



## Features

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

## Additional Information

Click these links for more information:



# 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.....		-40 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	52 V
75–145 V	80 V
230–250 V	150 V
300–600 V	

\*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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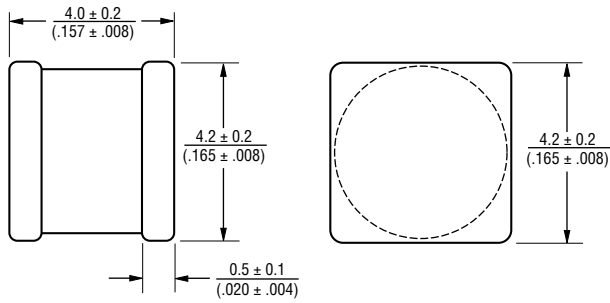
## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

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

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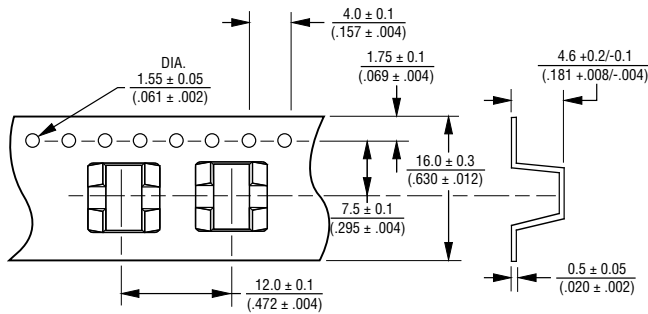
### Product Dimensions



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

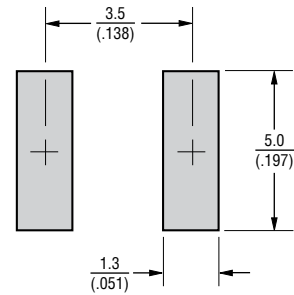
### Packaging Specifications

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.



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

### Recommended Pad Layout



### How to Order

**2053 - xx - SM - RP LF**

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

**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

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