Bourns® 2051 Series Gas Discharge Tube Surge Protector

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

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

**Characteristics**

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

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Model No.</th>
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<tbody>
<tr>
<td>DC Sparkover @ 100 V/s</td>
<td>2051-09 2051-15 2051-20 2051-23 2051-30</td>
</tr>
<tr>
<td>Impulse Sparkover (1)</td>
<td>100V/μs &lt;500 V &lt;500 V &lt;500 V &lt;600 V</td>
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<td>1000V/μs &lt;600 V &lt;600 V &lt;650 V &lt;750 V</td>
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<td></td>
<td>1000V/μs &lt;800 V &lt;900 V &lt;900 V &lt;950 V</td>
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Insulation Resistance (IR) .................................................. 50 / 100 Vdc ...................................................... > 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.

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Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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**WARNING** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)
2051 Series Gas Discharge Tube Surge Protector

Product Dimensions

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

Packaging Specifications

Recommended Pad Layout

How to Order

Model Number Designator

Voltage (Divided by 10)
- 09 = 90 V
- 15 = 150 V
- 20 = 200 V
- 23 = 230 V
- 30 = 300 V
- 35 = 350 V
- 40 = 400 V
- 42 = 420 V
- 47 = 470 V
- 60 = 600 V

Surface Mount

Packaging
- RP = Reelpack (2,500 pieces per reel)

RoHS Compliancy
- LF = RoHS Compliant Product

DIMENSIONS: MM (INCHES)

REV. E 09/19
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