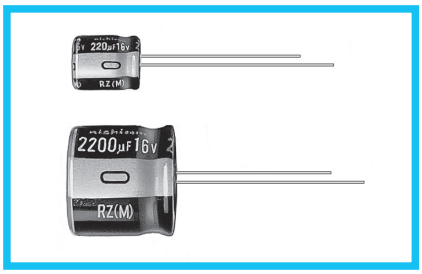
nichicon

URZ

Compact & Low-Profile Sized,
Wide Temperature Range

Smaller

Anti-Solvent Feature (Through 100V only)



- Very small case sizes same as URS, but operating over wide temperature range of −55 (−40) to +105˚C.
- Compliant to the RoHS directive (2011/65/EU).

URZ

High Temperature

URS

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105˚C (6.3 to 100V) , −40 to +105˚C (160 to 400V)
Rated Voltage Range	6.3 to 400V
Rated Capacitance Range	0.1 to 10000μF
Capacitance Tolerance	±20% at 120Hz, 20˚C
Leakage Current	Rated voltage (V) | 6.3 to 100 | 160 to 400 ——— | After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 (μA), whichever is greater. After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater. | After 1 minute's application of rated voltage at 20°C, I = 0.04CV+100 (μA) or less
Tangent of loss angle (tan δ)	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz at 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

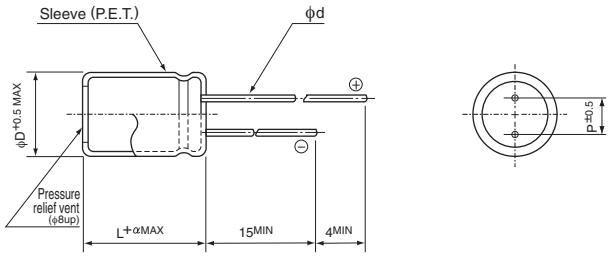
Rated voltage (V)		6.3	10	16	25	35	50	63	100	160	200	250	400
Impedance ratio ZT / Z20 (MAX.)	Z−25˚C / Z+20˚C	5	4	3	2	2	2	2	2	3	3	3	6
	Z−40˚C / Z+20˚C	10	8	6	4	3	3	3	3	4	4	6	10

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 105°C.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% 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 105˚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.
Marking	Printed with white color letter on black sleeve.

■Radial Lead Type



α	(ϕD < 20) 1.5
	(ϕD ≧ 20) 2.0

(mm)

ϕD	5	6.3	8	10	12.5	16	18	20
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

• Please refer to page 20 about the end seal configuration.

Type numbering system (Example : 10V 330μF)

1	2	3	4	5	6	7	8	9	10	11	12
U	R	Z	1	A	3	3	1	M	P	D	

Size code
Configuration ※
Capacitance tolerance (±20%)
Rated capacitance (330μF)
Rated voltage (10V)
Series name
Type

※ Configuration

ϕ D	Pb-free leadwire Pb-free PET sleeve
5 · 6.3	DD
8 · 10	PD
12.5 to 18	HD
20	RD

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

●Dimension table in next page.

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■Dimensions

Cap.(μF) \ V	6.3		10		16		25		35		50	
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					Case size φD × L (mm)	Rated ripple
10000	103	18 × 20	1450	18 × 25	1700								

Cap.(μF) \ V	63		100		160		200		250		400	
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	6.3 × 9	50							16 × 15	100
22	220	6.3 × 9	8 × 9	93					16 × 15	200	●18 × 15	200
33	330	8 × 9	10 × 9	130			16 × 15	250	●18 × 15	250	18 × 20	250
47	470	8 × 9	10 × 12.5	165	16 × 15	300	●18 × 15	300	Δ18 × 20	300	★18 × 25	300
68	680				●18 × 15	350	Δ18 × 20	350	18 × 20	350	20 × 25	350
100	101	10 × 9	12.5 × 15	265	Δ 18 × 20	420	★18 × 25	420	18 × 25	420		
150	151				★18 × 25	510	18 × 25	510				
220	221	12.5 × 12.5	16 × 15	440	20 × 25	550						
330	331	12.5 × 15	18 × 15	540							Case size φD × L (mm)	Rated ripple
470	471	16 × 15	640									

Rated ripple current (mArms) at 105˚C 120Hz

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

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

● Frequency coefficient of rated ripple current

V	Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1 kHz	10kHz or more
6.3 to 100	0.1 to 47	0.75	1.00	1.35	1.57	2.00
	100 to 470	0.80	1.00	1.23	1.34	1.50
	1000 to 10000	0.85	1.00	1.10	1.13	1.15
160 to 400	10 to 220	0.80	1.00	1.25	1.40	1.60