ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

URZ

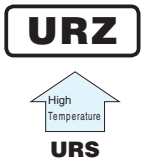
Compact & Low-Profile Sized,
Wide Temperature Range

Smaller

Anti-Solvent Feature (Through 100V only)

- Wide temperature range and same size as URS.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Valued marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.



■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	10 to 10000μF
Capacitance Tolerance	±20% at 120Hz, 20˚C
Leakage Current ※	Rated voltage (V) | 6.3 to 100: After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV. After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV. | 160 to 400: 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 (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

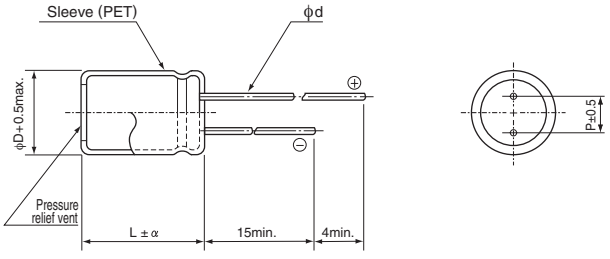
Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.

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.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Radial Lead Type



α	(φD < 20) 1.5
	(φD ≥ 20) 2.0

(mm)

φD	10	12.5	16	18	20
P	5.0	5.0	7.5	7.5	10.0
φd	0.6	0.6	0.8	0.8	1.0

- Please refer to the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

Type numbering system (Example : 10V 1000μF)

1	2	3	4	5	6	7	8	9	10	11	12
U	R	Z	1	A	1	0	2	M	P	D	

Size code
Configuration ※
Capacitance tolerance (±20%)
Rated capacitance (1000μF)
Rated voltage (10V)
Series name
Type

※Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
10	PD
12.5 to 18	HD
20	RD

● Frequency coefficient of rated ripple current

V	Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1 kHz	10kHz or more
6.3 to 100	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

● Dimension table in next page.

URZ

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA)		Rated Ripple (mArms) (105℃/120Hz)	Part Number
				at 20℃ after 1 minute	at 20℃ after 2 minutes		
6.3 (0J)	2200	12.5×15	0.30	415.8	138.6	635	URZ0J222MHD
	3300	16×15	0.32	623.7	207.9	860	URZ0J332MHD
	4700	16×15	0.34	888.3	296.1	1010	URZ0J472MHD
	6800	18×15	0.38	1285.2	428.4	1200	URZ0J682MHD
	10000	18×20	0.46	1890	630	1450	URZ0J103MHD
10 (1A)	1000	10×12.5	0.24	300	100	450	URZ1A102MPD
	2200	12.5×15	0.26	660	220	690	URZ1A222MHD
	3300	16×15	0.28	990	330	940	URZ1A332MHD
	4700	18×15	0.30	1410	470	1120	URZ1A472MHD
	6800	18×20	0.34	2040	680	1330	URZ1A682MHD
	10000	18×25	0.42	3000	1000	1700	URZ1A103MHD
16 (1C)	1000	12.5×12.5	0.20	480	160	520	URZ1C102MHD
	2200	16×15	0.22	1056	352	830	URZ1C222MHD
	3300	18×15	0.24	1584	528	1050	URZ1C332MHD
	4700	18×20	0.26	2256	752	1260	URZ1C472MHD
	6800	18×25	0.30	3264	1088	1560	URZ1C682MHD
25 (1E)	470	10×12.5	0.16	352.5	117.5	370	URZ1E471MPD
	1000	12.5×15	0.16	750	250	590	URZ1E102MHD
	2200	18×15	0.18	1650	550	970	URZ1E222MHD
	3300	18×20	0.20	2475	825	1220	URZ1E332MHD
	4700	18×25	0.22	3525	1175	1470	URZ1E472MHD
35 (1V)	330	10×12.5	0.14	346.5	115.5	340	URZ1V331MPD
	470	12.5×12.5	0.14	493.5	164.5	420	URZ1V471MHD
	1000	16×15	0.14	1050	350	720	URZ1V102MHD
	2200	18×20	0.16	2310	770	1110	URZ1V222MHD
	3300	20×25	0.18	3465	1155	1430	※URZ1V332MRD
50 (1H)	220	10×12.5	0.12	330	110	290	URZ1H221MPD
	330	12.5×12.5	0.12	495	165	370	URZ1H331MHD
	470	16×15	0.12	705	235	540	URZ1H471MHD
	1000	18×20	0.12	1500	500	830	URZ1H102MHD
	2200	20×25	0.14	3300	1100	1250	※URZ1H222MRD
63 (1J)	220	12.5×12.5	0.10	415.8	138.6	335	URZ1J221MHD
	330	12.5×15	0.10	623.7	207.9	510	URZ1J331MHD
	470	16×15	0.10	888.3	296.1	640	URZ1J471MHD
100 (2A)	47	10×12.5	0.08	141	47	165	URZ2A470MPD
	100	12.5×15	0.08	300	100	265	URZ2A101MHD
	220	16×15	0.08	660	220	440	URZ2A221MHD
	330	18×15	0.08	990	330	540	URZ2A331MHD
160 (2C)	47	16×15	0.20	400.8	—	300	URZ2C470MHD
	68	18×15	0.20	535.2	—	350	URZ2C680MHD
	68	16×20	0.20	535.2	—	350	URZ2C680MHD6

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code “1” and then add the appropriate code.

URZ

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA)		Rated Ripple (mArms) (105℃/120Hz)	Part Number
				at 20℃ after 1 minute	at 20℃ after 2 minutes		
160 (2C)	100	18×20	0.20	740	—	420	URZ2C101MHD
	100	20×15	0.20	740	—	420	※URZ2C101MRD6
	150	18×25	0.20	1060	—	510	URZ2C151MHD
	150	20×20	0.20	1060	—	510	※URZ2C151MRD6
	220	20×25	0.20	1508	—	550	※URZ2C221MRD
200 (2D)	33	16×15	0.20	364	—	250	URZ2D330MHD
	47	18×15	0.20	476	—	300	URZ2D470MHD
	47	16×20	0.20	476	—	300	URZ2D470MHD6
	68	18×20	0.20	644	—	350	URZ2D680MHD
	68	20×15	0.20	644	—	350	※URZ2D680MRD6
	100	18×25	0.20	900	—	420	URZ2D101MHD
	100	20×20	0.20	900	—	420	※URZ2D101MRD6
	150	18×25	0.20	1300	—	510	URZ2D151MHD
250 (2E)	22	16×15	0.20	320	—	200	URZ2E220MHD
	33	18×15	0.20	430	—	250	URZ2E330MHD
	33	16×20	0.20	430	—	250	URZ2E330MHD6
	47	18×20	0.20	570	—	300	URZ2E470MHD
	47	20×15	0.20	570	—	300	※URZ2E470MRD6
	68	18×20	0.20	780	—	350	URZ2E680MHD
	100	18×25	0.20	1100	—	420	URZ2E101MHD
400 (2G)	10	16×15	0.25	260	—	100	URZ2G100MHD
	22	18×15	0.25	452	—	200	URZ2G220MHD
	22	16×20	0.25	452	—	200	URZ2G220MHD6
	33	18×20	0.25	628	—	250	URZ2G330MHD
	47	18×25	0.25	852	—	300	URZ2G470MHD
	47	20×20	0.25	852	—	300	※URZ2G470MRD6
	68	20×25	0.25	1188	—	350	※URZ2G680MRD

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code “1” and then add the appropriate code.

- For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.