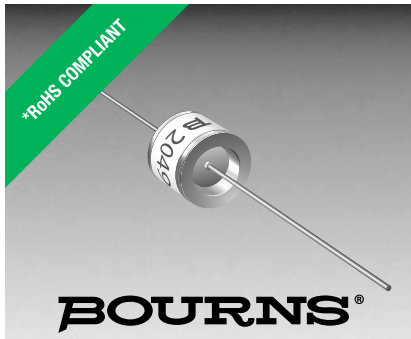




## Features

- Size: 8 mm diameter, 6 mm length
- Low capacitance
- High insulation resistance
- RoHS compliant\*
-  UL Recognized

## Additional Information

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## 2049 Series Medium Duty 2-Electrode Gas Discharge Tube

### Characteristics

Test Methods per ITU-T K.12 and IEC 61643-311.

| Characteristic                    | Model No. |         |         |         |         |         |
|-----------------------------------|-----------|---------|---------|---------|---------|---------|
|                                   | 2049-07   | 2049-09 | 2049-12 | 2049-13 | 2049-14 | 2049-23 |
| DC Sparkover $\pm 30\%$ @ 100 V/s | 75 V      | 90 V    | 120 V   | 130 V   | 145 V   | 230 V   |
| Impulse Sparkover <sup>(1)</sup>  |           |         |         |         |         |         |
| 100 V/ $\mu$ s                    | < 500 V   | < 500 V | < 500 V | < 500 V | < 500 V | < 500 V |
| 1000 V/ $\mu$ s                   | < 600 V   | < 600 V | < 700 V | < 700 V | < 700 V | < 700 V |

| Characteristic                    | Model No. |         |         |          |          |          |
|-----------------------------------|-----------|---------|---------|----------|----------|----------|
|                                   | 2049-25   | 2049-30 | 2049-35 | 2049-40  | 2049-47  | 2049-60  |
| DC Sparkover $\pm 30\%$ @ 100 V/s | 250 V     | 300 V   | 350 V   | 400 V    | 470 V    | 600 V    |
| Impulse Sparkover <sup>(1)</sup>  |           |         |         |          |          |          |
| 100 V/ $\mu$ s                    | < 500 V   | < 700 V | < 700 V | < 800 V  | < 900 V  | < 1100 V |
| 1000 V/ $\mu$ s                   | < 700 V   | < 900 V | < 900 V | < 1000 V | < 1100 V | < 1300 V |

<sup>(1)</sup> Impulse Sparkover voltage is defined as typical values of distribution.

|                                           |                        |                 |
|-------------------------------------------|------------------------|-----------------|
| Insulation Resistance (IR) <sup>(2)</sup> | 50 / 100 / 250 Vdc     | > 10 G $\Omega$ |
| Glow Voltage                              | 10 mA                  | ~ 70 V          |
| Arc Voltage                               | 1 A                    | ~ 10 V          |
| Glow-Arc Transition Current               |                        | < 1 A           |
| Maximum Capacitance                       | 1 MHz                  | < 1.5 pF        |
| Impulse Discharge Current                 | 20,000 A, 8/20 $\mu$ s | 1 operation     |
|                                           | 15,000 A, 8/20 $\mu$ s | 10 operations   |
| Alternating Discharge Current             | 20 A, 50 Hz, 1 sec.    | 1 operation     |
|                                           | 65 A, Single, 9 cycles | 1 operation     |
| Impulse Life                              | 100 A 10/1000 $\mu$ s  | 500 operations  |
| Operating Temperature                     |                        | -30 to +85 °C   |
| Storage Temperature                       |                        | -40 to +150 °C  |
| DC Holdover Voltage <sup>(3)</sup>        |                        | < 150 ms        |
| Climatic Category (IEC 60068-1)           |                        | 40 / 90 / 21    |

#### Notes:

- UL Recognized component, UL File E153537.
- At delivery AQL 0.65, level II DIN ISO 2859.

|                                     |                      |
|-------------------------------------|----------------------|
| <sup>(2)</sup> DC Breakdown Voltage | DC Measuring Voltage |
| 75–90 V                             | 50 V                 |
| 120–400 V                           | 100 V                |
| 470–600 V                           | 250 V                |

|                                     |                     |
|-------------------------------------|---------------------|
| <sup>(3)</sup> DC Breakdown Voltage | DC Holdover Voltage |
| 75–145 V                            | 52 V                |
| 230 V                               | 80 V                |
| 250 V                               | 135 V               |
| 300–600 V                           | 150 V               |



**WARNING**  
Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://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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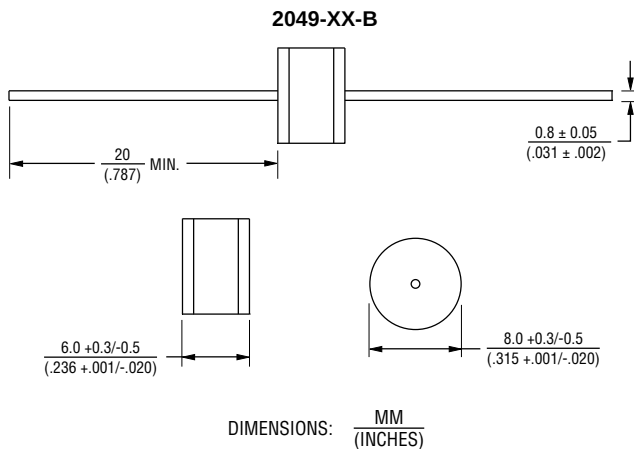
## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

## 2049 Series Medium Duty 2-Electrode Gas Discharge Tube

**BOURNS®**

### Product Dimensions



Note: Custom leadforms available - please contact Bourns for details.

### How to Order

**2049 - xx - B LF**

Model Number Designator \_\_\_\_\_

Voltage \_\_\_\_\_

|            |            |
|------------|------------|
| 07 = 75 V  | 25 = 250 V |
| 09 = 90 V  | 30 = 300 V |
| 12 = 120 V | 35 = 350 V |
| 13 = 130 V | 40 = 400 V |
| 14 = 145 V | 47 = 470 V |
| 23 = 230 V | 60 = 600 V |

Leads \_\_\_\_\_

B = 0.8 mm straight leads

Packaging \_\_\_\_\_

Blank = Bulk Packaging (Standard) - 100 pcs./tray; 500 pcs./box

T1 = Reelpack (Optional) - 500 pcs./reel

Plating \_\_\_\_\_

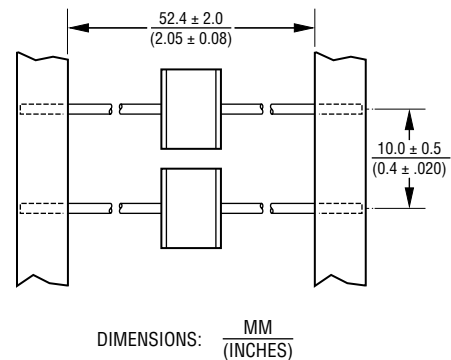
LF = RoHS Compliant Product

### Packaging Specifications

Model 2049-xx-BLF ships standard bulk pack, 100 pieces per tray; 5 trays per box (500 units).

The optional reelpack (-BT1LF) contains 500 pieces per reel. Reel is 330 mm in diameter and 68 mm wide. Two reels per box (1K units).

### 2049-XX-BT1LF — 0.8 mm (0.032 in.) dia. lead wire



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