



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

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.

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)	>1 G Ω
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 >10⁶ 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

Series Designator 2018 - xx - SMH - RP LF

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



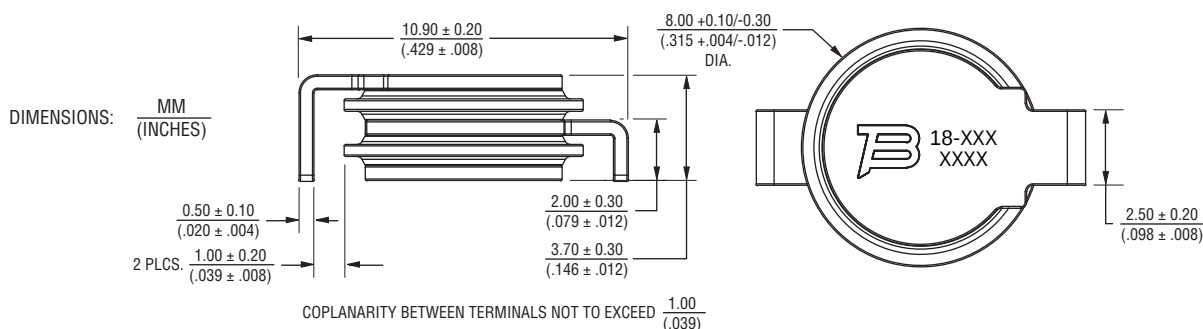
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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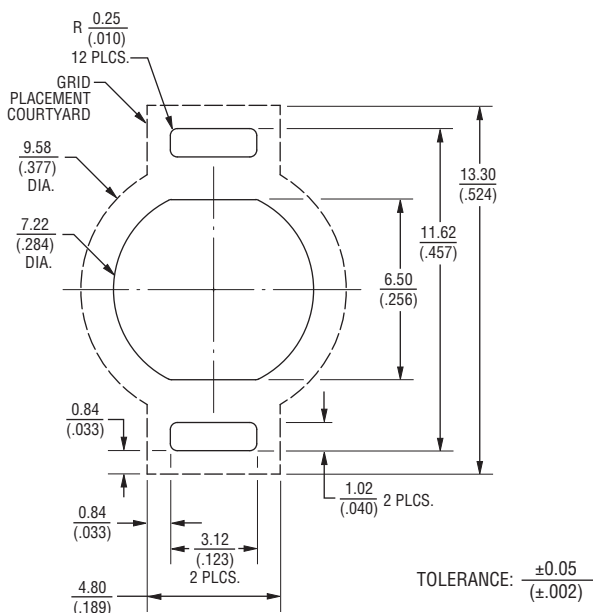
2018 Series Gas Discharge Tube Surge Arrestor with FLAT® Technology

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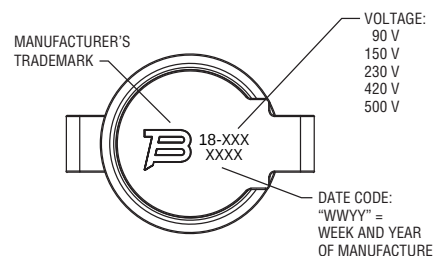
Product Dimensions



Pad Layout



Typical Part Marking



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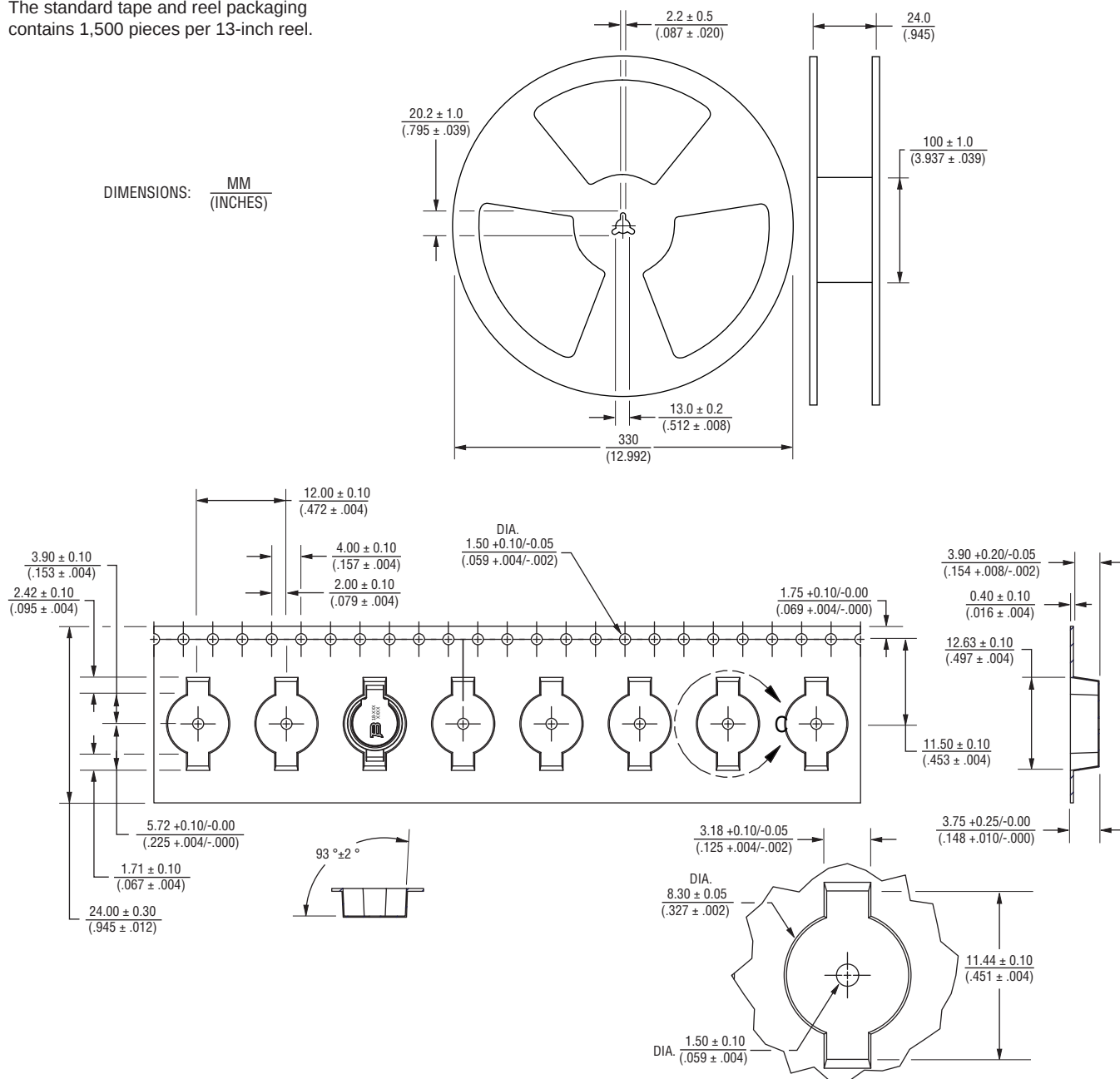
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2018 Series Gas Discharge Tube Surge Arrestor with FLAT® Technology

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Packaging Specifications

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



REV. 09/19

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