

Features

- Fast acting
- Small size
- Stable breakdown throughout life
- Designed to operate with TBU® devices
- RoHS compliant* versions available
- UL Recognized

Additional Information

Click these links for more information:

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2031-xxT-SM Series - Miniature 2-Pole Gas Discharge Tube

Characteristics

Test Methods per ITU-T K.12, IEEE C62.31 and IEC 61643-311 GDT standards.

Characteristic	Model No.		
	2031-15T	2031-23T	2031-42T
Initial DC Sparkover (100 V/s) Typical	150 V	230 V	420 V
Minimum DC Sparkover (100 V/s) Throughout Service Life	60 V	185 V	360 V
Maximum Impulse Sparkover (1) (5k V 1.2/50 µs) Throughout Service Life	500 V	650 V	850 V

(1) Impulse Sparkover voltage is defined as typical values of distribution.

Insulation Resistance (IR) ..... 50 / 100 V ..... > 10^9 Ω
Glow Voltage ..... 10 mA ..... ~ 70 V
Arc Voltage ..... >1 A ..... ~ 10 V
Glow-Arc Transition Current ..... < 0.5 A
Capacitance ..... 1 MHz ..... < 1 pF
DC Holdover Voltage (Network Applied per ITU-T K.12)
- 2031-15T ..... 52 V ..... < 150 ms
- 2031-23T ..... 80 V ..... < 150 ms
- 2031-42T ..... 135 V ..... < 150 ms

Service Life ..... 8/20 µs, 1 kA ..... 2 operations
10/1000 µs, 1 kV, 100 A ..... 50 operations
2/10 µs, 5 kV, 500 A ..... 20 operations
10/700 µs, 6 kV, 150 A ..... 10 operations
8/20 µs 250 A, 1.2/50 µs, 500 V (IEC 61643-21) ..... 150 operations
600 V rms, 1 A, 0.2 s ..... 5 operations

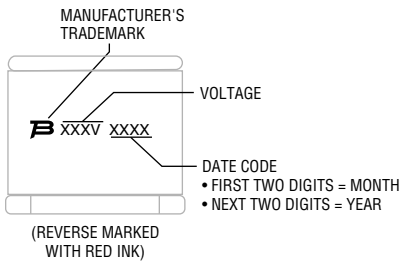
Operating and Storage Temperature, Climatic Category (IEC 60068-1) 40 / 90 / 21 ..... -40 °C to +90 °C
Moisture Sensitivity Level 1
ESD Classification (HBM) ..... N/A

Notes:
- **UL Recognized component, UL File E153537.**
- Surge polarity should be reversed between consecutive surges (+-+-).
- At delivery AQL 0.65 Level II, DIN ISO 2859.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

Applications

Port Protection	GDT Device P/N	TBU® Device P/N
CanBus	2031-23T-SM-RPLF	TBU-CA065-100-WH
RS232	2031-23T-SM-RPLF	TBU-CA065-200-WH
RS422	2031-23T-SM-RPLF	TBU-CA065-200-WH
RS485	2031-23T-SM-RPLF	TBU-CA065-200-WH
RS485	2031-42T-SM-RPLF	TBU-CA085-200-WH
SDI	2031-23T-SM-RPLF	TBU-CA065-100-WH
VDSL	2031-15T-SM-RPLF	TBU-CA050-500-WH

Typical Part Marking



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

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All references to TBU® in this document for use in Japan shall be deemed to be replaced with Bourns® TBU™.
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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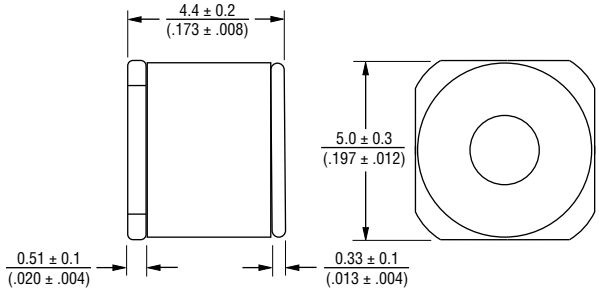
Applications

- Telecommunications
- Industrial electronics
- Avionics

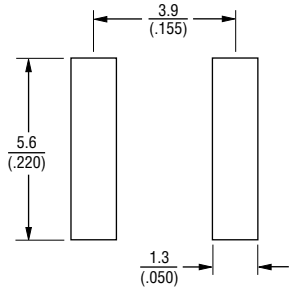
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BOURNS®

Product Dimensions



Recommended Pad Layout



DIMENSIONS: MM / (INCHES)

How to Order

2031 - xxT - SM - RP LF

Model Number Designator

Voltage (Divided by 10)
15 = 150 V
23 = 230 V
42 = 420 V

Surface Mount

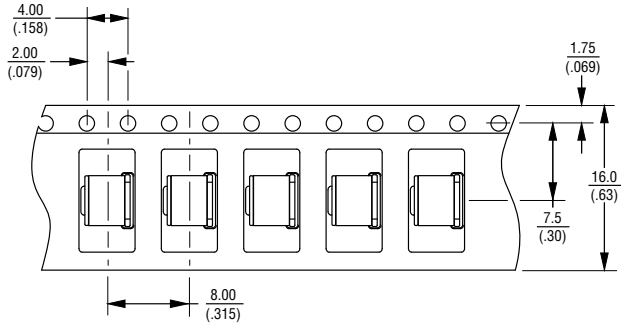
Packaging Options
Blank = Bulk Packaging - 250 pcs./bag (Standard)
RP = Reelpack - 1,500 pcs./reel (Optional)
RP3 = Reelpack - 1,000 pcs./reel (Optional)

RoHS Compliant Option
Blank = Standard Product
LF = RoHS Compliant Product

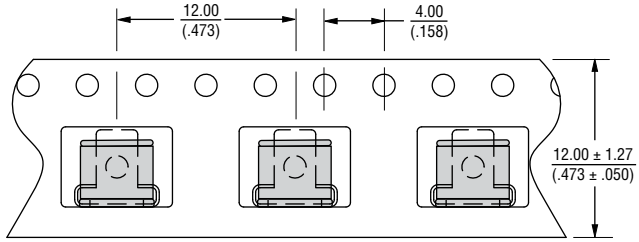
Packaging Specifications

Model	Standard Packaging Quantity			
	Bulk (Bag)	Tray	Box	Reel
2031-xxT-SM	250		1000	
2031-xxT-SM-RP				1500
2031-xxT-SM-RP3				1000

-RP
Reel is 13 inches in diameter and 3/4 inch wide.



-RP3
Reel is 13 inches in diameter and 11/16 inch wide.



DIMENSIONS: MM / (INCHES)

Unless otherwise specified, tolerances in decimals
are .X ± 0.3, .XX ± 0.15 for lengths in millimeters and ±1 ° for degrees.

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