35	1.57	2.00
	100 ~ 470		0.80	1.00	1.23	1.34	1.50
	1000 ~		0.85	1.00	1.10	1.13	1.15
160 ~ 400	10 ~ 220		0.80	1.00	1.25	1.40	1.60

In this case, [6] will be put at 12th digit of type numbering system.