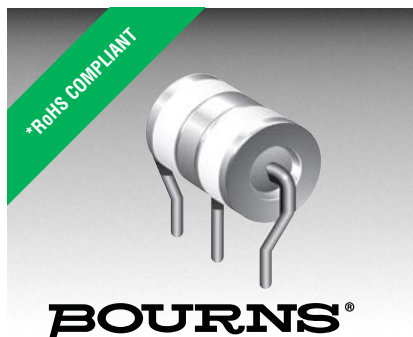




## Features

- Compact size: 6 mm diameter, 8 mm length
- Low capacitance and insertion loss
- Switch-Grade Fail-Short option available
- RoHS compliant\*
-  UL Recognized

## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

# 2056 Series Light Duty 3-Electrode Gas Discharge Tube

## Characteristics

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

| Characteristic                    | Model No. |         |         |         |         |
|-----------------------------------|-----------|---------|---------|---------|---------|
|                                   | 2056-09   | 2056-14 | 2056-20 | 2056-23 | 2056-25 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 90 V      | 145 V   | 200 V   | 230 V   | 250 V   |
| Impulse Sparkover                 |           |         |         |         |         |
| 100 V/ $\mu$ s                    | < 750 V   | < 750 V | < 600 V | < 600 V | < 600 V |
| 1000 V/ $\mu$ s                   | < 850 V   | < 850 V | < 700 V | < 700 V | < 700 V |

| Characteristic                    | Model No. |         |         |         |          |
|-----------------------------------|-----------|---------|---------|---------|----------|
|                                   | 2056-35   | 2056-40 | 2056-42 | 2056-47 | 2056-60  |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 350 V     | 400 V   | 420 V   | 470 V   | 600 V    |
| Impulse Sparkover                 |           |         |         |         |          |
| 100 V/ $\mu$ s                    | < 650 V   | < 700 V | < 700 V | < 800 V | < 900 V  |
| 1000 V/ $\mu$ s                   | < 750 V   | < 800 V | < 800 V | < 900 V | < 1000 V |

|                                             |                             |                |
|---------------------------------------------|-----------------------------|----------------|
| Insulation Resistance (IR) NOTE 1 .....     | 50 / 100 / 250 Vdc .....    | > 1 G $\Omega$ |
| Glow Voltage .....                          | 10 mA .....                 | ~ 70 V         |
| Arc Voltage .....                           | 1 A .....                   | ~ 10 V         |
| Glow-Arc Transition Current .....           | .....                       | < 1 A          |
| Maximum Capacitance .....                   | 1 MHz .....                 | < 2 pF         |
| Maximum Impulse Discharge Current .....     | 5,000 A, 8/20 $\mu$ s ..... | 10 operations  |
| Nominal Alternating Discharge Current ..... | 5 A, 50 Hz, 1 second .....  | 1 operation    |
| Impulse Life .....                          | 200 A 10/1000 $\mu$ s ..... | 100 operations |
| DC Holdover Voltage NOTE 2 .....            | .....                       | < 150 ms       |
| Operating Temperature .....                 | .....                       | -30 to +85 °C  |
| Storage Temperature .....                   | .....                       | -40 to +115 °C |
| 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
- Line to Line voltage is approximately 1.8 to 2 times the stated Line to Ground voltage.
- Discharge current rating is total current equally divided between Each Line To Ground (ELTG).

|         |                             |                             |
|---------|-----------------------------|-----------------------------|
| Note 1: | <u>DC Sparkover Voltage</u> | <u>IR Measuring Voltage</u> |
|         | 90 V .....                  | 50 V                        |
|         | 145–400 V .....             | 100 V                       |
|         | 420–600 V .....             | 250 V                       |

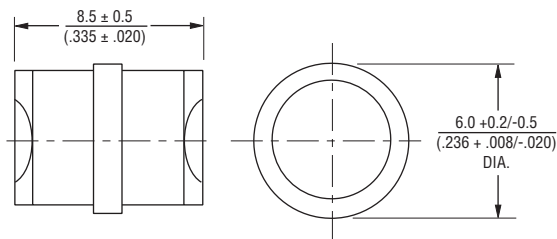
|         |                        |                            |
|---------|------------------------|----------------------------|
| Note 2: | <u>Network Applied</u> | <u>DC Holdover Voltage</u> |
|         | DC Sparkover Voltage   |                            |
|         | 90–145 V .....         | 52 V                       |
|         | 200–250 V .....        | 135 V                      |
|         | 350–600 V .....        | 150 V                      |

# 2056 Series Light Duty 3-Electrode Gas Discharge Tube

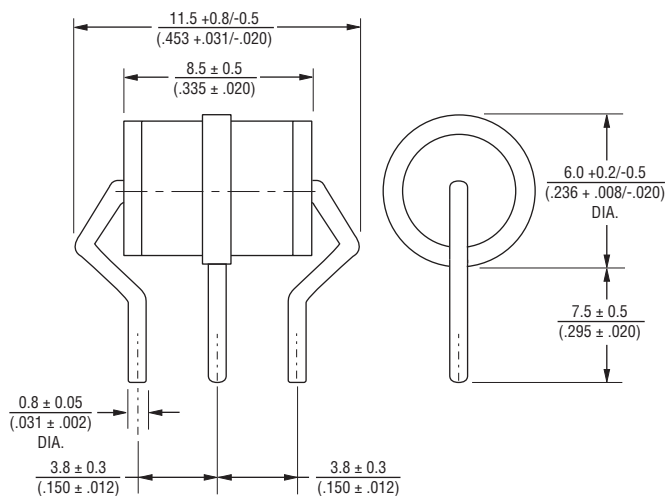
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## Product Dimensions

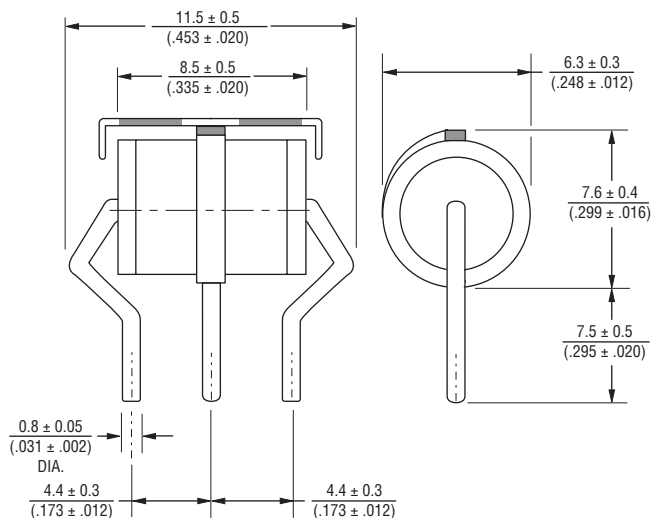
### 2056-xx-A



### 2056-xx-B3 0.8 mm dia., 3.8 mm spacing



### 2056-xx-B2 0.8 mm dia., 4.4 mm spacing (B2FLF Switch-Grade Fail-Short Configuration Shown)



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

## How to Order

2056 - xx - xx (F) LF

Model Number Designator

Voltage (Divided by 10)

|            |            |
|------------|------------|
| 09 = 90 V  | 35 = 350 V |
| 14 = 145 V | 40 = 400 V |
| 20 = 200 V | 42 = 420 V |
| 23 = 230 V | 47 = 470 V |
| 25 = 250 V | 60 = 600 V |

Leads

A = No leads/Cassette Applications  
B2 = 0.8 mm dia., 4.4 mm spacing  
B3 = 0.8 mm dia., 3.8 mm spacing

Switch-Grade Fail-Short Option

(Blank) = None  
F = Fail-Short Device (Optional)

RoHS Compliance

LF = RoHS Compliant Product

## Packaging Specifications

Model 2056 ships standard bulk pack, 100 pieces per tray; 5 trays per box, 2 boxes per outer pack (1K units).

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REV. A 06/12

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.