

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

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.

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 $\pm 20\%$ @ 100 V/s | 800 V | 1100 V |
| Impulse Sparkover ⁽¹⁾ @ 1000 V/ μ s | 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 μ s ⁽³⁾ | > 10 operations |
| | 100 A, 10/1000 μ s | > 100 operations |
| | 10 A, 10/1000 μ s | > 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 |

Notes:

- UL Recognized  file E313168 (UL 1449).
- Sparkover limits after life +30/-25 %, IR >10⁸ 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.



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

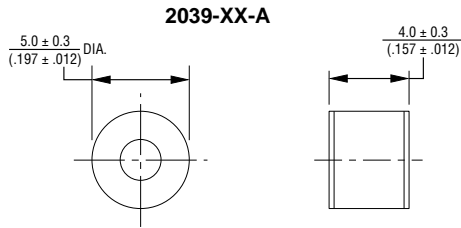
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

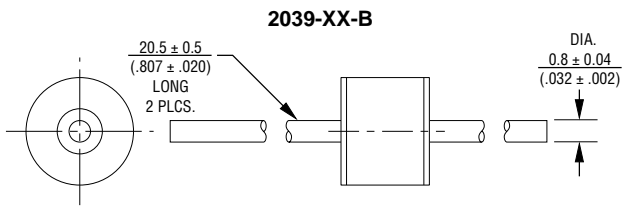
Users should verify actual device performance in their specific applications.

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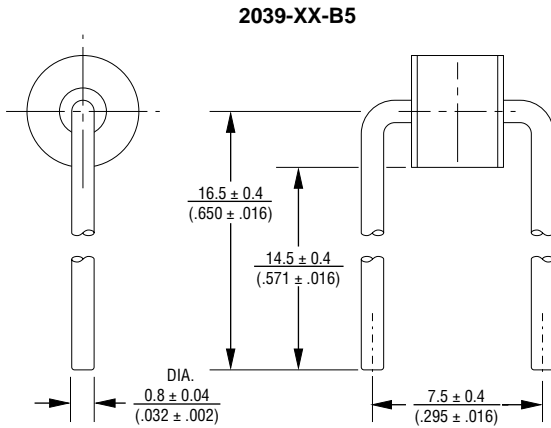
Product Dimensions



2039-XX-A



2039-XX-B

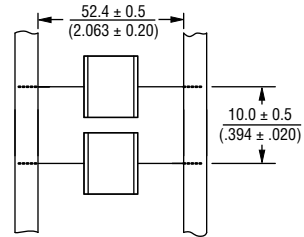


2039-XX-B5

2039-xx-B5 not available in reel pack

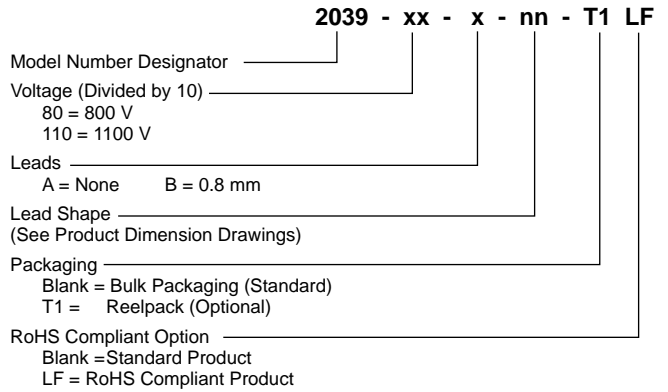
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Packaging Specifications



| 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



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