Features
- Size: 5 mm diameter, 7.3 mm length
- Very fast acting
- Small size
- Stable breakdown throughout life
- Designed to operate with TBU® devices
- RoHS compliant* versions available

Recognized per UL 497B
(File: E159337)

BOURNS®

2030-xxT-SM Series – Fast Acting 3-Electrode Miniature Gas Discharge Tube

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

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2030-23T</td>
</tr>
<tr>
<td>Initial DC Sparkover (100 V/s) Typical</td>
<td>230 V</td>
</tr>
<tr>
<td>Minimum DC Sparkover (100 V/s) Throughout Service Life</td>
<td>185 V</td>
</tr>
<tr>
<td>Maximum Impulse Sparkover (1) (5 kV/µs) Throughout Service Life</td>
<td>650 V</td>
</tr>
</tbody>
</table>

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

Insulation Resistance (IR) ............................................... > 10¹⁰ Ω
Glow Voltage ................................................................. 10 mA
Arc Voltage ................................................................. > 1 A
Glow-Arc Transition Current ............................................. < 0.5 A
DC Holdover Voltage (Network Applied per ITU-T K.12) 2030-23T ................. 80 V
2030-42T ................. 135 V
Impulse Service Life ....................................................... 1 operation (2)
1.2/50 µs, 6 kA ................................. 150 operations (4) (5)
2/10 µs, 6 kV, 100 A ................................. 25 operations (5)
10/700 µs, 6 kV, 500 A ................................. 10 operations (5)
10/700 µs, 6 kV, 150 A ................................. 5 operations (5)
AC Service Life .............................................................. > 150 ms
Temperature Range ......................................................... -40 °C to +90 °C
Moisture Sensitivity Level .............................................. 1
ESD Classification (HBM) ................................................... 6

Notes:
(2) The rated discharge current is the total current equally divided between each line to ground and operation(s) are performed in both polarities. The polarity of lightning surge tests should be reversed between consecutive surges.
(1) Per IEC 61643-21.
(5) At delivery AQL 0.65 Level II, DIN ISO 2859.

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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Applications

<table>
<thead>
<tr>
<th>Port Protection</th>
<th>GDT Device P/N</th>
<th>TBU® Device P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CanBus</td>
<td>2030-23T-SM-RPLF</td>
<td>TBU-CA065-100-WH</td>
</tr>
<tr>
<td>RS232</td>
<td>2030-23T-SM-RPLF</td>
<td>TBU-CA065-200-WH</td>
</tr>
<tr>
<td>RS422</td>
<td>2030-23T-SM-RPLF</td>
<td>TBU-CA065-200-WH</td>
</tr>
<tr>
<td>RS485</td>
<td>2030-23T-SM-RPLF</td>
<td>TBU-CA065-200-WH</td>
</tr>
<tr>
<td>RS485</td>
<td>2030-42T-SM-RPLF</td>
<td>TBU-CA085-200-WH</td>
</tr>
<tr>
<td>SDI</td>
<td>2030-23T-SM-RPLF</td>
<td>TBU-CA065-100-WH</td>
</tr>
</tbody>
</table>

"TBU" is a registered trademark of Bourns, Inc. in the United States and other countries.
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Typical Part Marking

Date Code
First Two Digits = Month
Next Two Digits = Year
XXXV
Voltage
(Reverse Marked with Red Ink)
Applications
- Telecommunications
- Industrial electronics
- Avionics

**2030-xxT-SM Series** - Fast Acting 3-Electrode Miniature Gas Discharge Tube

### Product Dimensions

**2030-23T-SM**

- 7.3 ± 0.3
  - (287 ± 0.012)
- 0.9 ± 0.3
  - (0.035 ± 0.012)
- 5.0 ± 0.3
  - (197 ± 0.012)
- 0.7 ± 0.3
  - (008 ± 0.012)
- 0.5 ± 0.3
  - (020 ± 0.012)

**2030-42T-SM**

- 7.95 ± 0.2
  - (295 ± 0.008)
- 1.3 ± 0.13
  - (051 ± 0.005)
- 5.6 ± 0.3
  - (220 ± 0.012)
- 0.7 ± 0.2
  - (028 ± 0.008)
- 0.5 ± 0.13
  - (020 ± 0.005)

### Recommended Pad Layout

**Dimensions: Millimeters**

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### How to Order

**Model Number Designator**

- 2030 - xxT - SM - RP LF

**Voltage** (Divided by 10)

- 23 = 230 V
- 42 = 420 V

**Surface Mount**

**Packaging Options**

- Blank = Bulk Packaging (Standard)
- RP = Reelpack (Optional)
- RP2 = Reelpack (Optional)

**RoHS Compliant Option**

- Blank = Standard Product
- LF = RoHS Compliant Product

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2030-xxT-SM Series - Fast Acting 3-Electrode Miniature Gas Discharge Tube

Packaging Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Standard Packaging Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bulk (Bag)</td>
</tr>
<tr>
<td>2030-xxT-SM</td>
<td>250</td>
</tr>
<tr>
<td>2030-xxT-SM-RP</td>
<td></td>
</tr>
<tr>
<td>2030-xxT-SM-RP2</td>
<td></td>
</tr>
</tbody>
</table>

The optional -RP & -RP2 reels are 330 mm in diameter and 23 mm wide.

-RP

-RP2

DIMENSIONS: MILLIMETERS

Unless otherwise specified, tolerances in decimals are \(X \pm 0.3, \ XX \pm 0.15\) for lengths in millimeters and \(\pm 1^\circ\) for degrees.
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