


## Features

- Size: 5 mm diameter, 7.2 mm length
- Surface mount design
- Symmetrical breakdown voltage (L-L, L-G)
- Low capacitance and insertion loss
-  UL Recognized
- RoHS compliant\*

## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

# 2052 Series Light Duty 3-Electrode Symmetrical Gas Discharge Tube

## Characteristics

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

Characteristic	Model No.							
	2052-23	2052-25	2052-35	2052-40	2052-42	2052-47	2052-60	2052-80
DC Sparkover $\pm 20\%$ @ 100 V/s (L-L, L-G)	230 V	250 V	350 V	400 V	420 V	470 V	600 V	800 V
Impulse Sparkover (L-L, L-G) <sup>(1)</sup>								
100 V/ $\mu$ s	< 600 V	< 600 V	< 650 V	< 700 V	< 700 V	< 800 V	< 900 V	< 1150 V
1000 V/ $\mu$ s	< 700 V	< 700 V	< 750 V	< 800 V	< 800 V	< 900 V	< 1000 V	< 1400 V

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

Insulation Resistance (IR) <sup>(2)</sup>	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	10,000 A, 8/20 $\mu$ s	1 operation
	5,000 A, 8/20 $\mu$ s	10 operations
Nominal Alternating Discharge Current	5 A, 50 Hz, 1 sec.	1 operation
	20 A, 9 cycles	1 operation
Impulse Life	200 A, 10/1000 $\mu$ s	150 operations
DC Holdover Voltage <sup>(3)</sup>	>135 V	<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 AQL Level II, DIN ISO 2859.
- The rated discharge current is the total current equally divided between each line to ground (ELTG).
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

<sup>(2)</sup> DC Sparkover Voltage	IR Measuring Voltage
145-400 V	100 V
420-800 V	250 V

<sup>(3)</sup> Network Applied.

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**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.

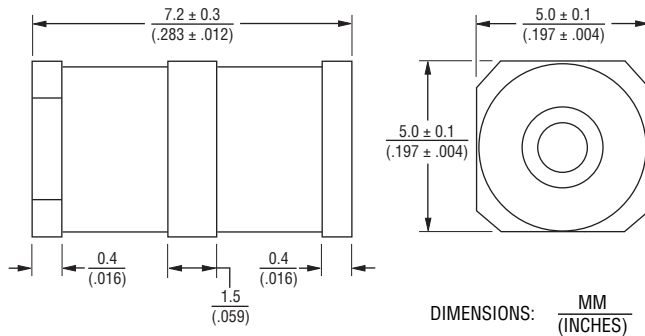
Users should verify actual device performance in their specific applications.

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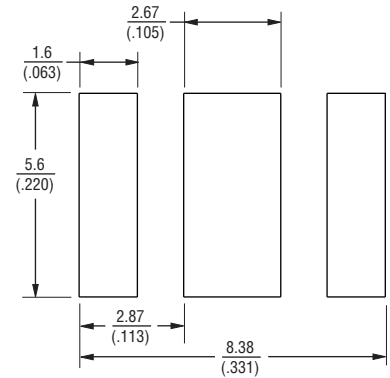
# 2052 Series Light Duty 3-Electrode Symmetrical Gas Discharge Tube



## Product Dimensions



## Recommended Pad Layout



## How to Order

**2052 - xx - SM - RP LF**

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

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

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

Packaging \_\_\_\_\_

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

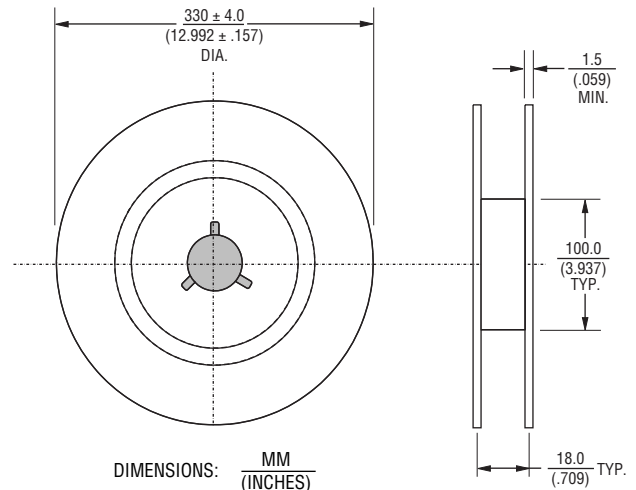
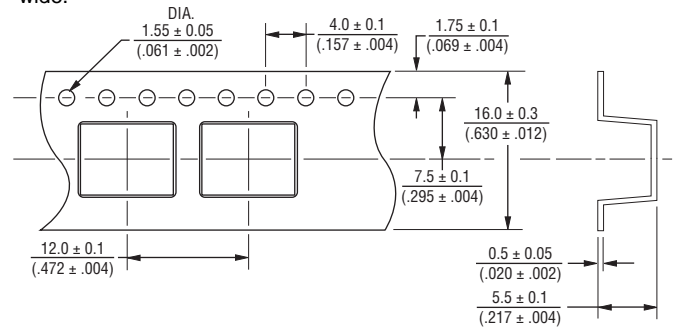
RP = Reel Pack

LF = RoHS Compliant Product

- 23 = 230 V
- 25 = 250 V
- 35 = 350 V
- 40 = 400 V
- 42 = 420 V
- 47 = 470 V
- 60 = 600 V
- 80 = 800 V

## Packaging Specifications

Model 2052-xx-SM-RPLF (Reel Pack) contains 900 pieces per reel, 2,700 pieces per box. The reel is 330 mm in diameter and 18 mm wide.



REV. B 09/19

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