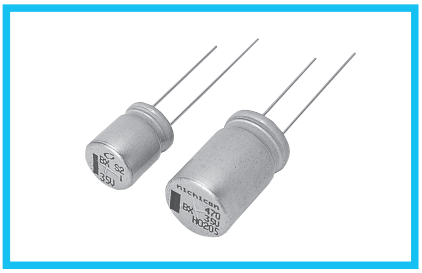
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UBX

High Temperature Range, For +150°C Use

Long Life



- Laminated case series.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

UBX

High Temperature

UBW

■Specifications

Item	Performance Characteristics		
Category Temperature Range	−55 to +150°C (16 to 100V), −40 to +150°C (160 · 200V), −25 to +150°C (350 · 400V)		
Rated Voltage Range	16 to 400V		
Rated Capacitance Range	6.8 to 3300μF		
Capacitance Tolerance	±20% at 120Hz, 20°C		
Leakage Current ※	Rated Voltage (V)	16 to 100	160 to 400
	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)

Rated voltage (V)	16	25	35	50	63	80	100	160 · 200	350 · 400
tan δ (max.)	0.16	0.14	0.12	0.10	0.10	0.08	0.08	0.20	0.24

120Hz 20°C

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

Stability at Low Temperature

Rated voltage (V)		16	25	35	50	63	80	100	160 · 200	350 · 400
Impedance ratio (max.)	Z(−25°C) / Z(+20°C)	2	2	2	2	2	2	2	3	6
	Z(−40°C) / Z(+20°C)	4	4	4	4	4	4	4	6	-

120Hz

Endurance

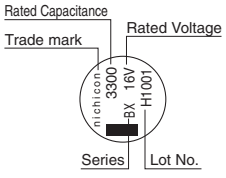
The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 2000 hours (1000 hours for φ12.5) at 150°C, the peak voltage shall not exceed the rated voltage.

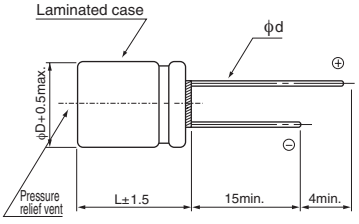
Capacitance change	Within ±30% of the initial capacitance value (16 to 100V) Within ±20% of the initial capacitance value (160 to 400V)
tan δ	300% or less than the initial specified value (16 to 100V) 200% or less than the initial specified value(160 to 400V)
Leakage current	Less than or equal to the initial specified value

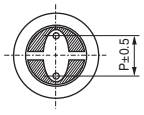
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Radial Lead Type







(mm)

φD	12.5	16	18
P	5.0	7.5	7.5
φd	0.6	0.8	0.8

Type numbering system (Example : 16V 3300μF)

1	2	3	4	5	6	7	8	9	10	11
U	B	X	1	C	3	3	2	M	H	L

- 11: Configuration
- 9–10: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (3300μF)
- 4–5: Rated voltage (16V)
- 3: Series name
- 1–2: Type

● Frequency coefficient of rated ripple current

V	Frequency / CV	120Hz	300Hz	1kHz	10kHz or more
16 to 100	1000 > CV	0.50	0.64	0.83	1.00
	1000 ≦ CV	0.67	0.79	0.91	1.00

V	Frequency / Cap. (μF)	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz or more
160 to 400	6.8 to 33	0.75	1.00	1.25	1.50	1.75	1.80
	47 to 100	0.80	1.00	1.15	1.30	1.40	1.50

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

● Dimension table in next page.

UBX

■Dimensions

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) 150℃/ 100kHz	Rated Ripple (mArms) 150℃/ 120Hz	Part Number
16 (1C)	470	12.5×20	0.16	225.6	600	—	UBX1C471MHL
	1000	16×25	0.16	480	800	—	UBX1C102MHL
	2200	18×35.5	0.18	1056	1200	—	UBX1C222MHL
	3300	18×40	0.20	1584	1300	—	UBX1C332MHL
25 (1E)	220	12.5×20	0.14	165	500	—	UBX1E221MHL
	330	12.5×25	0.14	247.5	600	—	UBX1E331MHL
	470	16×25	0.14	352.5	800	—	UBX1E471MHL
	1000	16×30.5	0.14	750	1000	—	UBX1E102MHL
35 (1V)	220	12.5×25	0.12	231	600	—	UBX1V221MHL
	330	16×25	0.12	346.5	800	—	UBX1V331MHL
	470	16×30.5	0.12	493.5	1000	—	UBX1V471MHL
	1000	18×40	0.12	1050	1300	—	UBX1V102MHL
50 (1H)	330	12.5×20	0.10	495	770	—	UBX1H331MHL
	470	12.5×25	0.10	705	960	—	UBX1H471MHL
	560	12.5×30.5	0.10	840	1080	—	UBX1H561MHL
	680	16×25	0.10	1020	1190	—	UBX1H681MHL
	1000	16×30.5	0.10	1500	1420	—	UBX1H102MHL
63 (1J)	220	12.5×25	0.10	415.8	1040	—	UBX1J221MHL
	330	12.5×30.5	0.10	623.7	1170	—	UBX1J331MHL
	470	16×25	0.10	888.3	1280	—	UBX1J471MHL
	560	16×30.5	0.10	1058.4	1520	—	UBX1J561MHL
	680	16×35.5	0.10	1285.2	1520	—	UBX1J681MHL
80 (1K)	100	12.5×20	0.08	240	820	—	UBX1K101MHL
	220	16×25	0.08	528	1250	—	UBX1K221MHL
	330	16×30.5	0.08	792	1480	—	UBX1K331MHL
	470	18×30.5	0.08	1128	1530	—	UBX1K471MHL
100 (2A)	68	12.5×20	0.08	204	760	—	UBX2A680MHL
	100	12.5×25	0.08	300	950	—	UBX2A101MHL
	220	16×30.5	0.08	660	1380	—	UBX2A221MHL
	330	18×30.5	0.08	990	1430	—	UBX2A331MHL
160 (2C)	33	12.5×20	0.20	311.2	—	230	UBX2C330MHL
	47	12.5×20	0.20	400.8	—	250	UBX2C470MHL
	56	12.5×25	0.20	458.4	—	270	UBX2C560MHL
	68	16×20	0.20	535.2	—	290	UBX2C680MHL
	100	16×25	0.20	740	—	300	UBX2C101MHL
200 (2D)	33	12.5×20	0.20	364	—	210	UBX2D330MHL
	47	12.5×25	0.20	476	—	250	UBX2D470MHL
	56	16×20	0.20	548	—	270	UBX2D560MHL
	68	16×25	0.20	644	—	290	UBX2D680MHL
350 (2V)	10	12.5×20	0.24	240	—	120	UBX2V100MHL
	15	12.5×25	0.24	310	—	130	UBX2V150MHL
400 (2G)	6.8	12.5×20	0.24	208.8	—	88	UBX2G6R8MHL
	10	12.5×25	0.24	260	—	105	UBX2G100MHL
	15	12.5×25	0.24	340	—	105	UBX2G150MHL

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.