




## Features

- Size: 4 mm diameter, 4.2 mm length
- Mini-surface mount footprint
- Low capacitance
- High insulation resistance
- RoHS compliant\*
-  UL Recognized

## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

# 2053 Series Light Duty 2-Electrode Miniature Gas Discharge Tube

## Characteristics

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

Characteristic	Model No.				
	2053-07	2053-09	2053-14	2053-23	2053-25
DC Sparkover $\pm 20\%$ @ 100 V/s	75 V	90 V	145 V	230 V	250 V
Impulse Sparkover <sup>(1)</sup>					
100V/ $\mu$ s	< 700 V	< 700 V	< 700 V	< 600 V	< 600 V
1000V/ $\mu$ s	< 800 V	< 800 V	< 800 V	< 700 V	< 700 V

Characteristic	Model No.				
	2053-30	2053-35	2053-40	2053-47	2053-60
DC Sparkover $\pm 20\%$ @ 100 V/s	300 V	350 V	400 V	470 V	600 V
Impulse Sparkover <sup>(1)</sup>					
100V/ $\mu$ s	< 600 V	< 650 V	< 700 V	< 800 V	< 900 V
1000V/ $\mu$ s	< 700 V	< 800 V	< 800 V	< 900 V	< 1000 V

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

Insulation Resistance (IR) <sup>(2)</sup> .....	50/100/250 V .....	> 1 G $\Omega$
Glow Voltage .....	10 mA .....	~ 70 V
Arc Voltage .....	>1 A .....	~ 10 V
Glow-Arc Transition Current .....		< 1 A
Capacitance.....	1 MHz .....	0.5 pF typical
Maximum Impulse Discharge Current .....	5,000 A, 8/20 $\mu$ s.....	1 operation
	3,000 A, 8/20 $\mu$ s.....	10 operations
Nominal Alternating Discharge Current .....	3 A, 50 Hz, 1 second.....	1 operation
	6 A, 9 cycles.....	1 operation
Impulse Life .....	100 A, 10/1000 $\mu$ s.....	300 operations
DC Holdover Voltage <sup>(3)</sup> .....		< 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.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

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

<sup>(3)</sup> Network Applied	DC Holdover Voltage
DC Sparkover Voltage	
75–145 V	52 V
230–250 V	80 V
300–600 V	150 V

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

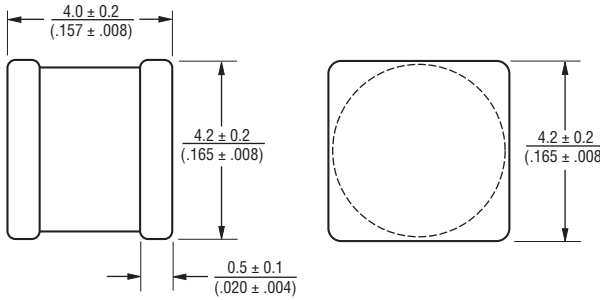
Specifications are subject to change without notice.

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.

# 2053 Series Light Duty 2-Electrode Miniature Gas Discharge Tube



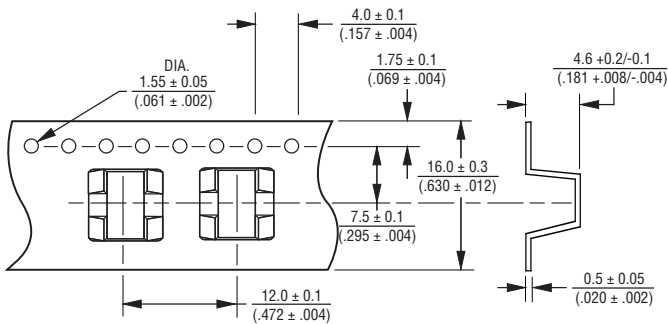
## Product Dimensions



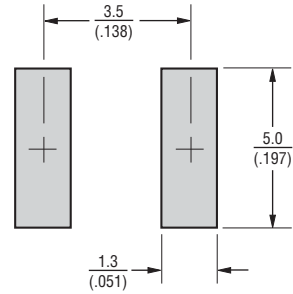
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Packaging Specifications

The Model 2053-xx-SM ships standard reelpack (-RP), 900 pieces per reel, 2,700 pieces per box. Reel is 330 mm in diameter and 16 mm wide.



## Recommended Pad Layout



## How to Order

Model Number Designator **2053 - xx - SM - RP LF**

**Voltage** (Divided by 10)  
 07 = 75 V      30 = 300 V  
 09 = 90 V      35 = 350 V  
 14 = 145 V     40 = 400 V  
 23 = 230 V     47 = 470 V  
 25 = 250 V     60 = 600 V

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

**Packaging**  
 RP = Reelpack

**RoHS Compliancy**  
 LF = RoHS Compliant Product



### Asia-Pacific:

Tel: +886-2 2562-4117

Fax: +886-2 2562-4116

### EMEA:

Tel: +36 88 520 390

Fax: +36 88 520 211

### The Americas:

Tel: +1-951 781-5500

Fax: +1-951 781-5700

[www.bourns.com](http://www.bourns.com)

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