



Features

- Miniature size
- Rugged construction
- Low capacitance
- Low cost
- High reliability
- Operation from -40°C to +125°C

Applications

- Circuit crowbar
- High current surge generator
- Ordnance explosive detonations
- Flashlamp triggers
- Rocket motor ignitions
- Furnace ignitions
- HID lamp igniter circuits

Standard Voltages

Series	DC Breakdown Voltage (Nom)	Unit
BX	2.0	kV
	2.5	kV
	5.0	kV
	7.5	kV
	10.0	kV
	12.5	kV
	15.0	kV
	17.5	kV
	20.0	kV

Devices in the BX Series with other breakdown voltages in the 2.0-20.0kV range are available upon request.

Description

The BX series of miniature two electrode spark gaps (2.0-20.0kV) has been designed for applications that have severe environment and high reliability requirements. These gaps are made with high alumina (Al_2O_3) ceramic cylinders and metal electrodes that are hermetically sealed at high braze temperatures to withstand extreme levels of temperature and rugged environmental conditions. The small size of the BX gaps allows alternative mounting methods, including circuit board mounting, as well as external clamping of the ceramic envelope by using low dielectric materials.

Ordering Information

A complete part number is represented by the digits below. Breakdown voltages are expressed in kV. For example, BX5.0-01 is a 5.0kV BX series device with outline 01 and BX10.0-01 is a 10.0kV BX series device with outline 01.

Product Series / Part Number	Breakdown Voltage	Outline
BXX.X-XX	2.0-9.0kV	01
BXXX.X-XX	10.0-20.0kV	01

Specifications (@25°C)

Parameter	Conditions	Symbol	BX2.0			BX2.5			BX5.0			Units
			Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	
Device Specifications												
DC Breakdown	100V/s	V_{BD}	1.8	2.0	2.2	2.25	2.50	2.75	4.5	5.0	5.5	kV
Impulse Breakdown	100V/ μ s	V_{bd}	-	-	4.0	-	-	5.0	-	-	7.0	kV
Insulation Resistance	100Vdc	IR	-	10^{10}	-	-	10^{10}	-	-	10^{10}	-	Ω
Capacitance	1MHz	C	-	-	1.0	-	-	1.0	-	-	1.0	pF
Life Ratings												
Surge Life	5,000A Pulse Energy (0.7 Joules)	-	10,000	-	-	10,000	-	-	10,000	-	-	surges

Specifications (@25°C)

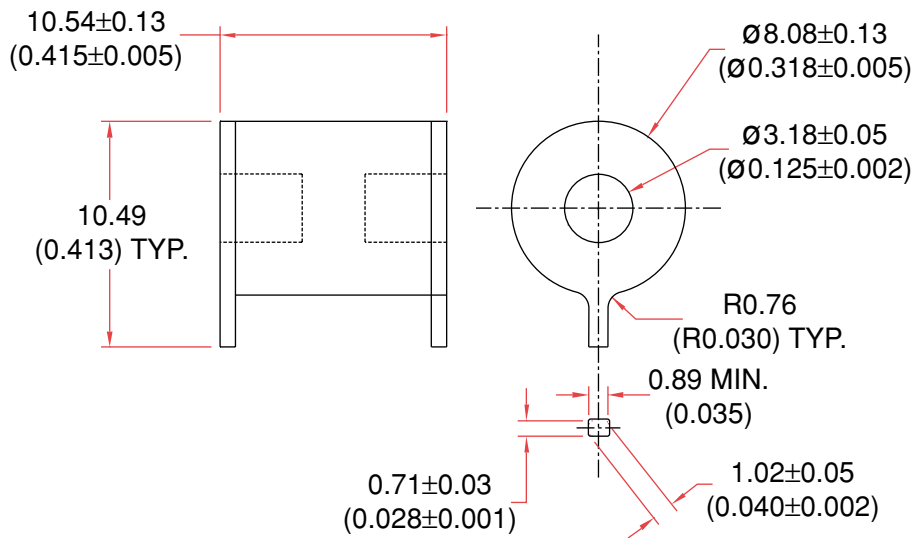
Parameter	Conditions	Symbol	BX7.5			BX10.0			BX12.5			Units
			Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	
Device Specifications												
DC Breakdown	100V/s	V_{BD}	6.75	7.50	8.25	9.0	10.0	11.0	11.25	12.50	13.75	kV
Impulse Breakdown	100V/ μ s	V_{bd}	-	-	10.5	-	-	14.0	-	-	19.5	kV
Insulation Resistance	100Vdc	IR	-	10^{10}	-	-	10^{10}	-	-	10^{10}	-	Ω
Capacitance	1MHz	C	-	-	1.0	-	-	1.0	-	-	1.0	pF
Life Ratings												
Surge Life	5,000A Pulse Energy (0.7 Joules)	-	10,000	-	-	10,000	-	-	10,000	-	-	surges

Specifications (@25°C)

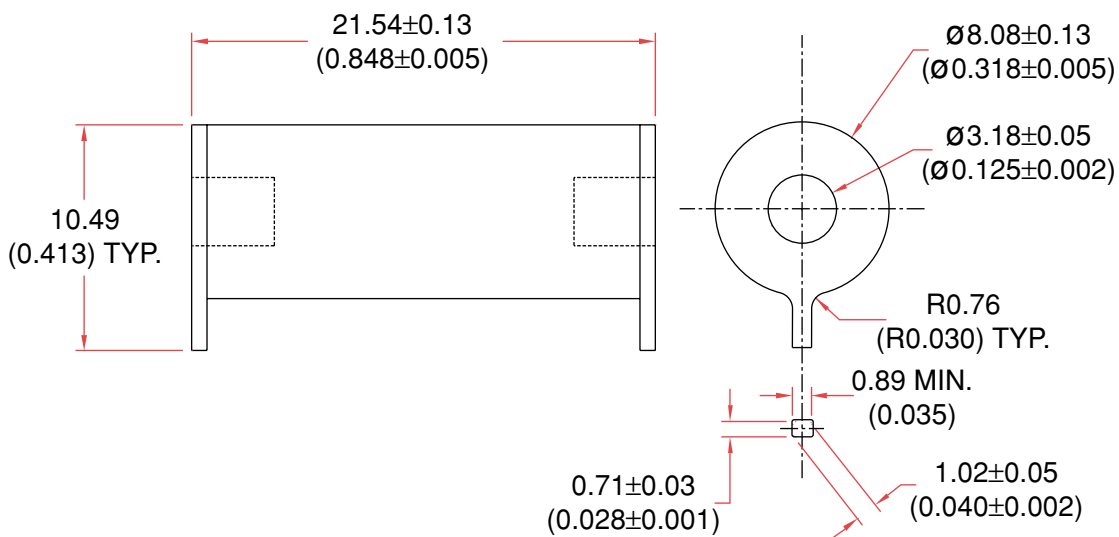
Parameter	Conditions	Symbol	BX15.0			BX17.5			BX20.0			Units
			Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	
Device Specifications												
DC Breakdown	100V/s	V_{BD}	13.5	15.0	16.5	15.75	17.50	19.25	18.0	20.00	22.0	kV
Impulse Breakdown	100V/ μ s	V_{bd}	-	-	20.6	-	-	24.0	-	-	27.5	kV
Insulation Resistance	100Vdc	IR	-	10^{10}	-	-	10^{10}	-	-	10^{10}	-	Ω
Capacitance	1MHz	C	-	-	1.0	-	-	1.0	-	-	1.0	pF
Life Ratings												
Surge Life	5,000A Pulse Energy (0.7 Joules)	-	10,000	-	-	10,000	-	-	10,000	-	-	surges

MECHANICAL DIMENSIONS
mm/(inches)

01 Outline for voltages 2.0-5.0kV



01 Outline for voltages > 5.0kV



Contact Information:

High Energy Devices, LLC
26 Hollenberg Court
Bridgeton, MO 63044
Phone: 314.291.0030
Fax: 314.291.8184
E-mail: info@highenergydevices.com
www.highenergydevices.com

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Specification: BX Series
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