



## Features

- Bourns® FLAT® GDT technology
- Flexible mounting options
- Volume- and space-saving design
- Improved impulse performance
- 10 kA 8/20  $\mu$ s rated
- Recognized per UL 497B (File: E153537)

- RoHS compliant\*

## Applications

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

## 2017 Series Gas Discharge Tube Surge Arrestor with FLAT® Technology

### Description

Bourns sets a new industry standard by offering this 2-electrode Gas Discharge Tube (GDT) in an innovative flat package design. The Model 2017 Series with FLAT® Technology provides a volume and space-saving solution for high density and space-restricted PCB applications. Surface mount versions are available in vertical and horizontal mounting configurations.

### Characteristics

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

Characteristic	Model No.					
	2017-09	2017-15	2017-23	2017-35	2017-42	2017-50
DC Sparkover $\pm 20\%$ @ 100 V/s (1)	90 V	150 V	230 V	350 V	420 V	500 V
DC Sparkover End-of-Life Values (2)						
Maximum (99 % of values)	<120 V	<195 V	<300 V	<455 V	<550 V	<650 V
Minimum (99 % of values)	>65 V	>110 V	>170 V	>260 V	>360 V	>400 V
Impulse Sparkover Voltage (3)						
100 V/ $\mu$ s Typical / For 99 % of Values	350 / <450 V	400 / <550 V	450 / <600 V	600 / <750 V	700 / <850 V	750 / <950 V
1 kV/ $\mu$ s Typical / For 99 % of Values	600 / <800 V	600 / <850 V	700 / <950 V	800 / <1000 V	900 / <1050 V	950 / <1200 V

Insulation Resistance (IR) .....	100 V (50 V for Model 2017-09) .....	>1 G $\Omega$
Glow Voltage .....	10 mA .....	~70 V
Arc Voltage .....	>1 A .....	~10 V
Capacitance .....	1 MHz .....	<3 pF
Impulse Discharge Current .....	12000 A, 8/20 $\mu$ s .....	1 operation
	10000 A, 8/20 $\mu$ s .....	10 operations
	2500 A, 10/350 $\mu$ s .....	1 operation
	100 A, 10/1000 $\mu$ s .....	300 operations
	10 A, 10/1000 $\mu$ s .....	1500 operations
Alternating Discharge Current .....	10 Arms, 1 s .....	10 operations
Operating Temperature .....		-55 to +105 °C
Storage Temperature .....		-55 to +105 °C
Climatic Category (IEC 60068-1) .....		55/105/21
Pushover Strength (4) .....		5 kg
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) Pushover Strength test performed on a board-mounted Model 2017-xx-SMC (Vertical Mount).



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
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### How to Order

**2017 - xx - xxx - RP LF**

Series Designator \_\_\_\_\_  
 2017 = 2-electrode GDT with FLAT® Technology, 10 kA 8/20  $\mu$ s rated

Voltage (Divided by 10) \_\_\_\_\_  
 09 = 90 V    23 = 230 V    42 = 420 V  
 15 = 150 V    35 = 350 V    50 = 500 V

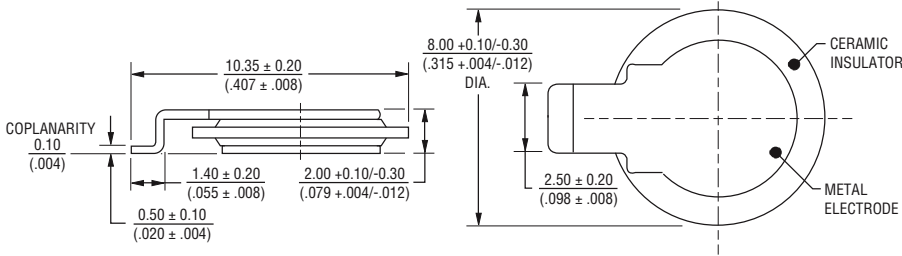
Configuration \_\_\_\_\_  
 SMH = Horizontal Mount SMD  
 SMC = Vertical Mount SMD

Packaging \_\_\_\_\_  
 RP = Reelpack (Standard)

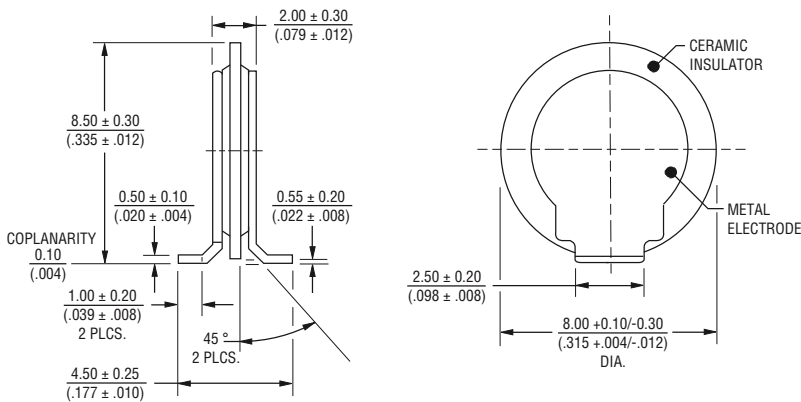
RoHS Compliancy \_\_\_\_\_  
 LF = RoHS Compliant Product

**Product Dimensions**

**2017-xx--SMH-RPLF**

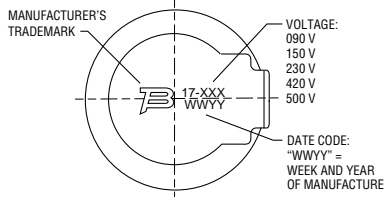


**2017-xx-SMC-RPLF**



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

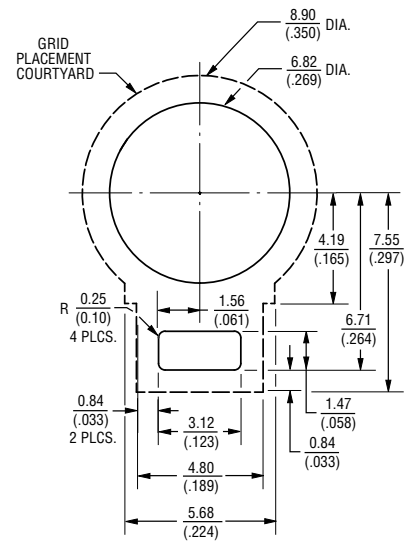
**Typical Part Marking**



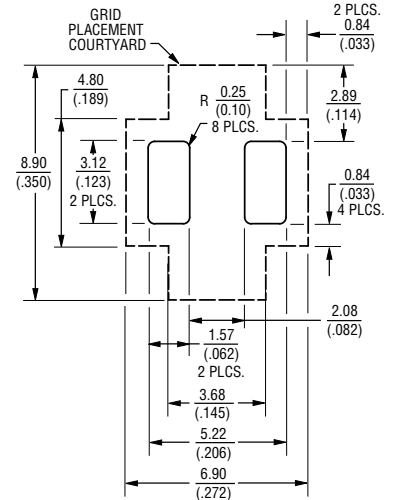
Information may be placed vertically or horizontally on the various models.

**Pad Layouts**

**2017-xx--SMH-RPLF**



**2017-xx-SMC-RPLF**



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

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# 2017 Series Gas Discharge Tube Surge Arrestor with FLAT® Technology



## Packaging Specifications

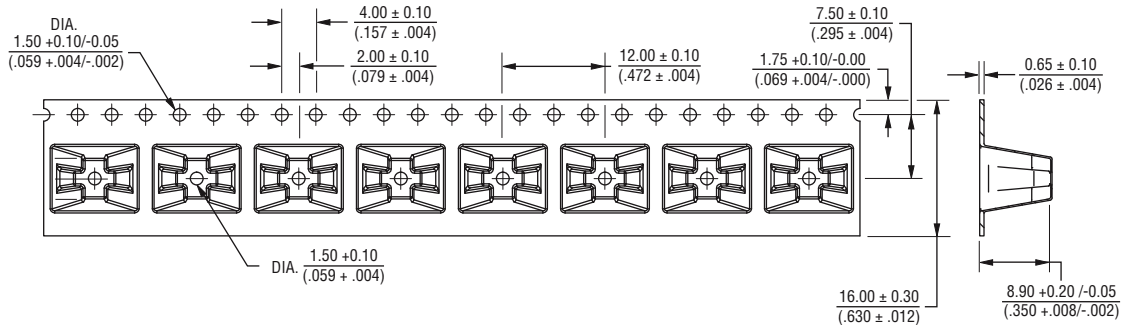
Model 2017-xx-SMC-RPLF: The standard tape and reel packaging contains 500 pieces per 13-inch reel.

Model 2017-xx-SMH-RPLF: The standard tape and reel packaging contains 2,000 pieces per 13-inch reel.

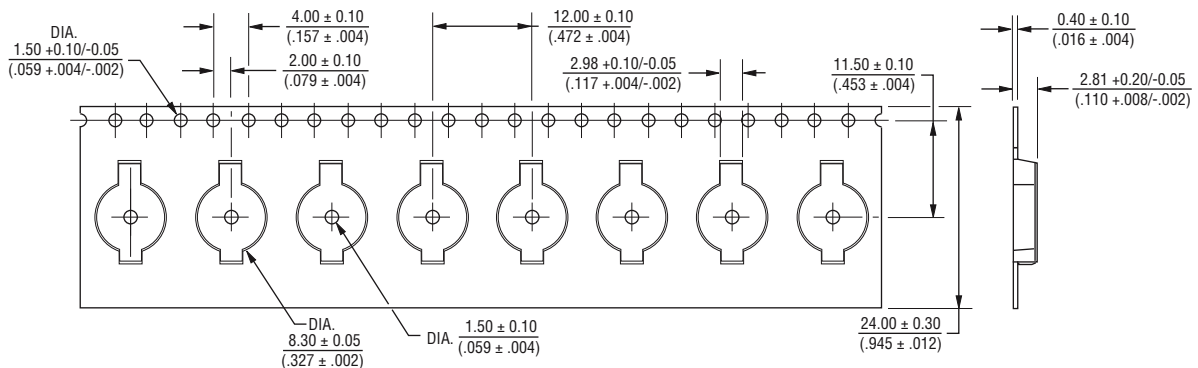
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



### 2017-xx-SMC-RPLF



### 2017-xx-SMH-RPLF



REV. A 09/19

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