



Features

- Bourns® FLAT® GDT technology
- Flexible mounting options
- Volume and space-saving design
- Improved impulse performance
- 25 kA 8/20 μ s 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 μ s 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.

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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 $\pm 20\%$ @ 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/ μ s Typical /			
For 99 % of Values	350 / <450 V	400 / <550 V	450 / <600 V
1 kV/ μ s 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 G Ω
Glow Voltage	10 mA	~70 V
Arc Voltage	>1 A	~10 V
Capacitance	1 MHz	<4 pF
Impulse Discharge Current	25 kA, 8/20 μ s	1 operation (4)
	20 kA, 8/20 μ s	10 operations
	5000 A, 10/350 μ s	1 operation (4)
	100 A, 10/1000 μ s	300 operations
	10 A, 10/1000 μ s	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 $>10^8 \Omega$.

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

(4) DC Sparkover may exceed $\pm 20\%$ 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.

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Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

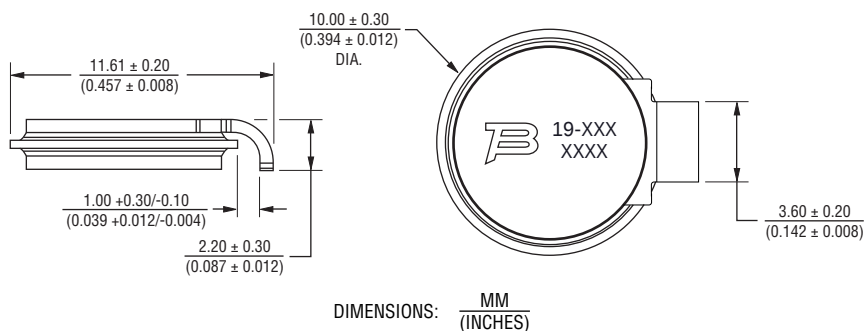
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2019 Series - Gas Discharge Tube Surge Arrestor with FLAT® Technology

BOURNS®

Product Dimensions

2019-xx-SMH-RPLF



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

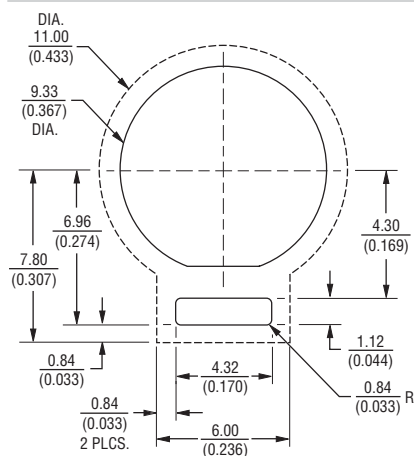
Packaging _____

RP = Reelpack (Standard)
 Blank = Cut Tape

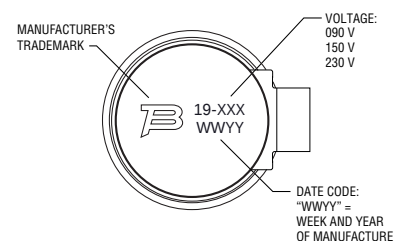
RoHS Compliancy _____

LF = RoHS Compliant Product

Pad Layout



Typical Part Marking



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