




Features

- Bourns® FLAT® GDT technology
- Flexible mounting options
- Low profile, space-saving design
- 10x 20 kA 8/20 μ s rating
-  UL Recognized
- RoHS compliant*

Applications

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

2018 Series - Gas Discharge Tube Surge Arrestor with FLAT® Technology

Description

Bourns sets a new industry standard by offering this 3-electrode Gas Discharge Tube (GDT) in an innovative flat package design. The Model 2018 Series with FLAT® Technology provides a low profile, space-saving solution for space-restricted PCB applications.

Additional Information

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Characteristics

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

Characteristic	Model No.					
	2018-09	2018-15	2018-23	2018-35	2018-42	2018-50
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	>315 V	>375 V
Impulse Sparkover Voltage ⁽³⁾						
100 V/ μ s Typical / For 99 % of Values	350 / <600 V	400 / <750 V	450 / <900 V	600 / <1050 V	700 / <1150 V	800 / <1250 V
1 kV/ μ s Typical / For 99 % of Values	650 / <850 V	650 / <900 V	600 / <1000 V	800 / <1250 V	900 / <1400 V	1000 / <1600 V

Insulation Resistance (IR)	100 V (50 V for Model 2018-09)	> G Ω 1
Glow Voltage	10 mA	~70 V
Arc Voltage	>1 A	~10 V
Capacitance	1 MHz	<2.5 pF
Impulse Discharge Current ⁽⁴⁾	24,000 A, 8/20 μ s ⁽⁵⁾	1 operation
	20,000 A, 8/20 μ s	> 10 operations
	5,000 A, 10/350 μ s	1 operation
	200 A, 10/1000 μ s	>300 operations
	20 A, 10/1000 μ s	>1500 operations
Alternating Discharge Current	10 Arms, 1 s	>10 operations
Operating/Storage Temperature		-55 to +105 °C
Climatic Category (IEC 60068-1)		55/105/21
Moisture Sensitivity Level		1
ESD Classification		3B (>8000 V)

Notes:

- **UL Recognized component, UL File E153537**
- DC Breakdown and Impulse Sparkover voltage are specified line to ground. Line to Line values are typically 1.8 to 2 times the stated line to ground values.
- (1) In ionized mode. (4) Total current rating through center electrode; half value each line to center electrode.
- (2) IR after life >10⁸ Ω . (5) DC Sparkover may exceed $\pm 25\%$ after discharge, but will continue to protect without venting.
- (3) At delivery AQL 0.65 Level II, DIN ISO 2859.

How to Order

2018 - xx - SMH - RP LF

Series Designator _____
 2018 = 3-electrode GDT with FLAT® Technology, 20 kA 8/20 μ s rated

Voltage _____
 09 = 90 V 23 = 230 V 42 = 420 V
 15 = 150 V 35 = 350 V 50 = 500 V

Configuration _____
 SMH = Horizontal Mount SMD

Packaging _____
 RP = Reelpack (Standard)

RoHS Compliancy _____
 LF = RoHS Compliant Product



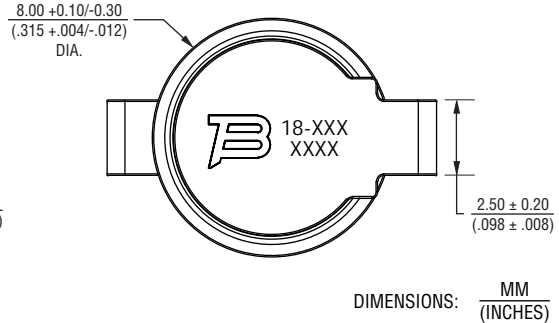
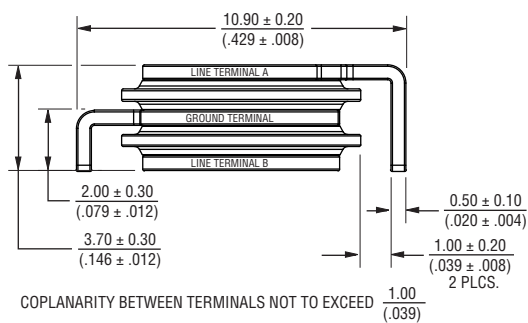
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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 Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

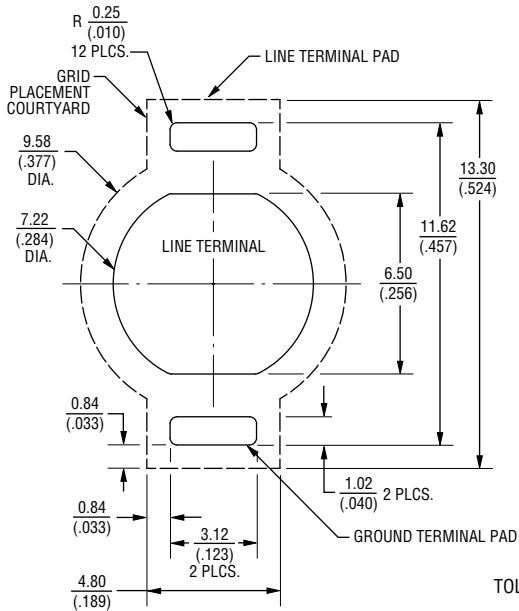
2018 Series - Gas Discharge Tube Surge Arrestor with FLAT® Technology



Product Dimensions



Pad Layout



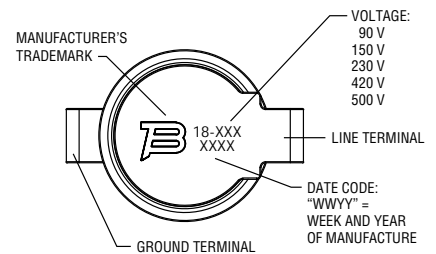
TOLERANCE: $\frac{\pm 0.05}{(\pm .002)}$

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



**Do Not Reverse
Line and Ground
Terminals**

Typical Part Marking and Pin-Out



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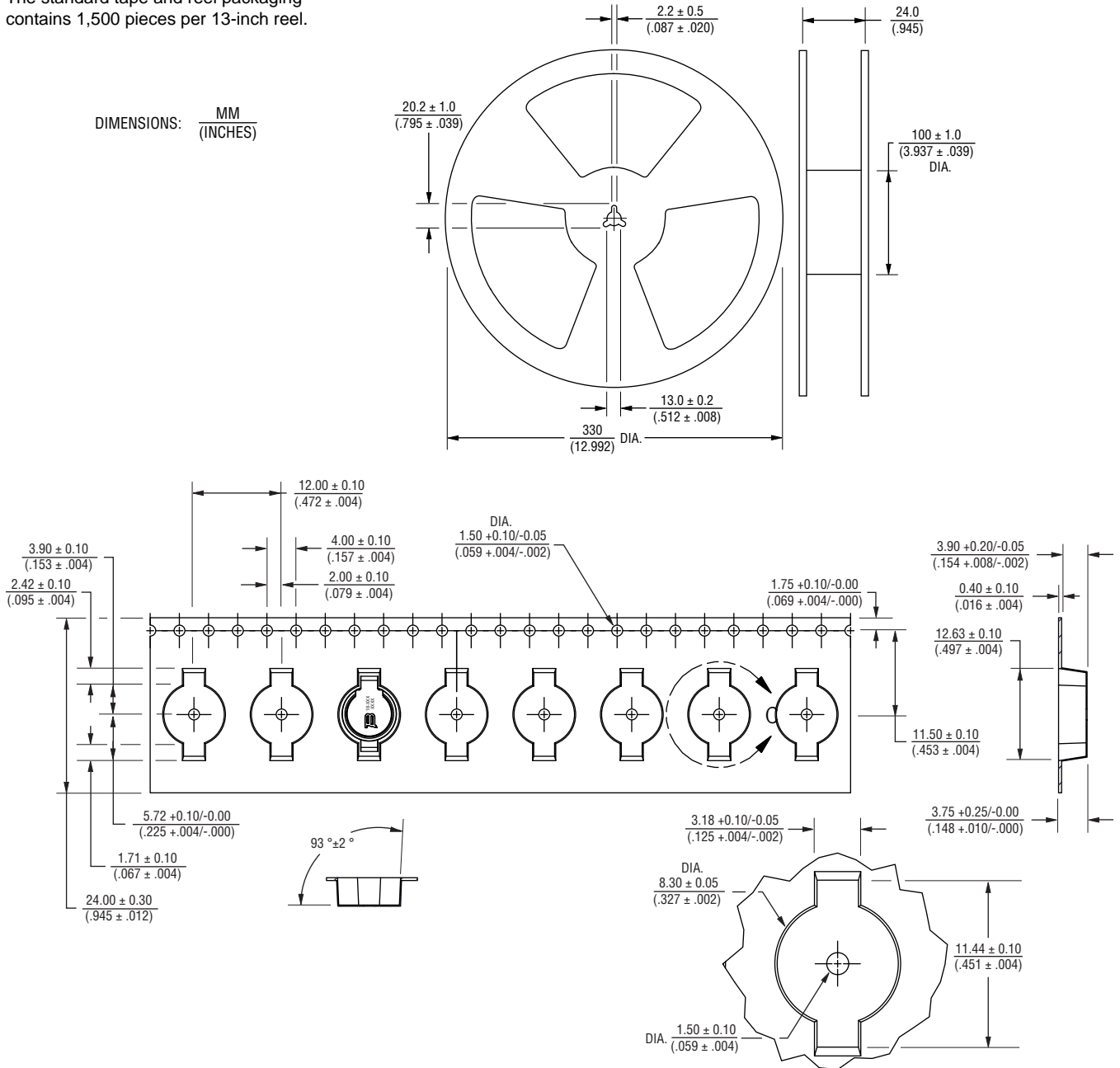
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Packaging Specifications

The standard tape and reel packaging contains 1,500 pieces per 13-inch reel.

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



REV. 09/19

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