

Features

- Bourns® FLAT® GDT technology
- Flexible mounting options
- Volume and space-saving design
- Improved impulse performance
- 25 kA 8/20 µs rated
- UL Recognized
- RoHS compliant* and halogen free**

Applications

- Telecom CPE
- Industrial Communications
- Surge Protective Devices
- High density PCB assemblies

2019 Series - Gas Discharge Tube Surge Arrestor with FLAT® Technology

Description

Bourns sets a new industry standard by offering a high current rated 2-electrode GDT in an innovative flat-package design. The Model 2019 Series with FLAT® Technology is an ITU K.12 Class IV GDT device rated at 25 kA maximum on an 8/20 µs waveform, providing a volume and space-saving solution for high density and space-restricted PCB applications. This surface mount device is available in a horizontal mounting configuration.

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Characteristics

Test Methods per ITU-T (CCITT) K.12 Class 3 and IEC 61643-311

Characteristic	Model No.		
	2019-09	2019-15	2019-23
DC Sparkover ±20 % @ 100 V/s (1)	90 V	150 V	230 V
DC Sparkover End-of-Life Values (2)			
Maximum (99 % of values)	<120 V	<195 V	<300 V
Minimum (99 % of values)	>65 V	>110 V	>170 V
Impulse Sparkover Voltage (3)			
100 V/µs Typical /			
For 99 % of Values	350 / <450 V	400 / <550 V	450 / <600 V
1 kV/µs Typical /			
For 99 % of Values	600 / <800 V	600 / <850 V	700 / <950 V

Insulation Resistance (IR)	100 V (50 V for Model 2019-09)		>1 GΩ
Glow Voltage	10 mA		~70 V
Arc Voltage	>1 A		~10 V
Capacitance	1 MHz		<4 pF
Impulse Discharge Current	25 kA, 8/20 µs		1 operation (4)
	20 kA, 8/20 µs		10 operations
	5000 A, 10/350 µs		1 operation (4)
	100 A, 10/1000 µs		300 operations
	10 A, 10/1000 µs		1500 operations (4)
Alternating Discharge Current	20 Arms, 1 s		10 operations
Operating Temperature			-55 to +85 °C
Storage Temperature			-55 to +105 °C
Climatic Category (IEC 60068-1)			55/105/21
Moisture Sensitivity Level			1
ESD Classification (HBM)			N/A

Notes:

UL Recognized component, UL File E153537

(1) In ionized mode.

(2) IR after life >10^8 Ω.

(3) At delivery AQL 0.65 Level II, DIN ISO 2859.

(4) DC Sparkover may exceed ±20 % after discharge, but will continue to protect without venting.

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.

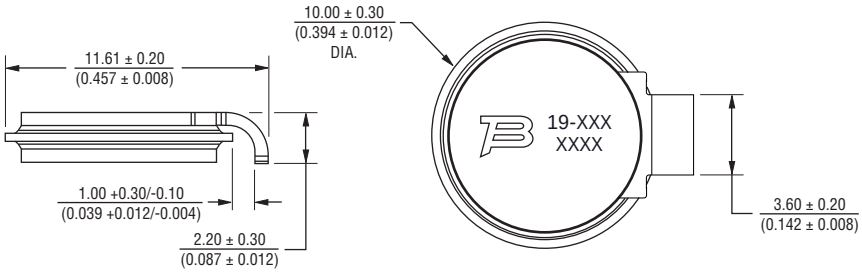
Users should verify actual device performance in their specific applications.

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Product Dimensions

2019-xx-SMH-RPLF



DIMENSIONS: MM / (INCHES)

How to Order

2019 - xx - SMH - RP LF

Series Designator
- 2019 = 2-electrode GDT with FLAT® Technology, 20 kA 8/20 μs rated

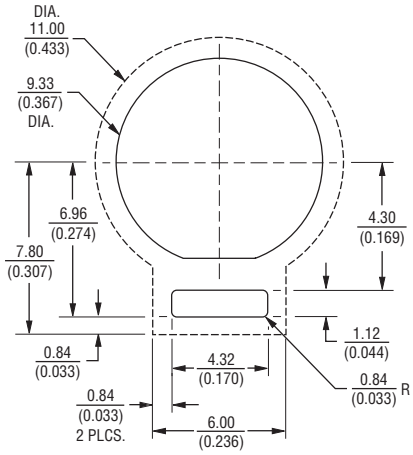
Voltage (Divided by 10)
- 09 = 90 V
- 15 = 150 V
- 23 = 230 V

Configuration
- SMH = Horizontal Mount SMD

Packaging
- RP = Reelpack (Standard)
- Blank = Cut Tape

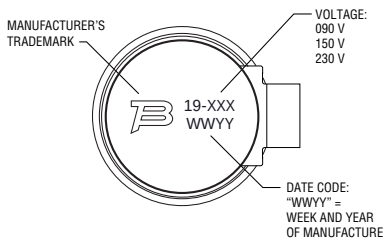
RoHS Compliancy
- LF = RoHS Compliant Product

Pad Layout



DIMENSIONS: MM / (INCHES)

Typical Part Marking



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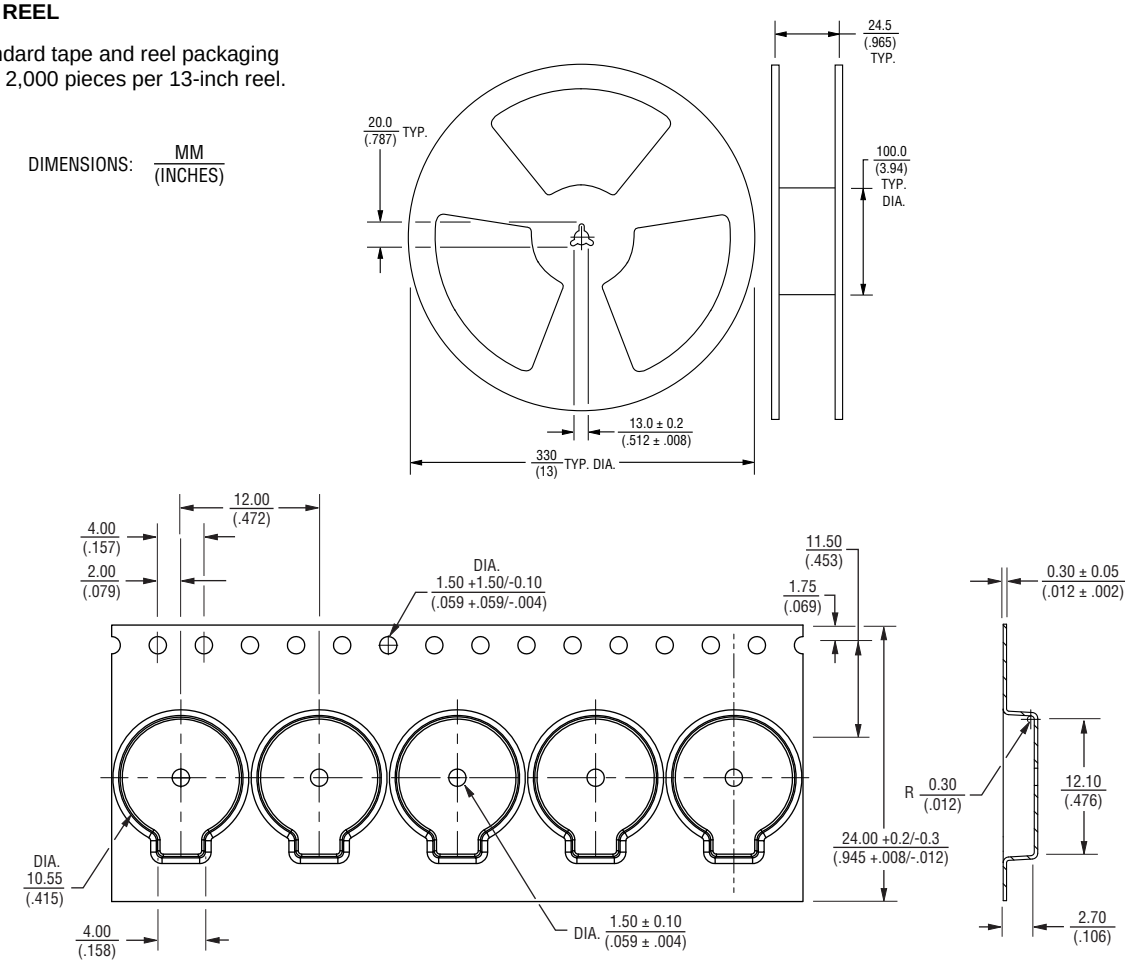
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Packaging Specification

TAPE & REEL

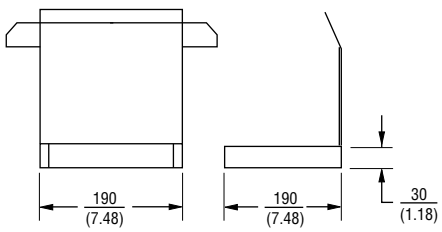
The standard tape and reel packaging contains 2,000 pieces per 13-inch reel.

DIMENSIONS: MM / (INCHES)



CUT TAPE

Cut tape contains 500 pieces within a carton box.



DIMENSIONS: MM / (INCHES)

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