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

## Applications
- Telecommunications
- Industrial electronics
- Avionics

## Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2031-15T</td>
</tr>
<tr>
<td>Initial DC Sparkover (100 V/s) Typical</td>
<td>150 V</td>
</tr>
<tr>
<td>Minimum DC Sparkover (100 V/s) Throughout Service Life</td>
<td>60 V</td>
</tr>
<tr>
<td>Maximum Impulse Sparkover (5k V 1.2/50 µs) Throughout Service Life</td>
<td>500 V</td>
</tr>
</tbody>
</table>

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

### 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 relowering surface mount devices per IPC/JEDEC J-STD-020 rev D.

### 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>2031-23T-SM-RPLF</td>
<td>TBU-CA065-100-WH</td>
</tr>
<tr>
<td>RS232</td>
<td>2031-23T-SM-RPLF</td>
<td>TBU-CA065-200-WH</td>
</tr>
<tr>
<td>RS422</td>
<td>2031-23T-SM-RPLF</td>
<td>TBU-CA065-200-WH</td>
</tr>
<tr>
<td>RS485</td>
<td>2031-23T-SM-RPLF</td>
<td>TBU-CA065-200-WH</td>
</tr>
<tr>
<td>RS485</td>
<td>2031-42T-SM-RPLF</td>
<td>TBU-CA085-200-WH</td>
</tr>
<tr>
<td>SDI</td>
<td>2031-23T-SM-RPLF</td>
<td>TBU-CA065-100-WH</td>
</tr>
<tr>
<td>VDSL</td>
<td>2031-15T-SM-RPLF</td>
<td>TBU-CA050-500-WH</td>
</tr>
</tbody>
</table>

**TBU®** is a registered trademark of Bourns, Inc. in the U.S., Taiwan and European Community.

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

- **Model Number Designator**: 2031-xxT-SM-RP1
- **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**

<table>
<thead>
<tr>
<th>Model</th>
<th>Bulk (Bag)</th>
<th>Tray</th>
<th>Box</th>
<th>Reel</th>
</tr>
</thead>
<tbody>
<tr>
<td>2031-xxT-SM</td>
<td>250</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2031-xxT-SM-RP</td>
<td>1500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2031-xxT-SM-RP3</td>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recommended Pad Layout**

**How to Order**

- **Model Number Designator**: 2031-xxT-SM-RP LF

**Specifications**

- **Dimensions**: (MM) (INCHES)
  - 4.00 (158)
  - 2.00 (079)
  - 8.00 (315)

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

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

- **Tolerances**: Unless otherwise specified, tolerances in decimals are .X ± .03, .XX ± .015 for lengths in millimeters and ±1° for degrees.

**Notes**

- 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.

**REV. I 09/17**