THE DATASHEET OF

UHV1E471MPD1TD

ALUMINUM ELECTROLYTIC CAPACITORS

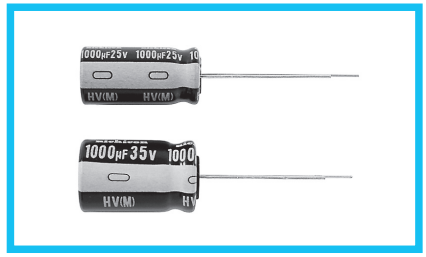
nichicon

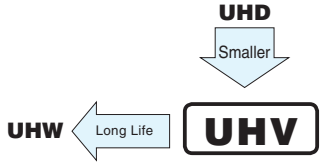
UHV

High Ripple Low Impedance

Smaller Low Impedance Long Life

- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



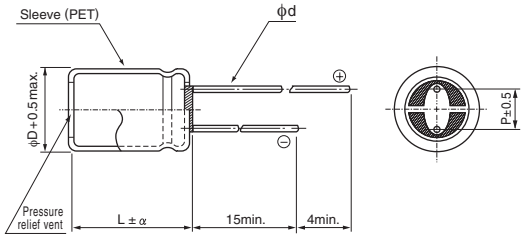


■Specifications

Item	Performance Characteristics						
Category Temperature Range	−40 to +105˚C						
Rated Voltage Range	6.3 to 35V						
Rated Capacitance Range	150 to 8200μF						
Capacitance Tolerance	±20% at 120Hz, 20˚C						
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV(μA).						
Tangent of loss angle (tan δ)	Rated voltage (V)	6.3	10	16	25	35	120Hz 20˚C
	tan δ (max.)	0.21	0.18	0.15	0.13	0.11	
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.						
Stability at Low Temperature	Rated voltage (V)	6.3	10	16	25	35	120Hz
	Impedance ratio (max.) Z(−25˚C) / Z(+20˚C)	2	2	2	2	2	
	Impedance ratio (max.) Z(−40˚C) / Z(+20˚C)	3	3	3	3	3	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied for 6000 hours at 105˚C, the peak voltage shall not exceed the rated voltage.	Capacitance change: Within ± 25% of the initial capacitance value (6.3V 10V : ±30%) / tan δ: 200% or less than the initial specified value / Leakage current: Less than or equal to the initial specified value					
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	
	(L < 20) 1.5
	(L ≧ 20) 2.0

(mm)

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

※In case L > 25 for the ϕ12.5 dia. unit, lead dia. ϕ d = 0.8mm.

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

Type numbering system (Example : 35V 150μF)

1	2	3	4	5	6	7	8	9	10	11	12
U	H	V	1	V	1	5	1	M	P	D	

- Size code
- Configuration ※
- Capacitance tolerance (±20%)
- Rated capacitance (150μF)
- Rated voltage (35V)
- Series name
- Type

※ Configuration

ϕ D	Pb-free leadwire Pb-free PET sleeve
8 · 10	PD
12.5 · 16	HD

● Frequency coefficient of rated ripple current

Cap. (μF) \ Frequency	120Hz	1kHz	10kHz	100kHz or more
150	0.40	0.75	0.90	1.00
220 to 560	0.50	0.85	0.94	1.00
680 to 1800	0.60	0.87	0.95	1.00
2200 to 3900	0.75	0.90	0.95	1.00
4700 to 8200	0.85	0.95	0.98	1.00

● 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 2 minutes)	Impedance(Ω) max. 20℃/100kHz	Impedance(Ω) max. −10℃/100kHz	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	680	8×11.5	0.21	42.84	0.059	0.181	900	UHV0J681MPD
	820	8×11.5	0.21	51.66	0.059	0.181	990	UHV0J821MPD
	1000	10×12.5	0.21	63	0.043	0.133	1250	UHV0J102MPD
	1200	10×12.5	0.21	75.6	0.043	0.133	1360	UHV0J122MPD
	1200	8×15	0.21	75.6	0.046	0.143	1330	UHV0J122MPD6
	1500	8×20	0.21	94.5	0.031	0.105	1550	UHV0J152MPD
	1800	10×16	0.21	113.4	0.030	0.095	1815	UHV0J182MPD
	2200	10×20	0.23	138.6	0.019	0.057	2160	UHV0J222MPD
	2700	10×25	0.23	170.1	0.017	0.051	2475	UHV0J272MPD
	3300	12.5×20	0.25	207.9	0.016	0.041	2500	UHV0J332MHD
	3900	12.5×20	0.25	245.7	0.016	0.041	2725	UHV0J392MHD
	4700	12.5×25	0.27	296.1	0.014	0.036	3190	UHV0J472MHD
	5600	12.5×30.5	0.29	352.8	0.012	0.031	3795	UHV0J562MHD
	6800	12.5×35.5	0.31	428.4	0.011	0.029	3925	UHV0J682MHD
	6800	16×20	0.31	428.4	0.014	0.036	3575	UHV0J682MHD6
	8200	16×25	0.35	516.6	0.012	0.033	3990	UHV0J822MHD
10 (1A)	470	8×11.5	0.18	47	0.059	0.181	820	UHV1A471MPD
	680	8×11.5	0.18	68	0.059	0.181	990	UHV1A681MPD
	820	10×12.5	0.18	82	0.043	0.133	1250	UHV1A821MPD
	1000	10×12.5	0.18	100	0.043	0.133	1360	UHV1A102MPD
	1000	8×15	0.18	100	0.046	0.143	1330	UHV1A102MPD6
	1200	10×16	0.18	120	0.030	0.095	1650	UHV1A122MPD
	1500	10×16	0.18	150	0.030	0.095	1815	UHV1A152MPD
	1500	8×20	0.18	150	0.031	0.105	1550	UHV1A152MPD6
	1800	10×20	0.18	180	0.019	0.057	2160	UHV1A182MPD
	2200	10×25	0.20	220	0.017	0.051	2475	UHV1A222MPD
	2700	12.5×20	0.20	270	0.016	0.041	2475	UHV1A272MHD
	3300	12.5×20	0.22	330	0.016	0.041	2725	UHV1A332MHD
	3900	12.5×25	0.22	390	0.014	0.036	3190	UHV1A392MHD
	4700	12.5×30.5	0.24	470	0.012	0.031	3795	UHV1A472MHD
	4700	16×20	0.24	470	0.014	0.036	3575	UHV1A472MHD6
	5600	12.5×35.5	0.26	560	0.011	0.029	3975	UHV1A562MHD
	6800	16×25	0.28	680	0.012	0.033	3990	UHV1A682MHD

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 2 minutes)	Impedance (Ω) max. 20℃/100kHz	Impedance (Ω) max. −10℃/100kHz	Rated Ripple (mArms) (105℃/100kHz)	Part Number
16 (1C)	330	8×11.5	0.15	52.8	0.059	0.181	830	UHV1C331MPD
	470	8×11.5	0.15	75.2	0.059	0.181	990	UHV1C471MPD
	680	10×12.5	0.15	108.8	0.043	0.133	1360	UHV1C681MPD
	680	8×15	0.15	108.8	0.046	0.143	1330	UHV1C681MPD6
	820	10×16	0.15	131.2	0.030	0.095	1650	UHV1C821MPD
	1000	10×16	0.15	160	0.030	0.095	1815	UHV1C102MPD
	1000	8×20	0.15	160	0.031	0.105	1550	UHV1C102MPD6
	1200	10×20	0.15	192	0.019	0.057	1930	UHV1C122MPD
	1500	10×20	0.15	240	0.019	0.057	2160	UHV1C152MPD
	1800	10×25	0.15	288	0.017	0.051	2475	UHV1C182MPD
	2200	12.5×20	0.17	352	0.016	0.041	2725	UHV1C222MHD
	2700	12.5×25	0.17	432	0.014	0.036	3190	UHV1C272MHD
	3300	12.5×30.5	0.19	528	0.012	0.031	3795	UHV1C332MHD
	3300	16×20	0.19	528	0.014	0.036	3575	UHV1C332MHD6
	3900	12.5×35.5	0.19	624	0.011	0.029	3925	UHV1C392MHD
	4700	16×25	0.21	752	0.012	0.033	3990	UHV1C472MHD
25 (1E)	220	8×11.5	0.13	55	0.059	0.181	810	UHV1E221MPD
	270	8×11.5	0.13	67.5	0.059	0.181	900	UHV1E271MPD
	330	8×11.5	0.13	82.5	0.059	0.181	990	UHV1E331MPD
	390	8×15	0.13	97.5	0.046	0.143	1330	UHV1E391MPD
	470	10×12.5	0.13	117.5	0.043	0.133	1360	UHV1E471MPD
	560	8×20	0.13	140	0.031	0.105	1550	UHV1E561MPD
	680	10×16	0.13	170	0.030	0.095	1815	UHV1E681MPD
	820	10×20	0.13	205	0.019	0.057	2160	UHV1E821MPD
	1000	10×25	0.13	250	0.017	0.051	2475	UHV1E102MPD
	1200	12.5×20	0.13	300	0.016	0.041	2475	UHV1E122MHD
	1500	12.5×20	0.13	375	0.016	0.041	2725	UHV1E152MHD
	1800	12.5×25	0.13	450	0.014	0.036	3190	UHV1E182MHD
	2200	12.5×30.5	0.15	550	0.012	0.031	3795	UHV1E222MHD
	2200	16×20	0.15	550	0.014	0.036	3575	UHV1E222MHD6
	2700	12.5×35.5	0.15	675	0.011	0.029	3925	UHV1E272MHD
	3300	16×25	0.17	825	0.012	0.033	3990	UHV1E332MHD

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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 2 minutes)	Impedance(Ω) max. 20℃/100kHz	Impedance(Ω) max. −10℃/100kHz	Rated Ripple (mArms) (105℃/100kHz)	Part Number
35 (1V)	150	8×11.5	0.11	52.5	0.059	0.181	820	UHV1V151MPD
	220	8×11.5	0.11	77	0.059	0.181	990	UHV1V221MPD
	270	8×15	0.11	94.5	0.046	0.143	1330	UHV1V271MPD
	330	10×12.5	0.11	115.5	0.043	0.133	1360	UHV1V331MPD
	390	8×20	0.11	136.5	0.031	0.105	1550	UHV1V391MPD
	470	10×16	0.11	164.5	0.030	0.095	1815	UHV1V471MPD
	560	10×20	0.11	196	0.019	0.057	2160	UHV1V561MPD
	680	10×25	0.11	238	0.017	0.051	2475	UHV1V681MPD
	820	12.5×20	0.11	287	0.016	0.041	2725	UHV1V821MHD
	1000	12.5×20	0.11	350	0.016	0.041	2920	UHV1V102MHD
	1200	12.5×25	0.11	420	0.014	0.041	3190	UHV1V122MHD
	1500	12.5×30.5	0.11	525	0.012	0.031	3795	UHV1V152MHD
	1500	16×20	0.11	525	0.014	0.036	3575	UHV1V152MHD6
	1800	12.5×35.5	0.11	630	0.011	0.029	3925	UHV1V182MHD
	2200	16×25	0.13	770	0.012	0.033	3990	UHV1V222MHD

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.

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