



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.

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 μ s) Throughout Service Life	650 V

Insulation Resistance (IR)	50 V	>10 megohms
Capacitance.....	1 MHz	<2.9 pF
Service Life.....	8/20 μ s, 1000 A.....	2 operations
	2/10 μ s, 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

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 Compliancy _____	
LF = RoHS Compliant Product	

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

* 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.

"FLAT" is a registered trademark of Bourns, Inc. in the U.S. and other countries.

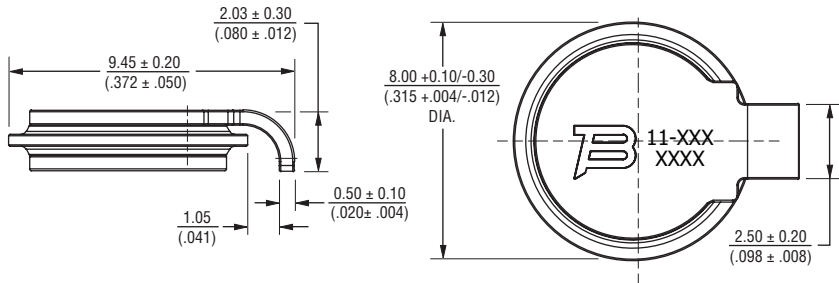
Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Product Dimensions

2011-15-SMH-RPLF



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

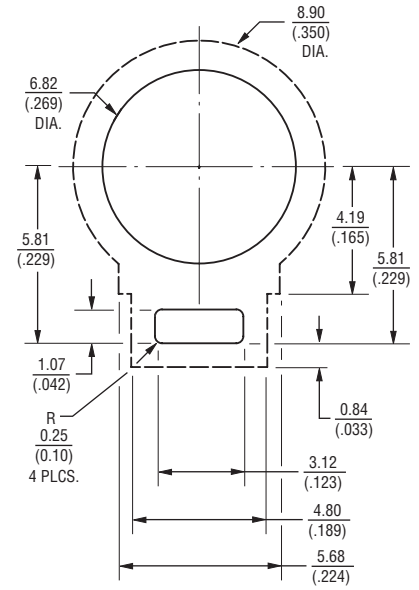
TOLERANCES: $X = \pm \frac{1.27}{(.05)}$

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

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

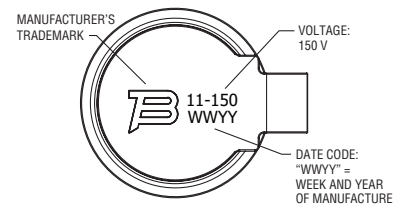
Pad Layout

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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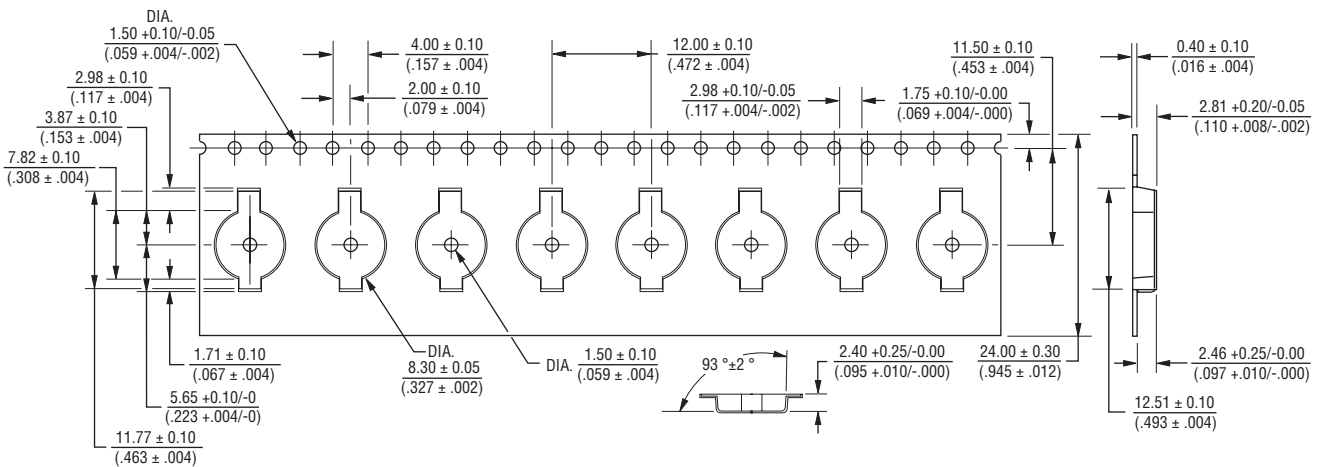
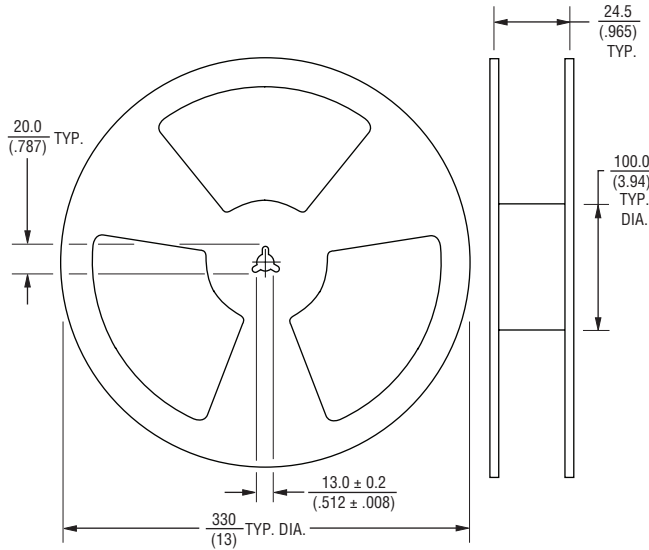
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Packaging Specification

TAPE & REEL

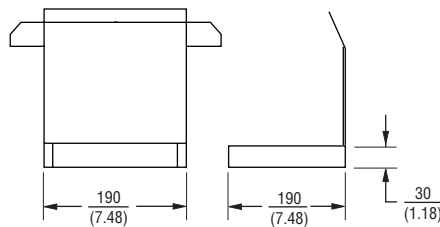
The standard tape and reel packaging contains 2,000 pieces per 13-inch reel.

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



CUT TAPE

Cut tape contains 500 pieces within a carton box.



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

REV. A – 12/18

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