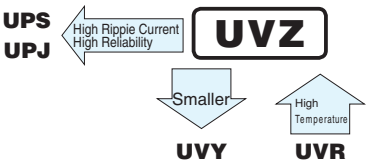
ALUMINUM ELECTROLYTIC CAPACITORS

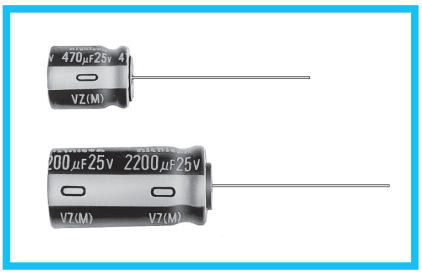
nichicon

UVZ

Wide Temperature Range

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





■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105˚C (6.3 to 100V) , −40 to +105˚C (160 to 400V), −25 to +105˚C (450V)
Rated Voltage Range	6.3 to 450V
Rated Capacitance Range	1 to 22000μF
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(μA). After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV(μA). 160 to 450: After 1 minute's application of rated voltage at 20°C, CV ≦ 1000 : I = 0.1CV+40 (μA) or less; CV > 1000 : 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 to 315	350 to 450
tan δ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25

Stability at Low Temperature — Measurement frequency : 120Hz

Rated voltage (V)		6.3	10	16	25	35	50	63	100	160 to 200	250 to 350	400	450
Impedance ratio (max.)	Z(−25˚C) / Z(+20˚C)	5	4	3	2	2	2	2	2	3	4	6	15
	Z(−40˚C) / Z(+20˚C)	10	8	6	4	3	3	3	3	4	8	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 (1000 hours for φD = 8) at 105°C.

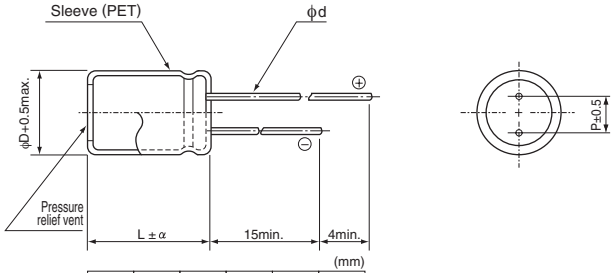
Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

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



(mm)

φD	8	10	12.5	16	18
P	3.5	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.6	0.8	0.8

α	(L<20) 1.5
	(L≧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
U	V	Z	1	A	1	0	2	M	P	D

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

※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
8 · 10	PD
12.5 to 18	HD

● Frequency coefficient of rated ripple current

V	Frequency / Cap. (μF)	50Hz	120Hz	300Hz	1 kHz	10 kHz or more
6.3 to 100	33 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 22000	0.85	1.00	1.10	1.13	1.15
160 to 450	1 to 220	0.80	1.00	1.25	1.40	1.60
	330	0.90	1.00	1.10	1.13	1.15

● Dimension table in next page.

UVZ

■ 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)	1000	8×11.5	0.28	189	63	390	UVZ0J102MPD
	2200	10×20	0.30	415.8	138.6	710	UVZ0J222MPD
	3300	10×20	0.32	623.7	207.9	840	UVZ0J332MPD
	4700	12.5×20	0.34	888.3	296.1	1090	UVZ0J472MHD
	6800	12.5×25	0.38	1285.2	428.4	1350	UVZ0J682MHD
	10000	16×25	0.46	1890	630	1650	UVZ0J103MHD
	15000	16×35.5	0.56	2835	945	2010	UVZ0J153MHD
	22000	18×40	0.70	4158	1386	2350	UVZ0J223MHD
10 (1A)	1000	10×12.5	0.24	300	100	460	UVZ1A102MPD
	2200	10×20	0.26	660	220	760	UVZ1A222MPD
	3300	12.5×20	0.28	990	330	1000	UVZ1A332MHD
	4700	12.5×25	0.30	1410	470	1260	UVZ1A472MHD
	6800	16×25	0.34	2040	680	1570	UVZ1A682MHD
	10000	16×35.5	0.42	3000	1000	1890	UVZ1A103MHD
	15000	18×35.5	0.52	4500	1500	2180	UVZ1A153MHD
16 (1C)	330	8×11.5	0.20	158.4	52.8	265	UVZ1C331MPD
	470	8×11.5	0.20	225.6	75.2	315	UVZ1C471MPD
	1000	10×16	0.20	480	160	560	UVZ1C102MPD
	2200	12.5×20	0.22	1056	352	920	UVZ1C222MHD
	3300	12.5×25	0.24	1584	528	1170	UVZ1C332MHD
	4700	16×25	0.26	2256	752	1480	UVZ1C472MHD
	6800	16×35.5	0.30	3264	1088	1780	UVZ1C682MHD
	10000	18×35.5	0.38	4800	1600	2060	UVZ1C103MHD
25 (1E)	220	8×11.5	0.16	165	55	240	UVZ1E221MPD
	330	10×12.5	0.16	247.5	82.5	315	UVZ1E331MPD
	470	10×12.5	0.16	352.5	117.5	380	UVZ1E471MPD
	1000	10×20	0.16	750	250	680	UVZ1E102MPD
	2200	12.5×25	0.18	1650	550	1090	UVZ1E222MHD
	3300	16×25	0.20	2475	825	1400	UVZ1E332MHD
	4700	16×30.5	0.22	3525	1175	1710	UVZ1E472MHD
	6800	18×35.5	0.26	5100	1700	2040	UVZ1E682MHD
35 (1V)	220	10×12.5	0.14	231	77	275	UVZ1V221MPD
	330	10×12.5	0.14	346.5	115.5	350	UVZ1V331MPD
	470	10×16	0.14	493.5	164.5	460	UVZ1V471MPD
	1000	12.5×20	0.14	1050	350	810	UVZ1V102MHD
	2200	16×25	0.16	2310	770	1260	UVZ1V222MHD
	3300	16×35.5	0.18	3465	1155	1610	UVZ1V332MHD
	4700	18×35.5	0.20	4935	1645	1910	UVZ1V472MHD
50 (1H)	100	8×11.5	0.12	150	50	190	UVZ1H101MPD
	220	10×12.5	0.12	330	110	300	UVZ1H221MPD
	330	10×16	0.12	495	165	410	UVZ1H331MPD
	470	12.5×20	0.12	705	235	530	UVZ1H471MHD
	1000	12.5×25	0.12	1500	500	950	UVZ1H102MHD
	2200	16×35.5	0.14	3300	1100	1470	UVZ1H222MHD
	3300	18×35.5	0.16	4950	1650	1770	UVZ1H332MHD
63 (1J)	100	10×12.5	0.10	189	63	215	UVZ1J101MPD
	220	10×16	0.10	415.8	138.6	335	UVZ1J221MPD
	330	10×20	0.10	623.7	207.9	510	UVZ1J331MPD
	470	12.5×20	0.10	888.3	296.1	640	UVZ1J471MHD
	1000	16×25	0.10	1890	630	930	UVZ1J102MHD
	2200	18×35.5	0.12	4158	1386	1650	UVZ1J222MHD

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.

UVZ

■ 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		
100 (2A)	33	8×11.5	0.08	99	33	130	UVZ2A330MPD
	47	10×12.5	0.08	141	47	165	UVZ2A470MPD
	100	10×20	0.08	300	100	265	UVZ2A101MPD
	220	12.5×25	0.08	660	220	440	UVZ2A221MHD
	330	12.5×25	0.08	990	330	540	UVZ2A331MHD
	470	16×25	0.08	1410	470	715	UVZ2A471MHD
	1000	18×40	0.08	3000	1000	985	UVZ2A102MHD
160 (2C)	10	8×11.5	0.20	164	—	41	UVZ2C100MPD
	22	10×16	0.20	240.8	—	100	UVZ2C220MPD
	33	10×20	0.20	311.2	—	145	UVZ2C330MPD
	47	12.5×20	0.20	400.8	—	195	UVZ2C470MHD
	100	12.5×25	0.20	740	—	215	UVZ2C101MHD
	220	16×35.5	0.20	1508	—	570	UVZ2C221MHD
	330	18×40	0.20	2212	—	750	UVZ2C331MHD
200 (2D)	4.7	8×11.5	0.20	134	—	39	UVZ2D4R7MPD
	10	10×12.5	0.20	180	—	65	UVZ2D100MPD
	22	10×20	0.20	276	—	120	UVZ2D220MPD
	33	12.5×20	0.20	364	—	160	UVZ2D330MHD
	47	12.5×20	0.20	476	—	195	UVZ2D470MHD
	100	16×30.5	0.20	900	—	375	UVZ2D101MHD
	220	18×35.5	0.20	1860	—	575	UVZ2D221MHD
250 (2E)	3.3	8×11.5	0.20	122.5	—	32	UVZ2E3R3MPD
	4.7	8×11.5	0.20	147	—	39	UVZ2E4R7MPD
	10	10×16	0.20	200	—	74	UVZ2E100MPD
	22	12.5×20	0.20	320	—	130	UVZ2E220MHD
	33	12.5×20	0.20	430	—	160	UVZ2E330MHD
	47	12.5×25	0.20	570	—	210	UVZ2E470MHD
	100	16×30.5	0.20	1100	—	365	UVZ2E101MHD
315 (2F)	2.2	8×11.5	0.20	109.3	—	26	UVZ2F2R2MPD
	3.3	10×12.5	0.20	141.58	—	38	UVZ2F3R3MPD
	4.7	10×12.5	0.20	159.22	—	45	UVZ2F4R7MPD
	10	10×20	0.20	226	—	80	UVZ2F100MPD
	22	12.5×20	0.20	377.2	—	115	UVZ2F220MHD
	33	16×25	0.20	515.8	—	195	UVZ2F330MHD
	47	16×25	0.20	692.2	—	230	UVZ2F470MHD
	100	18×35.5	0.20	1360	—	395	UVZ2F101MHD
350 (2V)	2.2	8×11.5	0.25	117	—	26	UVZ2V2R2MPD
	3.3	10×12.5	0.25	146.2	—	38	UVZ2V3R3MPD
	4.7	10×12.5	0.25	165.8	—	45	UVZ2V4R7MPD
	10	10×20	0.25	240	—	80	UVZ2V100MPD
	22	12.5×25	0.25	408	—	115	UVZ2V220MHD
	33	16×25	0.25	562	—	195	UVZ2V330MHD
	47	16×35.5	0.25	758	—	270	UVZ2V470MHD
	100	18×40	0.25	1500	—	420	UVZ2V101MHD

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UVZ

■ 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		
400 (2G)	1	8×11.5	0.25	80	—	17	UVZ2G010MPD
	2.2	10×12.5	0.25	128	—	30	UVZ2G2R2MPD
	3.3	10×12.5	0.25	152.8	—	38	UVZ2G3R3MPD
	4.7	10×16	0.25	175.2	—	50	UVZ2G4R7MPD
	10	12.5×20	0.25	260	—	90	UVZ2G100MHD
	22	16×25	0.25	452	—	165	UVZ2G220MHD
	33	16×30.5	0.25	628	—	215	UVZ2G330MHD
	47	16×35.5	0.25	852	—	270	UVZ2G470MHD
450 (2W)	1	8×11.5	0.25	85	—	13	UVZ2W010MPD
	2.2	10×12.5	0.25	139	—	23	UVZ2W2R2MPD
	3.3	10×16	0.25	159.4	—	31	UVZ2W3R3MPD
	4.7	10×20	0.25	184.6	—	40	UVZ2W4R7MPD
	10	12.5×20	0.25	280	—	65	UVZ2W100MHD
	22	16×25	0.25	496	—	115	UVZ2W220MHD
	33	16×35.5	0.25	694	—	165	UVZ2W330MHD
	47	18×40	0.25	946	—	185	UVZ2W470MHD

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