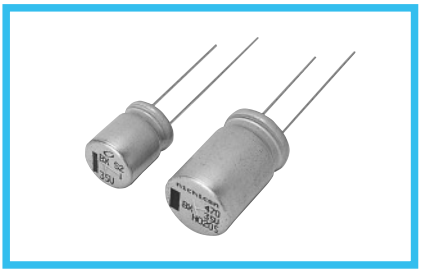
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

BX series

High Temperature Range, For +150°C Use

Long Life Anti-Solvent Feature



- Laminated case series.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2002/95/EC).

BX

High Temperature

BW

Item	Performance Characteristics		
Category Temperature Range	−55 to +150°C (10 to 100V), −40 to +150°C (160 · 200V), −25 to +150°C (350 · 400V)		
Rated Voltage Range	10 to 400V		
Rated Capacitance Range	1 to 4700μF		
Capacitance Tolerance	±20% at 120Hz, 20°C		
Leakage Current	Rated Voltage (V)	10 to 100	160 to 400
	Leakage current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.	CV ≦ 1000 : I = 0.1CV+40 (μA) max. (1 minute's) CV > 1000 : I = 0.04CV+100 (μA) max. (1 minute's)
Tangent of loss angle (tan δ)	120Hz 20°C		

Rated voltage (V)	10	16	25	35	50	63	80	100	160 · 200	350 · 400
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

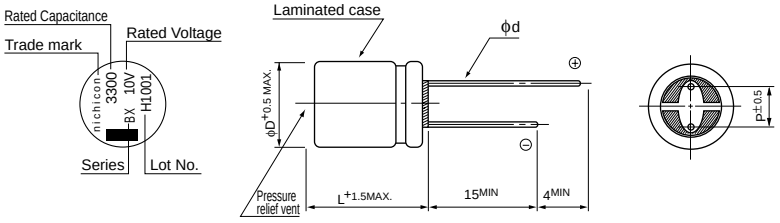
Rated voltage (V)		10	16	25	35	50	63	80	100	160 · 200	350 · 400
Impedance ratio	Z−25°C / Z+20°C	3	2	2	2	2	2	2	2	3	6
ZT / Z20 (MAX.)	Z−40°C / Z+20°C	4	4	4	4	4	4	4	4	6	-

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 φD=10 and 12.5) at 150°C, the peak voltage shall not exceed the rated voltage.

Capacitance change	Within ±30% of the initial capacitance value (10 to 100V) Within ±20% of the initial capacitance value (160 to 400V)
Dissipation Factor	300% or less than the initial specified value (10 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.

■Radial Lead Type



(mm)

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

Type numbering system (Example : 10V 3300μF)

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

φD	Code
10	PL
12.5 to 18	HL

Configuration
Capacitance tolerance (±20%)
Rated capacitance (3300μF)
Rated voltage (10V)
Series name
Type

• Please refer to page 20 about the end seal configulation.

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

● Dimension table in next page.

BX series

■Dimensions

Cap. (μF) \ V (Code)	10		16		25		35	
Code	1A		1C		1E		1V	
1	010						10×12.5	35
2.2	2R2						10×12.5	50
3.3	3R3						10×12.5	60
4.7	4R7						10×12.5	85
10	100						10×12.5	175
22	220						10×12.5	200
33	330						10×12.5	225
47	470						10×12.5	250
100	101				10×12.5	250	10×20	400
220	221		10×16	300	12.5×20	500	12.5×25	600
330	331	10×16	10×20	400	12.5×25	600	16×25	800
470	471	10×20	12.5×20	600	16×25	800	16×31.5	1000
1000	102	12.5×25	16×25	800	16×31.5	1000	18×40	1300
2200	222	16×31.5	18×35.5	1200				
3300	332	18×35.5	18×40	1300			Cace size φD×L (mm)	Rated ripple
4700	472	18×40						

Cap. (μF) \ V (Code)	50		63		80		100	
Code	1H		1J		1K		2A	
22	220						10×12.5	390
33	330				10×12.5	420	10×16	510
47	470				10×16	550	10×20	640
56	560		10×12.5	430	10×20	690	10×20	640
68	680		10×16	560	10×20	690	12.5×20	760
100	101	10×12.5	10×20	710	12.5×20	820	12.5×25	950
220	221	10×20	12.5×25	1040	16×25	1250	16×31.5	1380
330	331	12.5×20	12.5×31.5	1170	16×31.5	1480	18×31.5	1430
470	471	12.5×25	16×25	1280	18×31.5	1530		
560	561	12.5×31.5	16×31.5	1520				
680	681	16×25	16×35.5	1520			Cace size φD×L (mm)	Rated ripple
1000	102	16×31.5						

Rated ripple current (mArms) at 150°C 100kHz

● 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

Cap. (μF) \ V (Code)	160		200		350		400	
Code	2C		2D		2V		2G	
4.7	4R7				10×16	77	10×20	83
6.8	6R8		10×12.5	83	10×20	110	12.5×20	88
10	100	10×12.5	10×12.5	83	12.5×20	120	12.5×25	105
15	150	10×12.5	10×16	130	12.5×25	130	12.5×25	105
22	220	10×16	10×20	170				
33	330	12.5×20	12.5×20	210				
47	470	12.5×20	12.5×25	250				
56	560	12.5×25	16×20	270				
68	680	16×20	16×25	290			Cace size φD×L (mm)	Rated ripple
100	101	16×25	300					

Rated ripple current (mArms) at 150°C 120Hz

● Frequency coefficient of rated ripple current

V	Cap. (μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz
160 to 400	4.7 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