THE DATASHEET OF

UHD1H821MHD6

ALUMINUM ELECTROLYTIC CAPACITORS

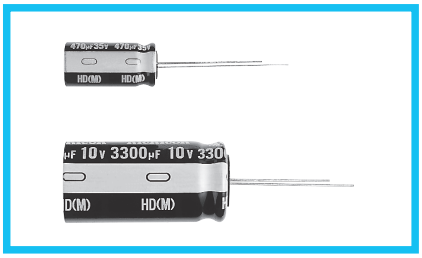
nichicon

UHD

High Ripple Low Impedance

Smaller Low Impedance

- 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 50V							
Rated Capacitance Range	100 to 6800μF							
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	50	120Hz 20˚C
	tan δ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	
	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	50	120Hz
	Impedance ratio (max.) Z(−25˚C) / Z(+20˚C)	2	2	2	2	2	2	
	Impedance ratio (max.) Z(−40˚C) / Z(+20˚C)	3	3	3	3	3	3	
Endurance	The specifications listed below shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied at 105˚C for the condition listed at right.The peak voltage shall not exceed the rated voltage.							

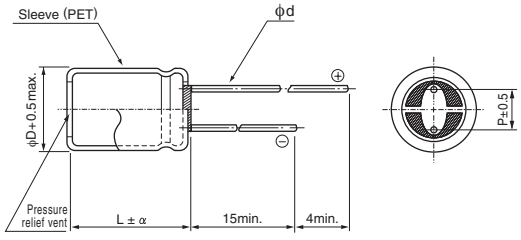
Rated Voltage \ φD(mm)	φ8	φ10	≧φ12.5
6.3～50V	3000hrs.	4000hrs.	5000hrs.

Capacitance change	Within ±25% 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

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 : 10V 3300μF)

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

- 12: Size code
- 10 11: Configuration ※
- 9: Capacitance tolerance (±20%)
- 6 7 8: Rated capacitance (3300μF)
- 4 5: Rated voltage (10V)
- 1 2 3: Series name
- U: 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	50Hz	120Hz	1kHz	10kHz	100kHz or more
100 to 330	0.60	0.70	0.85	0.95	1.00
470 to 1000	0.65	0.75	0.90	0.98	1.00
1200 to 6800	0.75	0.80	0.95	1.00	1.00

● Dimension table in next page.

UHD

■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.		Rated Ripple (mArms) (105℃/100kHz)	Part Number
					20℃/ 100kHz	−10℃/ 100kHz		
6.3 (0J)	560	8×11.5	0.22	35.28	0.072	0.22	760	UHD0J561MPD
	820	8×15	0.22	51.66	0.056	0.17	995	UHD0J821MPD
	1000	10×12.5	0.22	63	0.053	0.16	1030	UHD0J102MPD
	1200	8×20	0.22	75.6	0.041	0.13	1250	UHD0J122MPD
	1200	10×16	0.22	75.6	0.038	0.12	1430	UHD0J122MPD6
	1500	10×20	0.22	94.5	0.023	0.069	1820	UHD0J152MPD
	2200	10×25	0.24	138.6	0.022	0.066	2150	UHD0J222MPD
	3300	12.5×20	0.26	207.9	0.021	0.053	2360	UHD0J332MHD
	3900	12.5×25	0.26	245.7	0.018	0.045	2770	UHD0J392MHD
	4700	12.5×30.5	0.28	296.1	0.016	0.041	3290	UHD0J472MHD
	5600	12.5×35.5	0.30	352.8	0.015	0.039	3400	UHD0J562MHD
	5600	16×20	0.30	352.8	0.018	0.045	3140	UHD0J562MHD6
	6800	16×25	0.32	428.4	0.016	0.043	3460	UHD0J682MHD
10 (1A)	470	8×11.5	0.19	47	0.072	0.22	760	UHD1A471MPD
	680	8×15	0.19	68	0.056	0.17	995	UHD1A681MPD
	680	10×12.5	0.19	68	0.053	0.16	1030	UHD1A681MPD6
	1000	8×20	0.19	100	0.041	0.13	1250	UHD1A102MPD
	1000	10×16	0.19	100	0.038	0.12	1430	UHD1A102MPD6
	1200	10×20	0.19	120	0.023	0.069	1820	UHD1A122MPD
	1500	10×25	0.19	150	0.022	0.066	2150	UHD1A152MPD
	2200	12.5×20	0.21	220	0.021	0.053	2360	UHD1A222MHD
	3300	12.5×25	0.23	330	0.018	0.045	2770	UHD1A332MHD
	3900	12.5×30.5	0.23	390	0.016	0.041	3290	UHD1A392MHD
	3900	16×20	0.23	390	0.018	0.045	3140	UHD1A392MHD6
	4700	12.5×35.5	0.25	470	0.015	0.039	3400	UHD1A472MHD
	5600	16×25	0.27	560	0.016	0.043	3460	UHD1A562MHD
16 (1C)	330	8×11.5	0.16	52.8	0.072	0.22	760	UHD1C331MPD
	470	8×15	0.16	75.2	0.056	0.17	995	UHD1C471MPD
	470	10×12.5	0.16	75.2	0.053	0.16	1030	UHD1C471MPD6
	680	8×20	0.16	108.8	0.041	0.13	1250	UHD1C681MPD
	680	10×16	0.16	108.8	0.038	0.12	1430	UHD1C681MPD6
	1000	10×20	0.16	160	0.023	0.069	1820	UHD1C102MPD
	1200	10×25	0.16	192	0.022	0.066	2150	UHD1C122MPD
	1500	12.5×20	0.16	240	0.021	0.053	2360	UHD1C152MHD
	2200	12.5×25	0.18	352	0.018	0.045	2770	UHD1C222MHD
	2700	12.5×30.5	0.18	432	0.016	0.041	3290	UHD1C272MHD
	2700	16×20	0.18	432	0.018	0.045	3140	UHD1C272MHD6
	3300	12.5×35.5	0.20	528	0.015	0.039	3400	UHD1C332MHD
	3900	16×25	0.20	624	0.016	0.043	3460	UHD1C392MHD

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.

UHD

■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.		Rated Ripple (mArms) (105℃/100kHz)	Part Number
					20℃/ 100kHz	−10℃/ 100kHz		
25 (1E)	220	8×11.5	0.14	55	0.072	0.22	760	UHD1E221MPD
	330	8×15	0.14	82.5	0.056	0.17	995	UHD1E331MPD
	330	10×12.5	0.14	82.5	0.053	0.16	1030	UHD1E331MPD6
	470	8×20	0.14	117.5	0.041	0.13	1250	UHD1E471MPD
	470	10×16	0.14	117.5	0.038	0.12	1430	UHD1E471MPD6
	680	10×20	0.14	170	0.023	0.069	1820	UHD1E681MPD
	820	10×25	0.14	205	0.022	0.066	2150	UHD1E821MPD
	1000	12.5×20	0.14	250	0.021	0.053	2360	UHD1E102MHD
	1500	12.5×25	0.14	375	0.018	0.045	2770	UHD1E152MHD
	1800	12.5×30.5	0.14	450	0.016	0.041	3290	UHD1E182MHD
	1800	16×20	0.14	450	0.018	0.045	3140	UHD1E182MHD6
	2200	12.5×35.5	0.16	550	0.015	0.039	3400	UHD1E222MHD
	2700	16×25	0.16	675	0.016	0.043	3460	UHD1E272MHD
35 (1V)	150	8×11.5	0.12	52.5	0.072	0.22	760	UHD1V151MPD
	220	8×15	0.12	77	0.056	0.17	995	UHD1V221MPD
	220	10×12.5	0.12	77	0.053	0.16	1030	UHD1V221MPD6
	270	8×20	0.12	94.5	0.041	0.13	1250	UHD1V271MPD
	330	10×16	0.12	115.5	0.038	0.12	1430	UHD1V331MPD
	470	10×20	0.12	164.5	0.023	0.069	1820	UHD1V471MPD
	560	10×25	0.12	196	0.022	0.066	2150	UHD1V561MPD
	680	12.5×20	0.12	238	0.021	0.053	2360	UHD1V681MHD
	1000	12.5×25	0.12	350	0.018	0.045	2770	UHD1V102MHD
	1200	12.5×30.5	0.12	420	0.016	0.041	3290	UHD1V122MHD
	1200	16×20	0.12	420	0.018	0.045	3140	UHD1V122MHD6
	1500	12.5×35.5	0.12	525	0.015	0.039	3400	UHD1V152MHD
	1800	16×25	0.12	630	0.016	0.043	3460	UHD1V182MHD
50 (1H)	100	8×11.5	0.10	50	0.074	0.22	724	UHD1H101MPD
	120	8×15	0.10	60	0.061	0.18	950	UHD1H121MPD
	150	10×12.5	0.10	75	0.061	0.18	979	UHD1H151MPD
	180	8×20	0.10	90	0.046	0.14	1190	UHD1H181MPD
	220	10×16	0.10	110	0.042	0.12	1370	UHD1H221MPD
	270	10×20	0.10	135	0.030	0.090	1580	UHD1H271MPD
	330	10×25	0.10	165	0.028	0.085	1870	UHD1H331MPD
	470	12.5×20	0.10	235	0.027	0.068	2050	UHD1H471MHD
	560	12.5×25	0.10	280	0.023	0.059	2410	UHD1H561MHD
	680	12.5×30.5	0.10	340	0.021	0.052	2860	UHD1H681MHD
	820	12.5×35.5	0.10	410	0.019	0.051	2960	UHD1H821MHD
	820	16×20	0.10	410	0.023	0.059	2730	UHD1H821MHD6
	1000	16×25	0.10	500	0.021	0.056	3010	UHD1H102MHD

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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