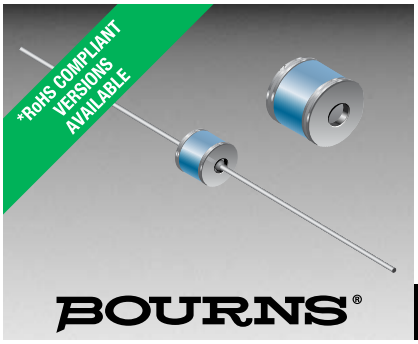


Features

- Through-hole or cassette mount
- Low capacitance and insertion loss
- High surge current rating
- Fast response to transients
- Compact “mini” size
- RoHS compliant* version available

This series is currently available but not recommended for new designs.

2039-xxx-XX Precision, Fast Responding, High Voltage Gas Discharge Tube

Bourns now offers miniature through-hole 2-electrode GDT surge protectors with sparkover voltage up to 1100 V. At only 5 mm in diameter, the 2039 Series is ideal for board level protection of high bandwidth applications such as xDSL, cable broadband and high speed Ethernet. The 2039 Series features high energy-handling capability, long and stable life performance and low capacitance of less than 1 pF.

Bourns® GDTs are designed to prevent damage from transient disturbances within rated limits by acting as a “crowbar” to create a short-to-ground circuit during conduction. When an electrical surge exceeds the defined breakdown voltage level of the GDT, the device becomes ionized and rapid conduction takes place. When the surge passes and system voltage returns to normal levels, the GDT returns to its high-impedance (off) state.

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Characteristics

Test Methods per ITU-T K.12, IEEE C62.31 and IEC 61643-311 GDT standards.

Characteristic	Model No.	
	2039-80	2039-110
DC Sparkover ±20 % @ 100 V/s	800 V	1100 V
Impulse Sparkover (1) @ 1000 V/μs	1250 V	1500 V

(1) Impulse Sparkover voltage is defined as typical values of distribution.

Insulation Resistance (IR)	100 V	> 10^9 Ω
Arc Voltage	1 A	~ 10 V
Glow-Arc Transition Current		< 0.5 A
Capacitance	1 MHz	< 1 pF
DC Holdover Voltage (2)	135 V	< 150 ms
Max. Single Discharge (3)	5 kA	> 1 operation
Impulse Discharge Current	2.5 kA, 8/20 μs (3)	> 10 operations
	100 A, 10/1000 μs	> 100 operations
	10 A, 10/1000 μs	> 1500 operations
Alternating Discharge Current	2.5 Arms, 1 s	> 10 operations
Operating and Storage Temperature		-55 to +85 °C
Climatic Category (IEC 60068-1)		40/90/21
Moisture Sensitivity Level		1
ESD Classification (Passive Component HBM)		6

Notes:
- UL Recognized, file E313168 (UL 1449).
- Sparkover limits after life +30/-25 %, IR >10^8 Ω.
- At delivery AQL 0.65 Level II, DIN ISO 2859.

(2) Network applied.
(3) DC Sparkover may exceed +30/-25 % but will continue to protect without venting.

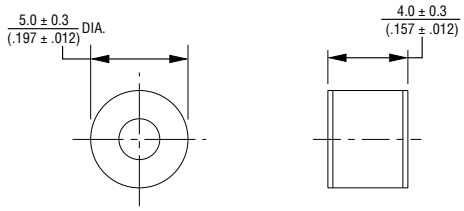
CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant. See www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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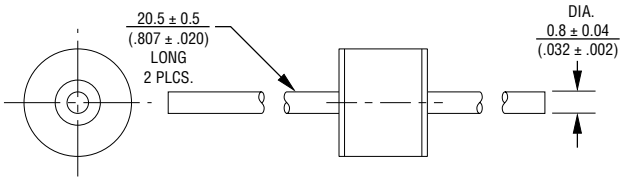
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Product Dimensions

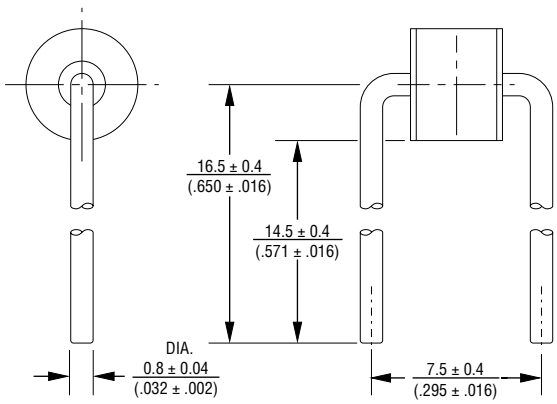
2039-XX-A



2039-XX-B



2039-XX-B5



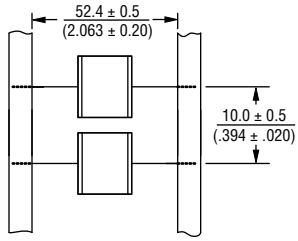
2039-xx-B5 not available in reel pack

DIMENSIONS: MM / (INCHES)

Packaging Specifications

Reel is 14 inches in diameter and 2.75 inches wide.

DIMENSIONS: MM / (INCHES)



Model	Standard Packaging Quantity			
	Bulk (Bag)	Tray	Box	Reel
2039-XX-A	250		1000	
2039-XX-B	100		700	
2039-XX-B5	250		1000	
2039-XX-BT1				1000

How to Order

2039 - xx - x - nn - T1 LF

Model Number Designator

Voltage (Divided by 10)
- 80 = 800 V
- 110 = 1100 V

Leads
- A = None
- B = 0.8 mm

Lead Shape
(See Product Dimension Drawings)

Packaging
- Blank = Bulk Packaging (Standard)
- T1 = Reelpack (Optional)

RoHS Compliant Option
- Blank = Standard Product
- LF = RoHS Compliant Product

REV. G 10/15/26

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