



Features

- Bourns® FLAT® GDT technology
- Improved impulse performance
- Flexible mounting options
- Stable breakdown throughout life
- Volume- and space-saving design
- UL Recognized
- RoHS compliant* and halogen free**

Applications

- Telecommunications
- Industrial Communications
- Surge Protective Devices
- High density PCB assemblies

2011 Series - Fast Acting GDT Surge Arrestor with FLAT® Technology

Description

Bourns sets a new industry standard by offering this fast acting 2-electrode Gas Discharge Tube (GDT) in an innovative flat package design. The Model 2011 Series with FLAT® Technology provides a volume and space-saving solution for high density and space-restricted PCB applications.

Additional Information

Click these links for more information:



Characteristics

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

| Characteristic | Model No. |
|---|--------------|
| | 2011-15 |
| Minimum / Maximum DC Sparkover (100 V/s) Throughout Service Life | 60 V / 350 V |
| Maximum Impulse Sparkover (5 kV 1.2/50 μs) Throughout Service Life | 650 V |

| | | |
|--------------------------------------|----------------------------|---------------|
| Insulation Resistance (IR) | 50 V | >10 megohms |
| Capacitance..... | 1 MHz | <2.9 pF |
| Service Life..... | 8/20 μs, 1000 A..... | 2 operations |
| | 2/10 μs, 5 kV, 500 A..... | 20 operations |
| | 600 Vrms, 1 A, 0.2 s | 5 operations |
| Operating Temperature..... | | -40 to +90 °C |
| Storage Temperature..... | | -40 to +90 °C |
| Climatic Category (IEC 60068-1)..... | | 40/90/21 |
| Moisture Sensitivity Level..... | | 1 |
| ESD Classification (HBM)..... | | N/A |

Notes:

UL Recognized component, UL File E153537

Surge polarity should be reversed between consecutive surges (++-)

At delivery AQL 0.65 Level II, DIN ISO2859

Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D

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How to Order

| | |
|--|--|
| Series Designator | 2011 - 15 - SMH - RP LF |
| 2011 = Fast Acting 2-Electrode GDT with FLAT® Technology | |
| Voltage (Divided by 10) | 15 = 150 V |
| Configuration | SMH = Horizontal Mount SMD |
| Packaging | RP = Reelpack (Standard) Blank = Cut Tape |
| RoHS Compliance | LF = RoHS Compliant Product |

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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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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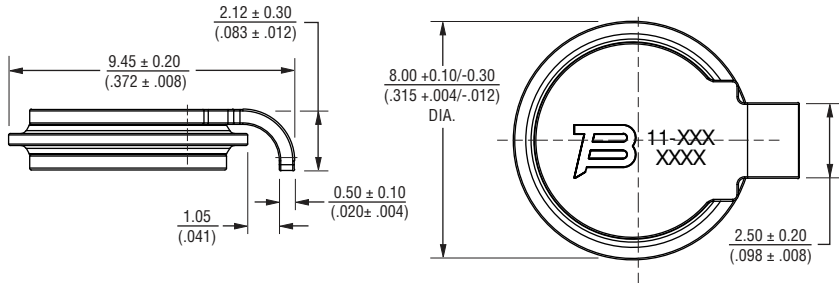
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

2011 Series - Fast-Acting GDT Surge Arrestor with FLAT® Technology



Product Dimensions

2011-15-SMH-RPLF



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

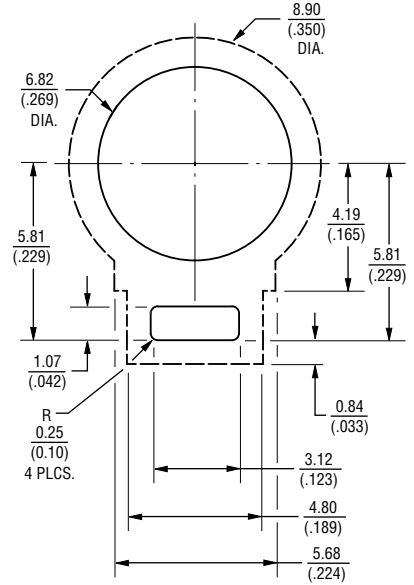
TOLERANCES: $X = \pm \frac{1.27}{(.05)}$

$.XX = \pm \frac{0.254}{(.01)}$

$.XXX = \pm \frac{0.127}{(.005)}$

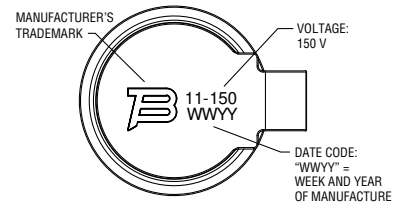
Pad Layout

2011-15-SMH-RPLF



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

Typical Part Marking



Information may be placed vertically or horizontally on the various models.

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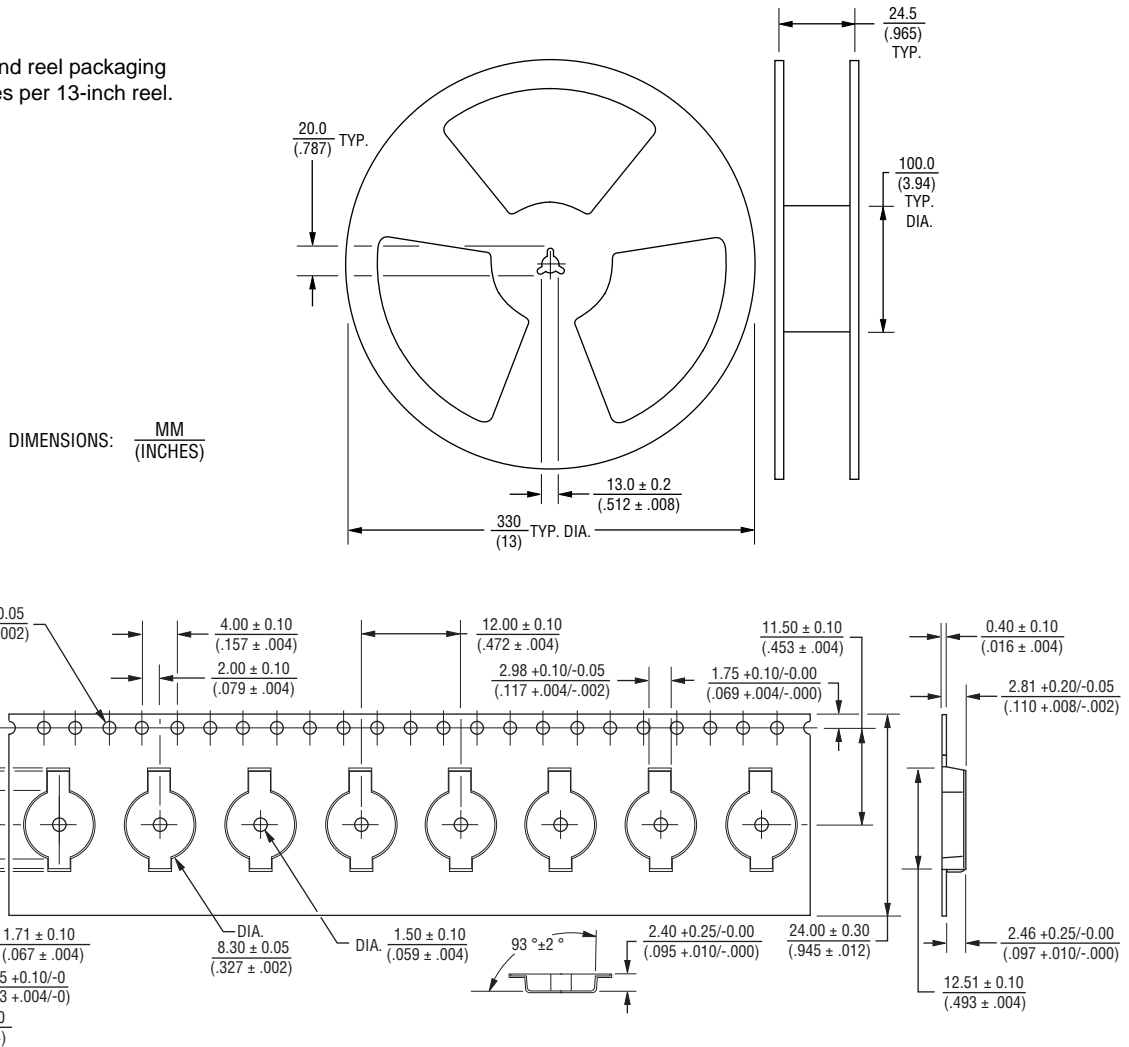
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Packaging Specification

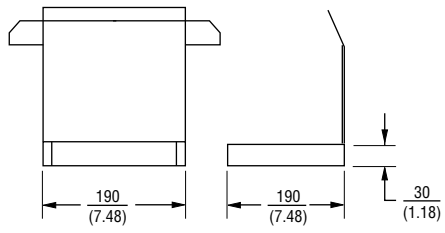
TAPE & REEL

The standard tape and reel packaging contains 2,000 pieces per 13-inch reel.



CUT TAPE

Cut tape contains 500 pieces within a carton box.



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

REV. B – 12/18

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