ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

URS

Compact & Low-profile Sized

Smaller

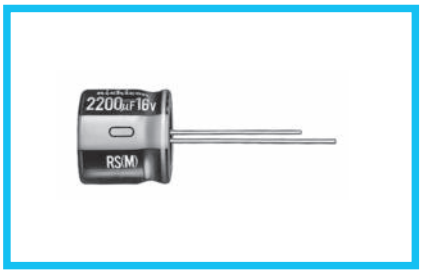
Anti-Solvent Feature (Through 100V only)

URZ

High Temperature

URS

- Compact & low profile case size.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +85˚C
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	160 to 400
———	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.	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	12	10	8	5	4	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 2000 hours at 85°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

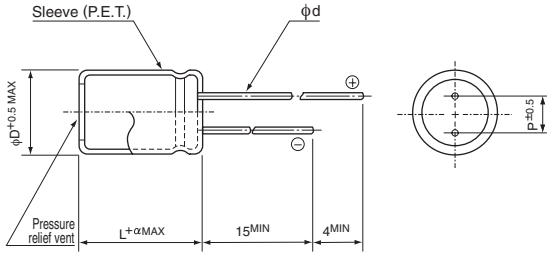
Shelf Life

After storing the capacitors under no load at 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.

Marking

Printed with white color letter on black sleeve.

■Radial Lead Type



(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

α	(φD<20) 1.5
	(φD≧20) 2.0

- 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	S	1	A	1	0	2	M	P	D	

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

※Configuration

φD	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.

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■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) at 20℃ after 1 minute	Leakage Current (μA) at 20℃ after 2 minutes	Rated Ripple (mArms) (85℃/120Hz)	Part Number
6.3 (0J)	2200	12.5×15	0.30	415.8	138.6	890	URS0J222MHD
	3300	16×15	0.32	623.7	207.9	1200	URS0J332MHD
	4700	16×15	0.34	888.3	296.1	1410	URS0J472MHD
	6800	18×15	0.38	1285.2	428.4	1660	URS0J682MHD
	10000	18×20	0.46	1890	630	2020	URS0J103MHD
10 (1A)	1000	10×12.5	0.24	300	100	620	URS1A102MPD
	2200	12.5×15	0.26	660	220	960	URS1A222MHD
	3300	16×15	0.28	990	330	1300	URS1A332MHD
	4700	18×15	0.30	1410	470	1550	URS1A472MHD
	6800	18×20	0.34	2040	680	1850	URS1A682MHD
	10000	18×25	0.42	3000	1000	2350	URS1A103MHD
16 (1C)	1000	12.5×12.5	0.20	480	160	720	URS1C102MHD
	2200	16×15	0.22	1056	352	1160	URS1C222MHD
	3300	18×15	0.24	1584	528	1460	URS1C332MHD
	4700	18×20	0.26	2256	752	1770	URS1C472MHD
	6800	18×25	0.30	3264	1088	2170	URS1C682MHD
25 (1E)	470	10×12.5	0.16	352.5	117.5	530	URS1E471MPD
	1000	12.5×15	0.16	750	250	830	URS1E102MHD
	2200	18×15	0.18	1650	550	1360	URS1E222MHD
	3300	18×20	0.20	2475	825	1720	URS1E332MHD
	4700	18×25	0.22	3525	1175	2050	URS1E472MHD
35 (1V)	330	10×12.5	0.14	346.5	115.5	480	URS1V331MPD
	470	12.5×12.5	0.14	493.5	164.5	590	URS1V471MHD
	1000	16×15	0.14	1050	350	1010	URS1V102MHD
	2200	18×20	0.16	2310	770	1560	URS1V222MHD
	3300	20×25	0.18	3465	1155	2000	URS1V332MRD
50 (1H)	220	10×12.5	0.12	330	110	420	URS1H221MPD
	330	12.5×12.5	0.12	495	165	530	URS1H331MHD
	470	16×15	0.12	705	235	750	URS1H471MHD
	1000	18×20	0.12	1500	500	1160	URS1H102MHD
	2200	20×25	0.14	3300	1100	1750	URS1H222MRD
63 (1J)	220	12.5×12.5	0.10	415.8	138.6	490	URS1J221MHD
	330	12.5×15	0.10	623.7	207.9	710	URS1J331MHD
	470	16×15	0.10	888.3	296.1	900	URS1J471MHD
100 (2A)	47	10×12.5	0.08	141	47	230	URS2A470MPD
	100	12.5×15	0.08	300	100	370	URS2A101MHD
	220	16×15	0.08	660	220	620	URS2A221MHD
	330	18×15	0.08	990	330	760	URS2A331MHD
160 (2C)	47	16×15	0.20	400.8	—	420	URS2C470MHD
	68	18×15	0.20	535.2	—	490	URS2C680MHD
	68	16×20	0.20	535.2	—	490	URS2C680MHD6

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.

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■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) at 20℃ after 1 minute	Leakage Current (μA) at 20℃ after 2 minutes	Rated Ripple (mArms) (85℃/120Hz)	Part Number
160 (2C)	100	18×20	0.20	740	—	590	URS2C101MHD
	100	20×15	0.20	740	—	590	URS2C101MRD6
	150	18×25	0.20	1060	—	710	URS2C151MHD
	150	20×20	0.20	1060	—	710	URS2C151MRD6
	220	20×25	0.20	1508	—	770	URS2C221MRD
200 (2D)	33	16×15	0.20	364	—	350	URS2D330MHD
	47	18×15	0.20	476	—	420	URS2D470MHD
	47	16×20	0.20	476	—	420	URS2D470MHD6
	68	18×20	0.20	644	—	490	URS2D680MHD
	68	20×15	0.20	644	—	490	URS2D680MRD6
	100	18×25	0.20	900	—	590	URS2D101MHD
	100	20×20	0.20	900	—	590	URS2D101MRD6
	150	18×25	0.20	1300	—	710	URS2D151MHD
250 (2E)	22	16×15	0.20	320	—	280	URS2E220MHD
	33	18×15	0.20	430	—	350	URS2E330MHD
	33	16×20	0.20	430	—	350	URS2E330MHD6
	47	18×20	0.20	570	—	420	URS2E470MHD
	47	20×15	0.20	570	—	420	URS2E470MRD6
	68	18×20	0.20	780	—	490	URS2E680MHD
	100	18×25	0.20	1100	—	590	URS2E101MHD
400 (2G)	10	16×15	0.25	260	—	140	URS2G100MHD
	22	18×15	0.25	452	—	280	URS2G220MHD
	22	16×20	0.25	452	—	280	URS2G220MHD6
	33	18×20	0.25	628	—	350	URS2G330MHD
	47	18×25	0.25	852	—	420	URS2G470MHD
	47	20×20	0.25	852	—	420	URS2G470MRD6
	68	20×25	0.25	1188	—	490	URS2G680MRD

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.