




## Features

- Size: 6.2 mm diameter, 4.2 mm length
- Surface mount device
- High voltage range
- Compact size
- High insulation resistance
- RoHS compliant\*
-  UL Recognized

## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

# 2093 Series High Voltage 2-Electrode Gas Discharge Tube

## Characteristics

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

Characteristic	Model No.				
	2093-100	2093-120	2093-180	2093-200	2093-250
DC Sparkover $\pm 20\%$ @ 100 V/s	1000 V	1200 V	1800 V	2000 V	2500 V
Impulse Sparkover <sup>(1)</sup>					
100V/ $\mu$ s	< 1500 V	< 1700 V	< 2500 V	< 2700 V	< 3100 V
1000V/ $\mu$ s	< 1600 V	< 1800 V	< 2600 V	< 2800 V	< 3200 V

Characteristic	Model No.	
	2093-270	2093-300
DC Sparkover $\pm 20\%$ @ 100 V/s	2700 V	3000 V
Impulse Sparkover <sup>(1)</sup>		
100V/ $\mu$ s	< 3300 V	< 3600 V
1000V/ $\mu$ s	< 3400 V	< 3700 V

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

Insulation Resistance (IR) <sup>(2)</sup> .....	500/1000 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 .....	< 0.8 pF
Impulse Discharge Current.....	5000 A, 8/20 $\mu$ s.....	1 operation
	3000 A, 8/20 $\mu$ s.....	10 operations
Alternating Discharge Current .....	3 Arms, 50 Hz, 1 sec.....	1 operation
	10 Arms, 50 Hz, 9 cycles .....	1 operation
Impulse Life .....	100 A, 10/1000 $\mu$ s.....	> 300 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 1000 V for GDTs with > 2000 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.

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

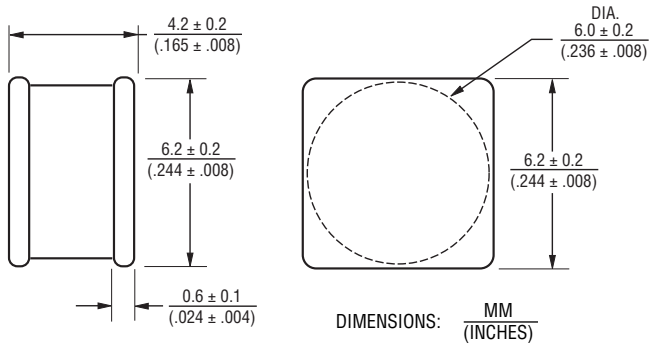
Specifications are subject to change without notice.

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.

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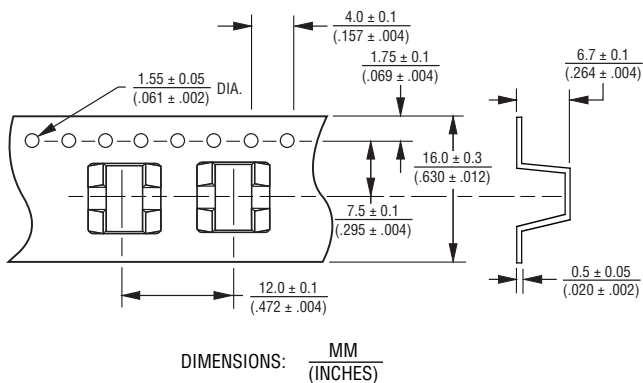
**BOURNS®**

## Product Dimensions

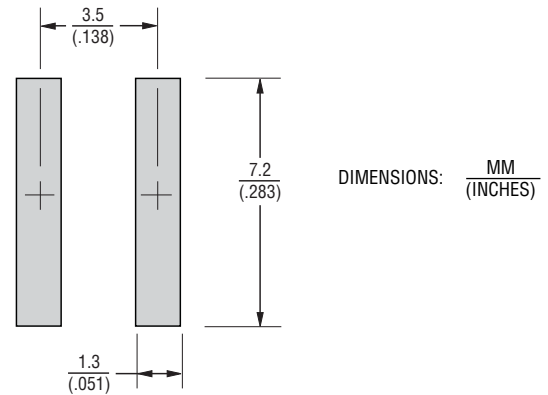


## Packaging Specifications

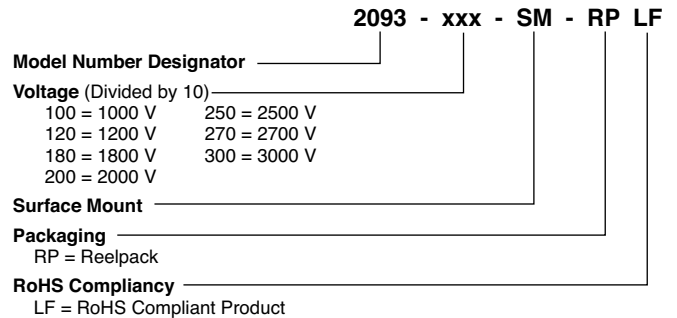
The Model 2093-xx-SM ships standard reelpack (-RP), 800 pieces per reel, 2,400 pieces per box. Reel is 330 mm in diameter and 16 mm wide.



## Recommended Pad Layout



## How to Order



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