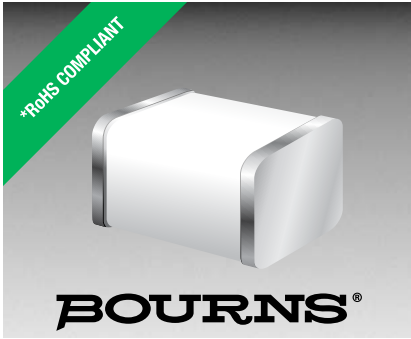




**THE DATASHEET OF  
2051-30-SM-RPLF**





## Features

- Compact size
- Low capacitance
- Performance stability over life
- High insulation resistance
- RoHS compliant\*
-  UL Recognized

## Applications

- MDC / PCI modems
- Splitters
- Telecom CPE
- Datacom

# 2051 Series Gas Discharge Tube Surge Protector

Bourns® 2051 Series micro surface mount, 2-electrode GDT surge protection device is designed to meet board level protection requirements with reduced space requirements. The 2051 Series is ideal for high-speed/high-bandwidth applications with a typical capacitance of 0.4 pF. The 2051 Series product dimensions are 2.7 x 3.2 x 4.5 mm.

### Additional Information

Click these links for more information:



### Characteristics

Test Methods per ITU-T (CCITT) K.12 and IEEE C62.31

Characteristic	Model No.				
	2051-09	2051-15	2051-20	2051-23	2051-30
DC Sparkover @ 100 V/s	90 V ±30 %	150 V ±30 %	200 V ±25 %	230 V ±25 %	300 V ±25 %
Impulse Sparkover <sup>(1)</sup>					
100V/μs	<500 V	<500 V	<500 V	<500 V	<600 V
1000V/μs	<600 V	<600 V	<650 V	<650 V	<750 V

Characteristic	Model No.				
	2051-35	2051-40	2051-42	2051-47	2051-60
DC Sparkover @ 100 V/s	350 V ±25 %	400 V ±25 %	420 V ±25 %	470 V ±25 %	600 V ±25 %
Impulse Sparkover <sup>(1)</sup>					
100V/μs	<650 V	<750 V	<750 V	<800 V	<950 V
1000V/μs	<800 V	<900 V	<900 V	<950 V	<1100 V

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

Insulation Resistance (IR) .....	50 / 100 V <sub>dc</sub> .....	> 1G Ω
Glow Voltage .....	10 mA .....	~ 70 V
Arc Voltage .....	1 A .....	~ 10 V
Glow-Arc Transition Current .....		< 1 A
Capacitance.....	1 MHz .....	< 0.5 pF
Impulse Discharge Current.....	2000 A, 8/20 μs.....	10 operations
	100 A, 8/20 μs.....	300 operations
	10 A, 10/1000 μs.....	100 operations
Alternating Discharge Current .....	2 A, 50 Hz, 1 sec.....	10 operations
Operating & Storage Temperature.....		-40 to +125 °C
Climatic Category (IEC 60068-1).....		40 / 90 / 21
Moisture Sensitivity Level.....		1
ESD Classification (HBM).....		6

#### 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.



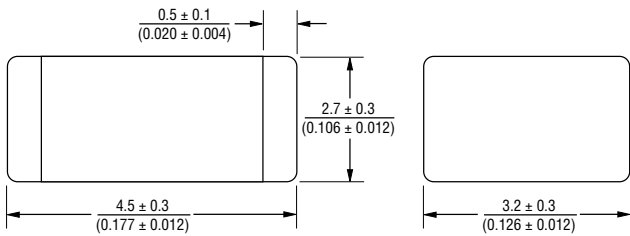
**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*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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# 2051 Series Gas Discharge Tube Surge Protector

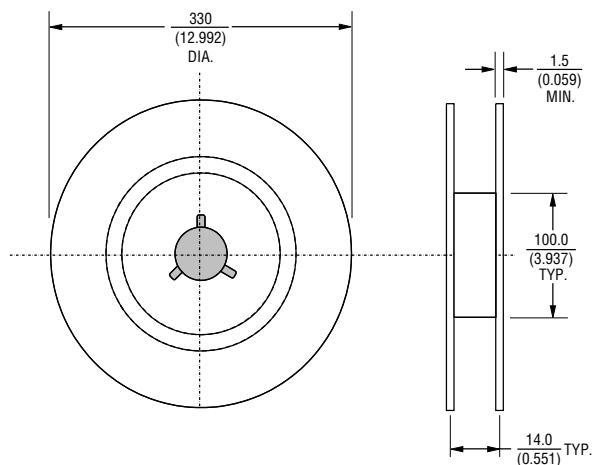
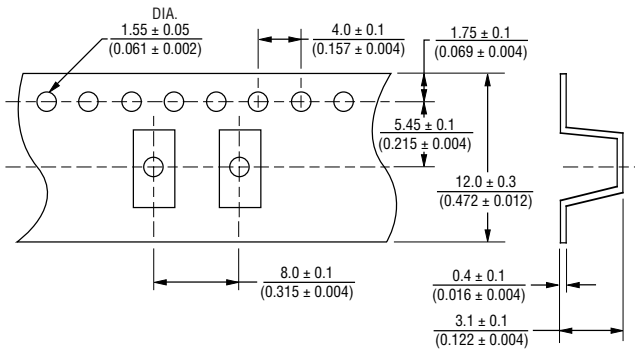


## Product Dimensions



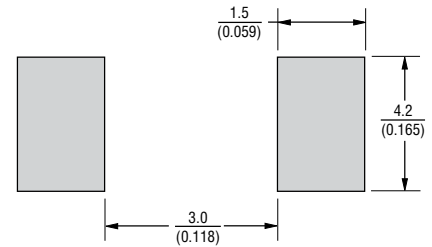
## Packaging Specifications

The Model 2051-xx-SM ships standard reelpack (-RP), 2500 pieces per reel. Reel is 330 mm in diameter and 14 mm wide.



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

## Recommended Pad Layout



## How to Order

2051 - xx - SM - RP LF

Model Number Designator

Voltage (Divided by 10)

- |            |            |
|------------|------------|
| 09 = 90 V  | 35 = 350 V |
| 15 = 150 V | 40 = 400 V |
| 20 = 200 V | 42 = 420 V |
| 23 = 230 V | 47 = 470 V |
| 30 = 300 V | 60 = 600 V |

Surface Mount

Packaging

RP = Reelpack (2,500 pieces per reel)

RoHS Compliancy

LF = RoHS Compliant Product



Asia-Pacific: Tel: +886-2 2562-4117

Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877

Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500

Email: americus@bourns.com

www.bourns.com

REV. E 09/19

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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