



## Features

- Mini-compact size: 4 mm diameter, 4.2 mm length
- Surface mount device
- High voltage range
- High insulation resistance
- RoHS compliant\*
-  UL Recognized

## Applications

- Industrial equipment/electronics
- Telecommunications electronics
- Consumer electronics

## 2087 Series High Voltage Mini-2-Electrode Gas Discharge Tube

### Characteristics

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

| Characteristic                    | Model No. |          |          |          |          |          |
|-----------------------------------|-----------|----------|----------|----------|----------|----------|
|                                   | 2087-80   | 2087-100 | 2087-120 | 2087-150 | 2087-180 | 2087-200 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 800 V     | 1000 V   | 1200 V   | 1500 V   | 1800 V   | 2000 V   |
| Impulse Sparkover <sup>(1)</sup>  |           |          |          |          |          |          |
| 100 V/ $\mu$ s                    | < 1300 V  | < 1500 V | < 1700 V | < 2000 V | < 2500 V | < 2700 V |
| 1000 V/ $\mu$ s                   | < 1400 V  | < 1600 V | < 1800 V | < 2100 V | < 2600 V | < 2800 V |

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

|                                           |                         |                  |
|-------------------------------------------|-------------------------|------------------|
| Insulation Resistance (IR) <sup>(2)</sup> | 250/500 Vdc             | > 1 G $\Omega$   |
| Glow Voltage                              | 10 mA                   | ~ 60 V           |
| Arc Voltage                               | 1 A                     | ~ 15 V           |
| Glow-Arc Transition Current               |                         | < 1 A            |
| Capacitance                               | 1 MHz                   | < 0.5 pF         |
| Impulse Discharge Current                 | 3,000 A, 8/20 $\mu$ s   | 1 operation      |
|                                           | 2,000 A, 8/20 $\mu$ s   | 10 operations    |
| Alternating Discharge Current             | 2 Arms, 50 Hz, 1 second | 1 operation min. |
|                                           | 4 Arms, 50 Hz, 9 cycles | 1 operation min. |
| Impulse Life                              | 100 A, 10/1000 $\mu$ s  | > 100 operations |
| Operating Temperature                     |                         | -30 to +85 °C    |
| Storage Temperature                       |                         | -40 to +115 °C   |
| Climatic Category (IEC 60068-1)           |                         | 40 / 90 / 21     |

### Notes:

<sup>(2)</sup> Insulation Resistance measured at 500 V for GDTs with >1000 V DCBD.

- UL Recognized component: UL File E313168.
- At delivery AQL 0.65 Level II, DIN ISO 2859.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

# BOURNS®

**Asia-Pacific:** Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

**EMEA:** Tel: +36 88 520 390 • Email: eurocus@bourns.com

**The Americas:** Tel: +1-951 781-5500 • Email: americus@bourns.com

**www.bourns.com**

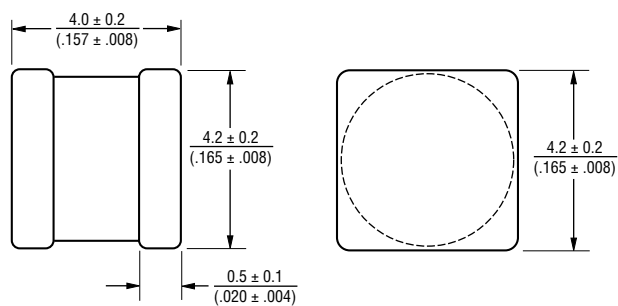
\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# 2087 Series High Voltage Mini-2-Electrode Gas Discharge Tube Surge Protector **BOURNS®**

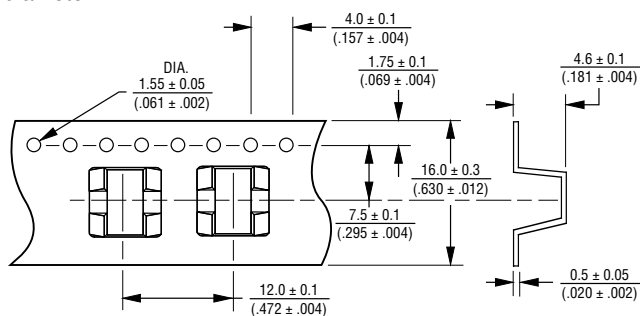
## Product Dimensions



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

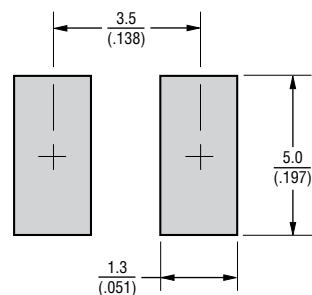
## Packaging Specifications

The Model 2087-xxx-SM ships standard reelpack (-RP), 900 pieces per reel, 2,700 pieces per box. Reel is 13 inches in diameter.



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

## Recommended Pad Layout



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

## How to Order

**2087 - xxx - SM - RP LF**

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

**Voltage** (Divided by 10) \_\_\_\_\_

80 = 800 V

100 = 1000 V

120 = 1200 V

150 = 1500 V

180 = 1800 V

200 = 2000 V

**Surface Mount** \_\_\_\_\_

**Packaging** \_\_\_\_\_

RP = Reelpack (900 pcs./13 " reel)

**RoHS Compliancy** \_\_\_\_\_

LF = RoHS Compliant Product

REV. D 01/17

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