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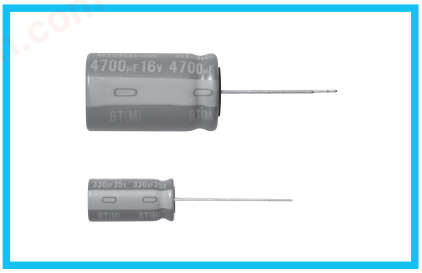
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

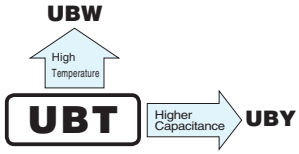
UBT

High Temperature Range, For +125°C Use

Long Life



- Highly dependable reliability withstanding load life of 2000 to 10000 hours at +125°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C (10 to 250V), −25 to +125°C (350 to 450V)
Rated Voltage Range	10 to 450V
Rated Capacitance Range	4.7 to 4700μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	Rated Voltage (V): 10 to 100 / 160 to 450 Leakage current: After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA). / After 1 minute's application of rated voltage at 20°C, I = 0.04CV+100 (μA) or less.
Tangent of loss angle (tan δ)	120Hz, 20°C

Rated voltage (V)	10	16	25	35	50	63	80	100	160 to 250	350 to 450
tan δ (max.)	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.08	0.20	0.24

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.

Stability at Low Temperature — 120Hz

Rated voltage (V)		10	16	25	35	50	63	80	100	160 to 250	350 to 450
Impedance ratio (max.)	Z(−25°C) / Z(+20°C)	3	2	2	2	2	2	2	2	3	6
	Z(−40°C) / Z(+20°C)	4	4	4	4	4	4	4	4	6	–

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 125°C for the condition listed at right.The peak voltage shall not exceed the rated voltage.

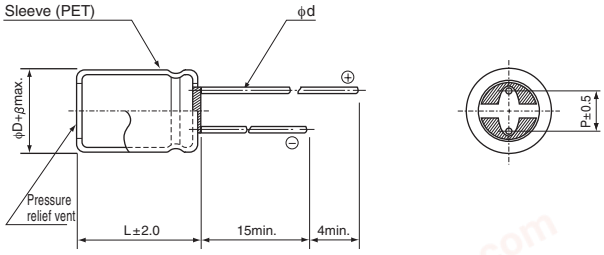
Rated Voltage \ φD(mm)	φ8	φ10	≧φ12.5
≦50V	2000hrs.	5000hrs.	10000hrs.
63～100V	2000hrs.	3000hrs.	5000hrs.
≧160V	2000hrs.		

Capacitance change	Within ±30% of the initial capacitance value (10 to 100V) Within ±20% of the initial capacitance value (160 to 450V)
tan δ	300% or less than the initial specified value (10 to 100V) 200% or less than the initial specified value (160 to 450V)
Leakage current	Less than or equal to the initial specified value

Shelf Life	After storing the capacitors under no load at 125˚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 blue 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
β	0.8	0.8	1.0	1.0	1.0

※ 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 220μF)

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

- Configuration ※
- Capacitance tolerance (±20%)
- Rated capacitance (220μF)
- 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	CV \ Frequency	120Hz	300Hz	1kHz	10kHz or more
10 to 100	1000 > CV	0.50	0.64	0.83	1.00
	1000 ≦ CV	0.67	0.79	0.91	1.00

V	Cap. (μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz or more
160 to 450	4.7 to 33	0.75	1.00	1.25	1.50	1.75	1.80
	47 to 150	0.80	1.00	1.15	1.30	1.40	1.50

●Dimension table in next page.

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Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (125℃/100kHz)	Part Number
10 (1A)	220	8×11.5	0.20	66	0.26	340	UBT1A221MPD8
	330	10×12.5	0.20	99	0.15	620	UBT1A331MPD8
	470	10×12.5	0.20	141	0.10	680	UBT1A471MPD8
	1000	10×20	0.20	300	0.057	1100	UBT1A102MPD8
	2200	12.5×25	0.22	660	0.033	1750	UBT1A222MHD8
	3300	16×25	0.24	990	0.024	2300	UBT1A332MHD8
	4700	16×30.5	0.26	1410	0.020	2710	UBT1A472MHD8
16 (1C)	100	8×11.5	0.16	48	0.32	340	UBT1C101MPD8
	220	10×12.5	0.16	105.6	0.15	620	UBT1C221MPD8
	330	10×12.5	0.16	158.4	0.10	680	UBT1C331MPD8
	470	10×16	0.16	225.6	0.075	945	UBT1C471MPD8
	1000	12.5×20	0.16	480	0.042	1490	UBT1C102MHD8
	2200	16×25	0.18	1056	0.024	2300	UBT1C222MHD8
	3300	16×30.5	0.20	1584	0.020	2710	UBT1C332MHD8
	4700	18×30.5	0.22	2256	0.018	3270	UBT1C472MHD8
25 (1E)	100	8×11.5	0.14	75	0.13	500	UBT1E101MPD8
	220	10×12.5	0.14	165	0.10	680	UBT1E221MPD8
	330	10×16	0.14	247.5	0.075	945	UBT1E331MPD8
	470	10×20	0.14	352.5	0.057	1100	UBT1E471MPD8
	1000	12.5×25	0.14	750	0.033	1750	UBT1E102MHD8
	2200	16×30.5	0.16	1650	0.020	2710	UBT1E222MHD8
	3300	18×30.5	0.18	2475	0.017	3310	UBT1E332MHD8
35 (1V)	100	10×12.5	0.12	105	0.15	620	UBT1V101MPD8
	220	10×16	0.12	231	0.094	790	UBT1V221MPD8
	330	10×20	0.12	346.5	0.075	950	UBT1V331MPD8
	470	12.5×20	0.12	493.5	0.058	1330	UBT1V471MHD8
	1000	16×25	0.12	1050	0.031	2010	UBT1V102MHD8
	2200	18×35.5	0.14	2310	0.025	2790	UBT1V222MHD8
50 (1H)	4.7	8×11.5	0.10	7.05	1.15	85	UBT1H4R7MPD8
	10	8×11.5	0.10	15	0.75	180	UBT1H100MPD8
	22	8×11.5	0.10	33	0.50	250	UBT1H220MPD8
	33	8×11.5	0.10	49.5	0.45	300	UBT1H330MPD8
	47	8×11.5	0.10	70.5	0.35	440	UBT1H470MPD8
	100	10×12.5	0.10	150	0.18	555	UBT1H101MPD8
	220	10×20	0.10	330	0.098	930	UBT1H221MPD8
	330	12.5×20	0.10	495	0.070	1330	UBT1H331MHD8
	470	12.5×25	0.10	705	0.055	1650	UBT1H471MHD8
	1000	16×30.5	0.10	1500	0.031	2430	UBT1H102MHD8
63 (1J)	22	8×11.5	0.10	41.58	2.00	130	UBT1J220MPD8
	33	8×11.5	0.10	62.37	1.50	150	UBT1J330MPD8
	47	10×12.5	0.10	88.83	0.59	530	UBT1J470MPD8
	100	10×16	0.10	189	0.41	690	UBT1J101MPD8
	220	12.5×20	0.10	415.8	0.16	1050	UBT1J221MHD8
	330	12.5×25	0.10	623.7	0.12	1290	UBT1J331MHD8
	470	12.5×30.5	0.10	888.3	0.097	1460	UBT1J471MHD8

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80 (1K)	22	8×11.5	0.08	52.8	1.50	150	UBT1K220MPD8
	33	10×12.5	0.08	79.2	0.80	480	UBT1K330MPD8
	47	10×12.5	0.08	112.8	0.80	480	UBT1K470MPD8
	100	10×20	0.08	240	0.39	790	UBT1K101MPD8
	220	12.5×25	0.08	528	0.18	1240	UBT1K221MHD8
	330	12.5×30.5	0.08	792	0.16	1390	UBT1K331MHD8
	470	16×25	0.08	1128	0.11	1500	UBT1K471MHD8
100 (2A)	10	8×11.5	0.08	30	1.50	150	UBT2A100MPD8
	22	10×12.5	0.08	66	0.80	480	UBT2A220MPD8
	33	10×12.5	0.08	99	0.80	480	UBT2A330MPD8
	47	10×16	0.08	141	0.55	630	UBT2A470MPD8
	100	12.5×20	0.08	300	0.25	990	UBT2A101MHD8
	220	16×25	0.08	660	0.11	1500	UBT2A221MHD8
	330	16×30.5	0.08	990	0.079	1790	UBT2A331MHD8

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (125℃/120Hz)	Part Number
160 (2C)	22	10×20	0.20	240.8	115	UBT2C220MPD8
	33	10×25	0.20	311.2	154	UBT2C330MPD8
	47	12.5×20	0.20	400.8	187	UBT2C470MHD8
	68	12.5×25	0.20	535.2	245	UBT2C680MHD8
	100	16×25	0.20	740	329	UBT2C101MHD8
	150	16×30.5	0.20	1060	434	UBT2C151MHD8
200 (2D)	10	10×20	0.20	180	78	UBT2D100MPD8
	22	10×25	0.20	276	126	UBT2D220MPD8
	33	12.5×20	0.20	364	157	UBT2D330MHD8
	47	12.5×25	0.20	476	204	UBT2D470MHD8
	68	16×20	0.20	644	250	UBT2D680MHD8
	100	16×25	0.20	900	329	UBT2D101MHD8
250 (2E)	10	10×20	0.20	200	78	UBT2E100MPD8
	22	12.5×20	0.20	320	128	UBT2E220MHD8
	33	12.5×25	0.20	430	171	UBT2E330MHD8
	47	16×25	0.20	570	225	UBT2E470MHD8
	68	16×30.5	0.20	780	292	UBT2E680MHD8
350 (2V)	4.7	10×20	0.24	165.8	53	UBT2V4R7MPD8
	10	10×25	0.24	240	85	UBT2V100MPD8
	22	12.5×25	0.24	408	139	UBT2V220MHD8
	33	16×25	0.24	562	189	UBT2V330MHD8
	47	16×30.5	0.24	758	243	UBT2V470MHD8
400 (2G)	4.7	10×20	0.24	175.2	53	UBT2G4R7MPD8
	10	10×25	0.24	260	86	UBT2G100MPD8
	22	12.5×30.5	0.24	452	142	UBT2G220MHD8
	33	16×25	0.24	628	189	UBT2G330MHD8
	47	16×30.5	0.24	852	243	UBT2G470MHD8
450 (2W)	4.7	10×25	0.24	184.6	58	UBT2W4R7MPD8
	10	12.5×20	0.24	280	86	UBT2W100MHD8
	22	16×25	0.24	496	154	UBT2W220MHD8
	33	16×30.5	0.24	694	203	UBT2W330MHD8

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