

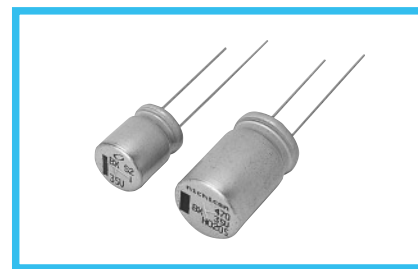
BX series High Temperature Range, For +150°C Use



- 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

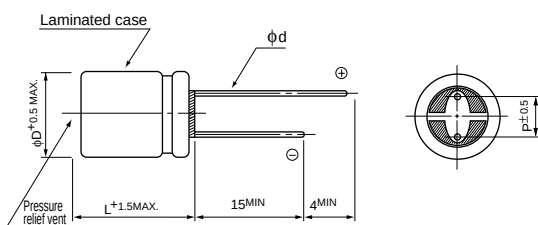


Item	Performance Characteristics																							
Category Temperature Range	-55 to +150°C (10 to 100V), -40 to +150°C (160 · 200V), -25 to +150°C (350 · 400V)																							
Rated Voltage Range	10 to 400V																							
Rated Capacitance Range	1 to 4700μF																							
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)	Rated voltage (V)	10	16	25	35	50	63	80	100	160·200	350·400	120Hz 20°C												
	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	Rated voltage (V)				10	16	25	35	50	63	80	100	160·200	350·400	120Hz									
	Impedance ratio		Z-25°C / Z+20°C		3	2	2	2	2	2	2	3	6											
	ZT / Z20 (MAX.)		Z-40°C / Z+20°C		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)										
Marking	Black print on the case top.																							
													Leakage current	Less than or equal to the initial specified value										

Radial Lead Type

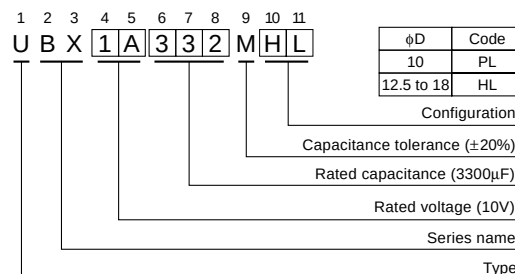
Type numbering system (Example : 10V 3300μF)

Rated Capacitance
Trade mark
Rated Voltage
Series
Lot No.



(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



- Please refer to page 20 about the end seal configuration.

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.

■ Dimensions

Cap. (μ F)	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	300		10 × 20	400	12.5 × 25	600	16 × 25	800
470	471	10 × 20	400		12.5 × 20	600	16 × 25	800	16 × 31.5	1000
1000	102	12.5 × 25	600		16 × 25	800	16 × 31.5	1000	18 × 40	1300
2200	222	16 × 31.5	1000		18 × 35.5	1200				
3300	332	18 × 35.5	1200		18 × 40	1300			Case size ϕ D × L (mm)	Rated ripple
4700	472	18 × 40	1300							

Cap. (μ F)	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	380		10 × 20	710	12.5 × 20	820	12.5 × 25	950
220	221	10 × 20	640		12.5 × 25	1040	16 × 25	1250	16 × 31.5	1380
330	331	12.5 × 20	770		12.5 × 31.5	1170	16 × 31.5	1480	18 × 31.5	1430
470	471	12.5 × 25	960		16 × 25	1280	18 × 31.5	1530		
560	561	12.5 × 31.5	1080		16 × 31.5	1520				
680	681	16 × 25	1190		16 × 35.5	1520			Case size ϕ D × L (mm)	Rated ripple
1000	102	16 × 31.5	1420							

● Frequency coefficient of rated ripple current

Rated ripple current (mA rms) at 150°C 100kHz

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. (μ F)	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	110		10 × 12.5	83	12.5 × 20	120	12.5 × 25	105
15	150	10 × 12.5	110		10 × 16	130	12.5 × 25	130	12.5 × 25	105
22	220	10 × 16	160		10 × 20	170				
33	330	12.5 × 20	230		12.5 × 20	210				
47	470	12.5 × 20	250		12.5 × 25	250				
56	560	12.5 × 25	270		16 × 20	270				
68	680	16 × 20	290		16 × 25	290			Case size ϕ D × L (mm)	Rated ripple
100	101	16 × 25	300							

Rated ripple current (mA rms) at 150°C 120Hz

● Frequency coefficient of rated ripple current

V	Cap. (μ F)	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