



Features

- Formerly a **JENOPTIK DEVICES** product
- Fast switching rate
- High energy, low loss capability
- Wide operating temperature range
- Long service life
- High insulation resistance
- RoHS compliant*

Applications

- Igniters for Xenon discharge lamps
- Electronic igniters for gas heating and gas domestic appliances, e.g., cookers
- Ignition of ultra-high pressure gas discharge lamps for data and video projectors

Sparctube® Switching Spark Gap ST-0350 Series

Description

Bourns® Sparctube® Switching Spark Gap Series is a range of switching spark gaps designed specifically for voltage controlled switching of capacitive discharge circuits where a high energy, low loss, fast rate of switching is required. This series is ideally suited for applications where a capacitive discharge is utilized with a transformer to obtain pulses of very high voltage levels in the order of several thousand volts.

Characteristics

Initial Values:

Static Breakdown Voltage @ 800 V/s 1

First Ignition Values	< 450 V
Following Ignition Values	350 V ±12 %

Electrical Life:

Minimum Number of Switching Cycles 2x105

Peak Current (Approx.) 500 A

Maximum Switching Frequency 200 Hz

Breakdown Characteristics @ 450 V Limit

First Ignition Values ≤ V 450

Delay Time < 60 ms

Following Ignition Values 350 V ±15 %

General Data:

Breakdown Time < 50 ns

Insulation Resistance @ 100 Vdc > 100 megohms

Share of Early Ignition Values (< 298 V) < 1 %

Capacitance < 1 pF

Operating Temperature Range 2 -40 °C to +160 °C

Storage Temperature Range -65 °C to +125 °C

Weight (Approx.) 2.3 g

Testing 100 %

Robustness of Terminations IEC 60068-2-21 3

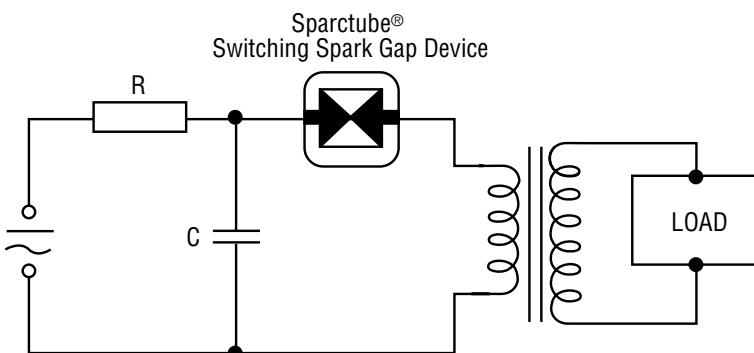
Notes:

1 At delivery AQL 0.65 Level II, DIN ISO 2859.

2 Distribution of switchings: maximum 20 % above +125 °C and 20 % below +20°C.

3 Test Ua1 (tensile), Ua2 (thrust), Ub (bending) and Uc (torsion).

Basic Application Circuit



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* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

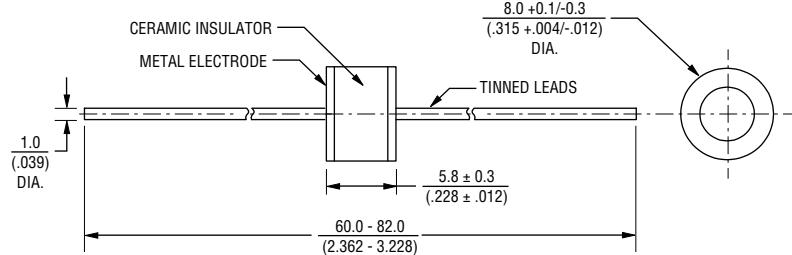
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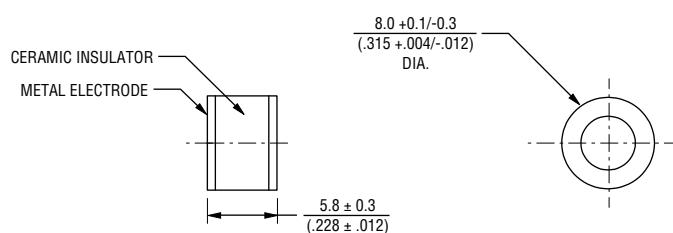
BOURNS®

Product Dimensions

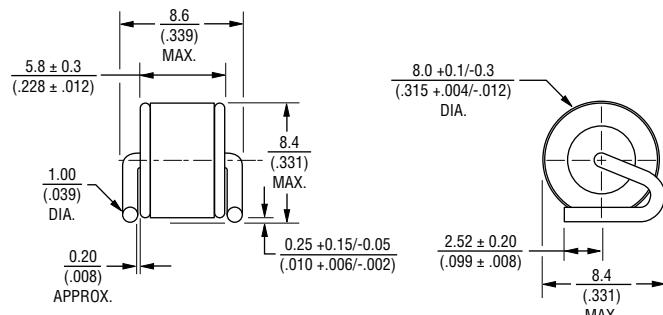
ST-0350-BLx



ST-0350-BCx



ST-0350-BBx



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

How to Order

ST - 0350 - B x x - STD

Series
Designator

Switching Voltage
0350 = 350 V

Tolerance
B = 12 %

Lead Shape
B = Bent Leads
C = No Leads*
L = Straight Leads

Packaging
B = Bulk
T = Tape & Reel*

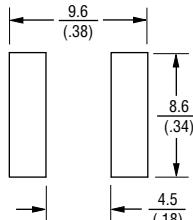
Standard or Modified Product Indicator
STD = Standard

*Leadless version available in bulk packaging
only.

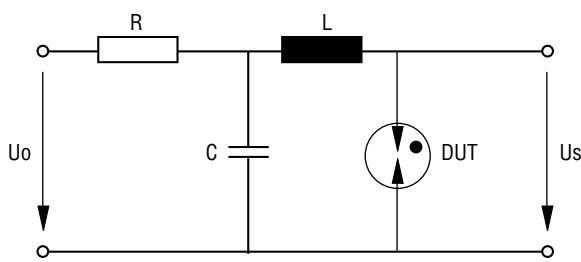
Typical Part Marking

ST 0350 wwy "wwy" = Week and
year of production

Recommended Pad Layout



Test Circuit



U_0 450 V
 R See Note
 C 470 nF
 L 0.33 μ H
 DUT Device Under Test
 U_s Breakdown Voltages

NOTE: U_0 and R are set to provide suitable conditions for different measurements.

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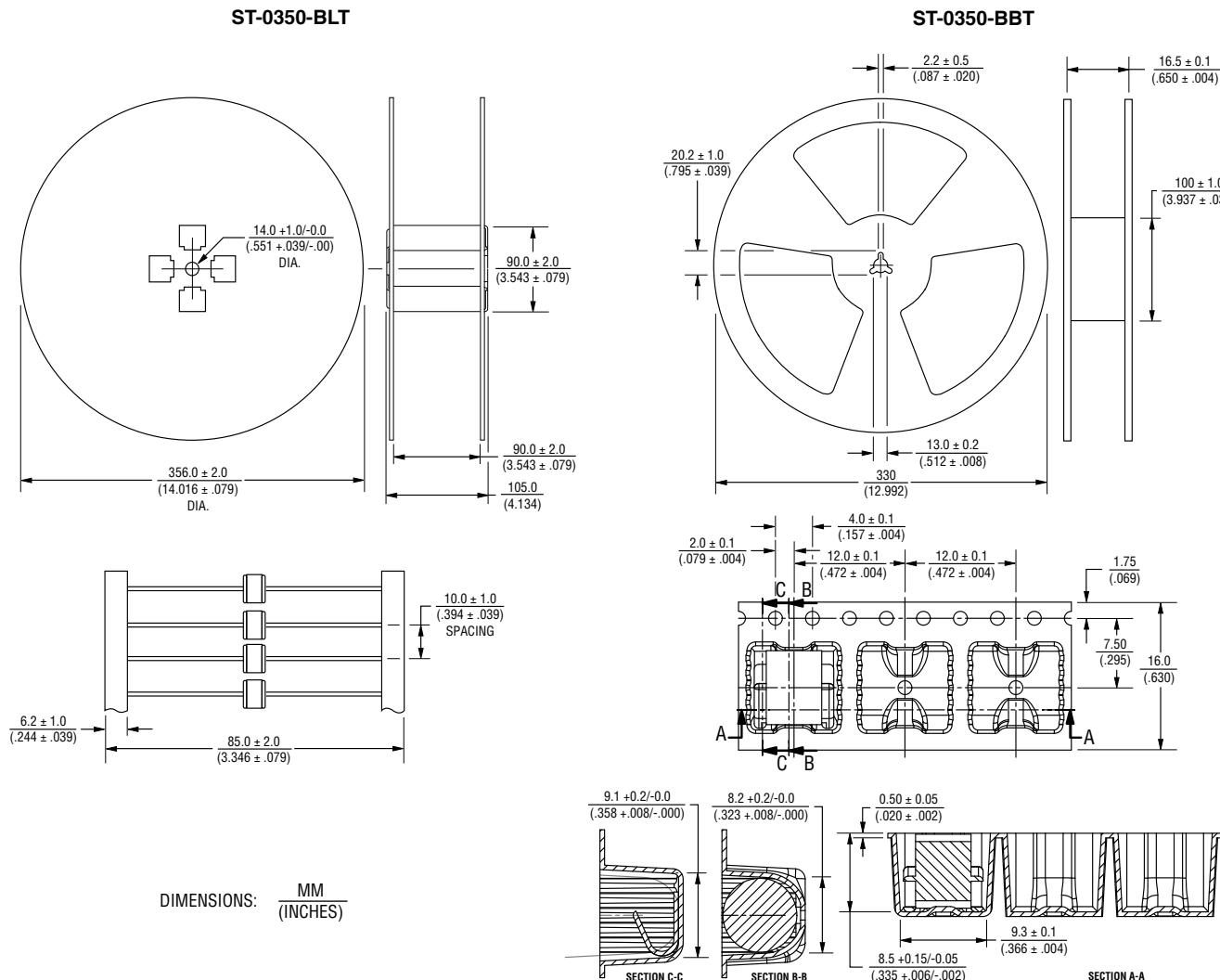
Sparctube® Switching Spark Gap ST-0350 Series

BOURNS®

Packaging Specifications

Models ST-0350-BBB, ST-0350-BLB and ST-0350-BCB* ship standard bulk pack, 1,000 pcs./bag. The optional tape and reel packaging contains 1,000 pcs./reel for Model ST-0350-BLT or 500 pcs./reel for Model ST-0350-BBT.

* Available in bulk packaging only.



REV. 11/18

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