




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.

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) DC Sparkover End-of-Life Values (2) | 90 V | 150 V | 230 V |
| 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 >10⁸ 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.

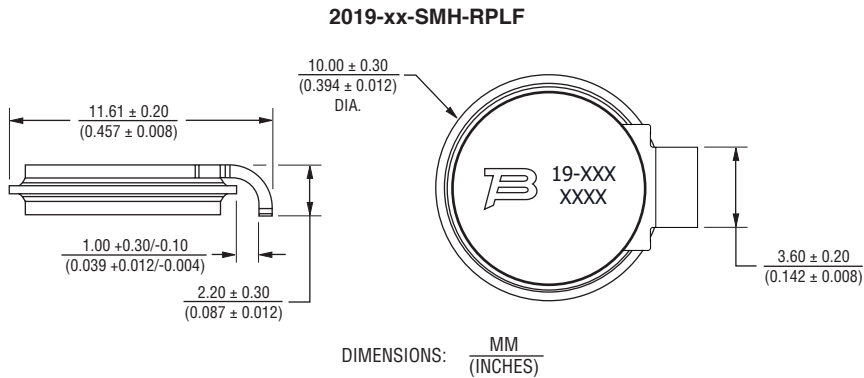
Users should verify actual device performance in their specific applications.

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2019 Series Gas Discharge Tube Surge Arrestor with FLAT® Technology



Product Dimensions



How to Order

2019 - xx - SMH - RP LF

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

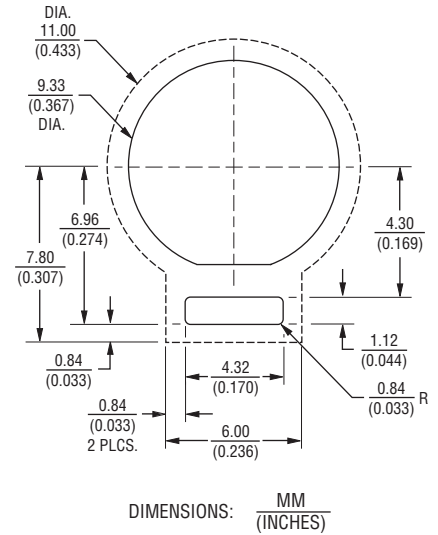
Voltage (Divided by 10) _____
 09 = 90 V
 15 = 150 V
 23 = 230 V

Configuration _____
 SMH = Horizontal Mount SMD

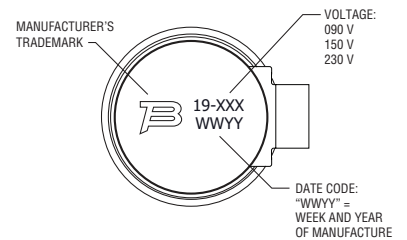
Packaging _____
 RP = Reelpack (Standard)
 Blank = Bulk Pack

RoHS Compliancy _____
 LF = RoHS Compliant Product

Pad Layout



Typical Part Marking



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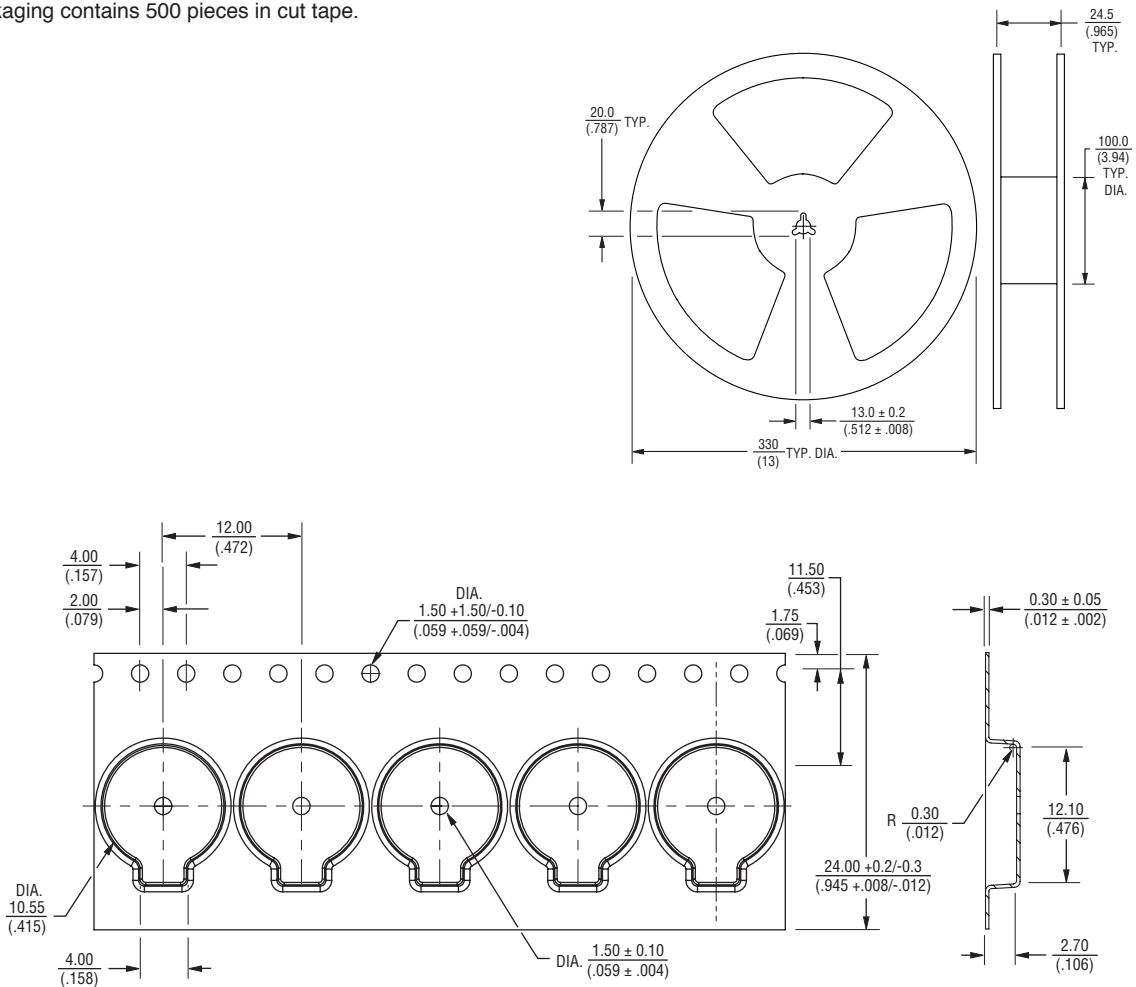
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Packaging Specification

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

Bulk packaging contains 500 pieces in cut tape.



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

REV. A – 09/18

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