



## Features

- Leadless, surface mount for economical assembly
- Compact mini-size
- Low capacitance and insertion loss
- RoHS compliant\*
- UL Recognized

## 2055 Series Gas Discharge Tube Surge Protector

Bourns offers a low-cost surface mount (SM) 2-electrode GDT surge protection device. The 2055 Series is ideal for broadband protection due to its ultra-low capacitance. The 2055 Series offers superior protection characteristics suitable for telecommunications, commercial and industrial applications.

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### Characteristics

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

| Characteristic                    | Model No. |         |         |         |         |
|-----------------------------------|-----------|---------|---------|---------|---------|
|                                   | 2055-07   | 2055-09 | 2055-23 | 2055-25 | 2055-30 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 75 V      | 90 V    | 230 V   | 250 V   | 300 V   |
| Impulse Sparkover <sup>(1)</sup>  |           |         |         |         |         |
| 100V/ $\mu$ s                     | 600 V     | 600 V   | 450 V   | 450 V   | 500 V   |
| 1000V/ $\mu$ s                    | 700 V     | 700 V   | 550 V   | 550 V   | 600 V   |

| Characteristic                    | Model No. |         |         |         |
|-----------------------------------|-----------|---------|---------|---------|
|                                   | 2055-35   | 2055-40 | 2055-60 | 2055-80 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 350 V     | 400 V   | 600 V   | 800 V   |
| Impulse Sparkover <sup>(1)</sup>  |           |         |         |         |
| 100V/ $\mu$ s                     | 600 V     | 600 V   | 800 V   | 1000 V  |
| 1000V/ $\mu$ s                    | 750 V     | 700 V   | 900 V   | 1200 V  |

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

|                                          |                                  |                             |
|------------------------------------------|----------------------------------|-----------------------------|
| Insulation Resistance (IR) .....         | 50V / 100 V <sup>(2)</sup> ..... | > 10 <sup>10</sup> $\Omega$ |
| Glow Voltage .....                       | 10 mA .....                      | ~ 80 V                      |
| Arc Voltage .....                        | >2 A .....                       | ~ 12 V                      |
| Glow-Arc Transition Current .....        | .....                            | < 1 A                       |
| Capacitance.....                         | 1 MHz .....                      | 1.0 pF maximum              |
| DC Holdover Voltage <sup>(3)</sup> ..... | >150 V .....                     | < 150 ms                    |
| Impulse Discharge Current.....           | 8000 A, 8/20 $\mu$ s.....        | 1 operation                 |
|                                          | 5000 A, 8/20 $\mu$ s.....        | 10 operations               |
|                                          | 100 A, 10/1000 $\mu$ s.....      | > 300 operations            |
|                                          | 10 A, 10/1000 $\mu$ s.....       | > 1500 operations           |
| Alternating Discharge Current .....      | 10 Arms, 9 cycles.....           | 1 operation min.            |
|                                          | 2.5 Arms, 1 sec, 50 Hz.....      | 10 operations               |
| Operating Temperature.....               | .....                            | -40 to +85 °C               |
| Moisture Sensitivity Level .....         | .....                            | 1                           |
| ESD Classification (HBM).....            | .....                            | N/A                         |

#### Notes:

- **UL Recognized component:** Model 2055-80 = UL File E313168; All other models = UL File E153537.
- At delivery AQL 0.65 Level II, DIN ISO 2859.
- Surface Mount (SM) parts may show a temporary increase in DCBD after the solder reflow process. Most devices will recover within 24 hours time. It should be noted that there is no quality defect nor change in protection levels during the temporary change in DCBD.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

<sup>(2)</sup> Insulation Resistance test conditions:

| DC Sparkover<br>Voltage | DC Measuring<br>Voltage |
|-------------------------|-------------------------|
| 75 - 150 V .....        | 50 V                    |
| $\geq 151$ V .....      | 100 V                   |

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

\*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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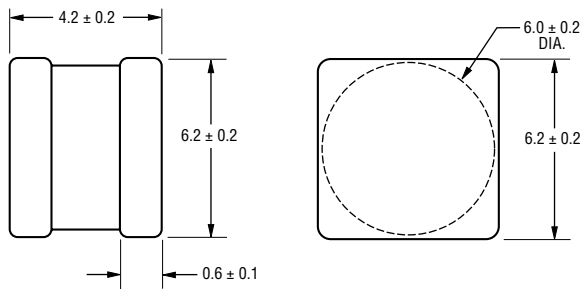


**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## 2055 Series Gas Discharge Tube Surge Protector

**BOURNS®**

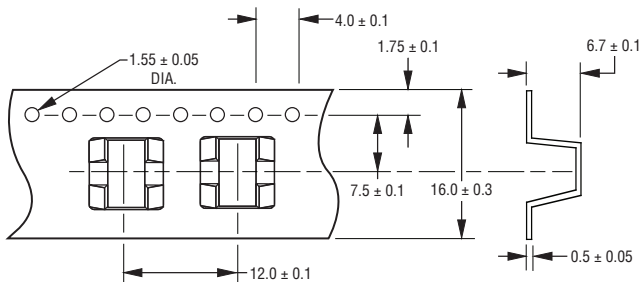
### Product Dimensions



DIMENSIONS: MILLIMETERS

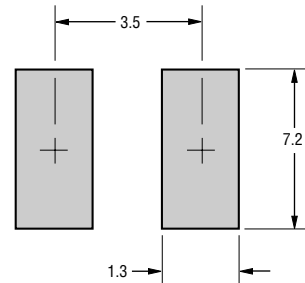
### Packaging Specifications

The Model 2055-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.



DIMENSIONS: MILLIMETERS

### Recommended Pad Layout



### How to Order

Model Number Designator **2055 - xx - SM - RP LF**

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

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

Packaging \_\_\_\_\_  
RP = Reelpack

RoHS Compliancy \_\_\_\_\_  
LF = RoHS Compliant Product

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