TransZorb® TVS Offer More Precise Breakdown Voltage, Higher Peak Pulse Surge Current Capability, and Lower Clamping Voltage

KEY BENEFITS
- Designed to protect sensitive electronics against voltage transients induced by inductive load switching and lightning
- Tightened breakdown voltage tolerance of ± 3.5 %
- Low-profile DO-214AA (SMBJ) package
- High peak pulse surge currents from 2.03 A to 65.9 A
- Excellent clamping capability from 9.1 V to 301 V
- High surge capability to 600 W at 10/1000 µs
- Series consists of 47 TVS with stand-off voltages from 5 V to 188 V
- Available with uni-directional polarity
- Temperature range from -55 °C to +150 °C
- Ideal for automated placement
- RoHS-compliant and halogen-free

APPLICATIONS
- DC adapter power line protection, power supply snubber circuits, and general voltage surge protection in consumer, computer, industrial, and telecommunication equipment

RESOURCES
- Datasheet: please visit www.vishay.com/ppg?87606
- For technical questions, contact DiodesAmericas@vishay.com, DiodesEurope@vishay.com, or DiodesAsia@vishay.com
- Material categorization: For definitions of compliance, please see www.vishay.com/doc?99912
Surface Mount TRANSZORB®
Transient Voltage Suppressors

FEATURES
- Low profile package
- Ideal for automated placement
- ± 3.5 %, very tight VBR tolerance
- Available in uni-directional
- 600 W peak pulse power capability with a 10/1000 μs waveform, repetitive rate (duty cycle): 0.01 %
- Excellent clamping capability
- Very fast response time
- Low incremental surge resistance
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS
Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFETs, signal lines of sensor units for consumer, computer, industrial, and telecommunication.

MECHANICAL DATA
Case: DO-214AA (SMBJ)
Molding compound meets UL 94 V-0 flammability rating
Base P/N-M3 - halogen-free, RoHS-compliant, and industrial grade
Terminals: matte tin plated leads, solderable per J-STD-020 and JESD 22-B102
M3 suffix meets JESD 201 class 2 whisker test
Polarity: for uni-directional types the band denotes cathode end

MAXIMUM RATINGS (T_J = 25 °C unless otherwise noted)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SYMBOL</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak pulse power dissipation with a 10/1000 μs waveform</td>
<td>P_{PPM} (1)</td>
<td>600</td>
<td>W</td>
</tr>
<tr>
<td>Peak pulse current with a 10/1000 μs waveform</td>
<td>I_{PPM} (1)</td>
<td>See next table</td>
<td>A</td>
</tr>
<tr>
<td>Power dissipation T_M = 50 °C</td>
<td>P_D (2)</td>
<td>5.0</td>
<td>W</td>
</tr>
<tr>
<td>Power dissipation T_A = 25 °C</td>
<td>P_D (3)</td>
<td>1.0</td>
<td>W</td>
</tr>
<tr>
<td>Operating junction and storage temperature range</td>
<td>T_J, T_STG</td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
</tbody>
</table>

Notes
(1) Non-repetitive current pulse, per fig. 3 and derated above T_A = 25 °C per fig. 2
(2) Power dissipation mounted on infinite heatsink
(3) Power dissipation mounted on minimum recommended pad layout

ORDERING INFORMATION (Example)

<table>
<thead>
<tr>
<th>PREFERRED P/N</th>
<th>UNIT WEIGHT (g)</th>
<th>PREFERRED PACKAGE CODE</th>
<th>BASE QUANTITY</th>
<th>DELIVERY MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMBJ5.0D-M3/H</td>
<td>0.096</td>
<td>H</td>
<td>750</td>
<td>7’’ diameter plastic tape and reel</td>
</tr>
<tr>
<td>SMBJ5.0D-M3/I</td>
<td>0.096</td>
<td>I</td>
<td>3200</td>
<td>13’’ diameter plastic tape and reel</td>
</tr>
</tbody>
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