




Features

- Bourns® FLAT® GDT technology
- Flexible mounting options
- Volume- and space-saving design
- Improved impulse performance
- 10 kA 8/20 μ s rated
-  UL Recognized
- 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. The series is offered in a leadless version for cartridge or clamp fit 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/ μ 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/ μ 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 Ω
Glow Voltage	10 mA	~70 V
Arc Voltage	>1 A	~10 V
Capacitance	1 MHz	<2.5 pF
Impulse Discharge Current	12000 A, 8/20 μ s	1 operation
	10000 A, 8/20 μ s	>10 operations
	2500 A, 10/350 μ s	1 operation
	100 A, 10/1000 μ s	>300 operations
	10 A, 10/1000 μ 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

Notes:

UL Recognized component, UL File E153537

(1) In ionized mode. (3) At delivery AQL 0.65 Level II, DIN ISO 2859.

(2) IR after life >10⁸ Ω . (4) Pushover Strength test performed on a board-mounted Model 2017-xx-SMC (Vertical Mount).

How to Order

2017 - xx - xxx - RP LF

Series Designator _____
 2017 = 2-electrode GDT with FLAT® Technology, 10 kA 8/20 μ 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 _____
 A = No Leads, (Clamp-Cartridge)
 SMH = Horizontal Mount SMD
 SMC = Vertical Mount SMD

Packaging _____
 RP = Reelpack (Standard)

RoHS Compliance _____
 LF = RoHS Compliant Product

BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

www.bourns.com

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

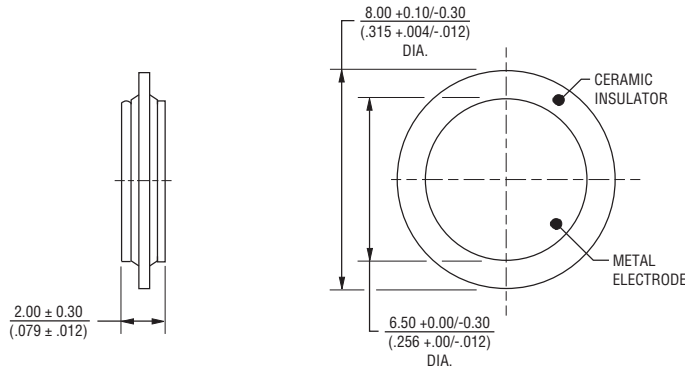
"FLAT" is a registered trademark of Bourns, Inc. in the U.S. and other countries. Specifications are subject to change without notice. The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

2017 Series Gas Discharge Tube Surge Arrestor with FLAT® Technology

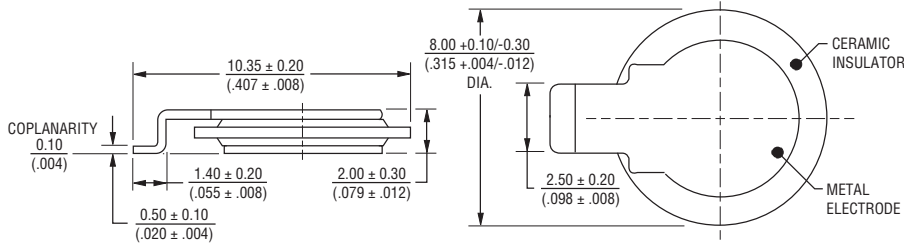
BOURNS®

Product Dimensions

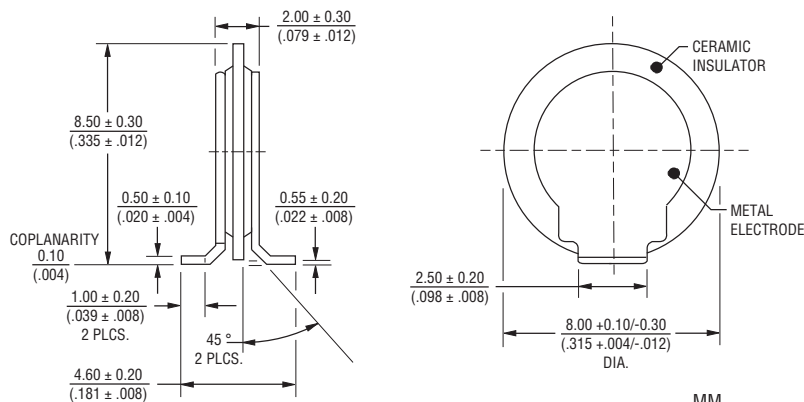
2017-xx-A-RPLF



2017-xx--SMH-RPLF



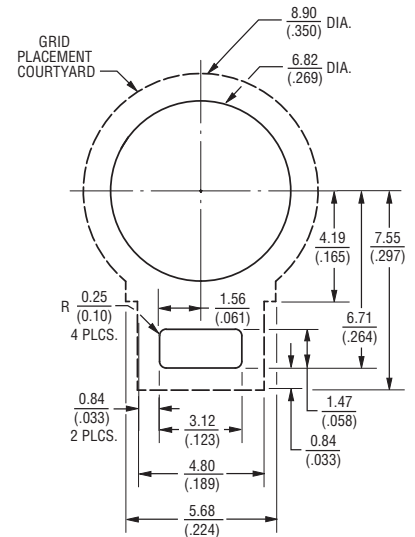
2017-xx-SMC-RPLF



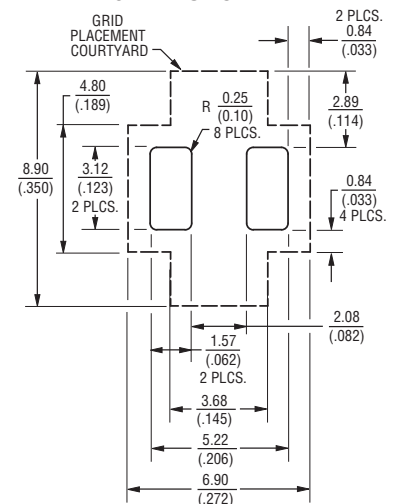
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Pad Layouts

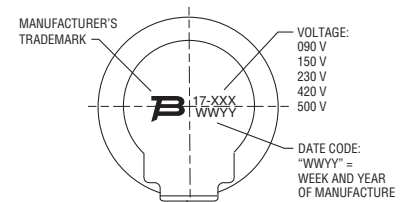
2017-xx--SMH-RPLF



2017-xx-SMC-RPLF



Typical Part Marking



Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

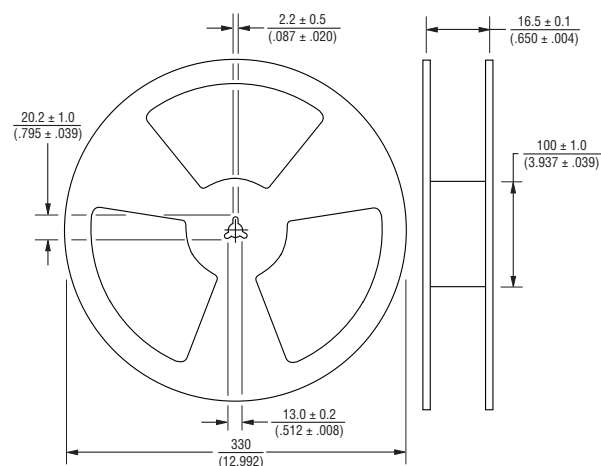
Information may be placed vertically or horizontally on the various models.

BOURNS®

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

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

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



Technical drawing of the 77-XX-SMC-RFL antenna assembly. The drawing includes a top view, a side view, and a detail view of the antenna element.

Top View Dimensions:

- Overall width: 12.00 ± 0.10 ($.472 \pm .004$)
- Overall height: $8.90 \pm 0.20 / -0.05$ ($.350 \pm .008 / -.002$)
- Distance from centerline to mounting holes: 4.38 ± 0.15 ($.173 \pm .006$)
- Distance between mounting holes: 10.99 ± 0.20 ($.433 \pm .008$)
- Distance from centerline to mounting holes (alternative): 5.33 ± 0.10 ($.210 \pm .004$)
- Distance from centerline to mounting holes (alternative): 2.79 ± 0.20 ($.110 \pm .008$)
- Distance from centerline to mounting holes (alternative): 1.79 ± 0.20 ($.070 \pm .008$)
- Distance from centerline to mounting holes (alternative): 1.50 ± 0.10 ($.059 \pm .004$)
- Distance from centerline to mounting holes (alternative): $1.75 \pm 0.10 / -0.00$ ($.069 \pm .004 / -.000$)
- Distance from centerline to mounting holes (alternative): 7.50 ± 0.10 ($.295 \pm .004$)
- Distance from centerline to mounting holes (alternative): 0.65 ± 0.10 ($.026 \pm .004$)

Side View Dimensions:

- Overall height: 8.77 ± 0.15 ($.345 \pm .006$)
- Distance from centerline to mounting holes: 5.28 ± 0.20 ($.208 \pm .008$)
- Distance from centerline to mounting holes: $9.05 \pm 0.20 / -0.05$ ($.356 \pm .008 / -.002$)
- Distance from centerline to mounting holes: 3.30 ± 0.20 ($.130 \pm .008$)
- Distance from centerline to mounting holes: $8.90 \pm 0.20 / -0.05$ ($.350 \pm .008 / -.002$)

Detail View Dimensions:

- Overall width: 10.99 ± 0.20 ($.433 \pm .008$)
- Overall height: $8.90 \pm 0.20 / -0.05$ ($.350 \pm .008 / -.002$)
- Distance from centerline to mounting holes: 5.33 ± 0.10 ($.210 \pm .004$)
- Distance from centerline to mounting holes: 2.79 ± 0.20 ($.110 \pm .008$)
- Distance from centerline to mounting holes: 1.79 ± 0.20 ($.070 \pm .008$)
- Distance from centerline to mounting holes: 1.50 ± 0.10 ($.059 \pm .004$)
- Distance from centerline to mounting holes: $1.75 \pm 0.10 / -0.00$ ($.069 \pm .004 / -.000$)
- Distance from centerline to mounting holes: 7.50 ± 0.10 ($.295 \pm .004$)
- Distance from centerline to mounting holes: 0.65 ± 0.10 ($.026 \pm .004$)

Other Dimensions:

- Distance from centerline to mounting holes: 4.38 ± 0.15 ($.173 \pm .006$)
- Distance from centerline to mounting holes: 5.28 ± 0.20 ($.208 \pm .008$)
- Distance from centerline to mounting holes: $9.05 \pm 0.20 / -0.05$ ($.356 \pm .008 / -.002$)
- Distance from centerline to mounting holes: 3.30 ± 0.20 ($.130 \pm .008$)
- Distance from centerline to mounting holes: $8.90 \pm 0.20 / -0.05$ ($.350 \pm .008 / -.002$)

Technical drawing of a 10-hole 1/2 inch NPT x 1/2 inch NPT 150 lb. flange. The drawing includes dimensions for hole diameter (DIA. 1.50 ± 0.10 / (.059 ± .004)), hole spacing (12.00 ± 0.10 / (.472 ± .004)), and overall dimensions (11.03 ± 0.10 / (.434 ± .004), 10.38 ± 0.10 / (.409 ± .004), 8.05 ± 0.10 / (.317 ± .004), 2.98 ± 0.10 / (.117 ± .004), 2.00 ± 0.10 / (.079 ± .004), 4.00 ± 0.10 / (.157 ± .004), 2.85 ± 0.10 / (.112 ± .004), 1.75 ± 0.10 / (.069 ± .004), 8.50 ± 0.10 / (.335 ± .004), 16.00 ± 0.30 / (.630 ± .012), 2.40 ± 0.25 / (.095 ± .010), 0.40 ± 0.10 / (.016 ± .004), 2.55 ± 0.20 / (.100 ± .008), 2.40 ± 0.25 / (.095 ± .010)). The side view shows a 93 ± 2 degree angle and a 2.40 ± 0.25 / (.095 ± .010) dimension.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.