

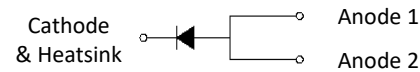
## 15A, 45V Schottky Rectifiers

### FEATURES

- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- High forward surge capability
- Ideal for automated placement
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-277B



### TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.

### MECHANICAL DATA

**Case:** TO-277B

Molding compound meets UL 94 V-0 flammability rating

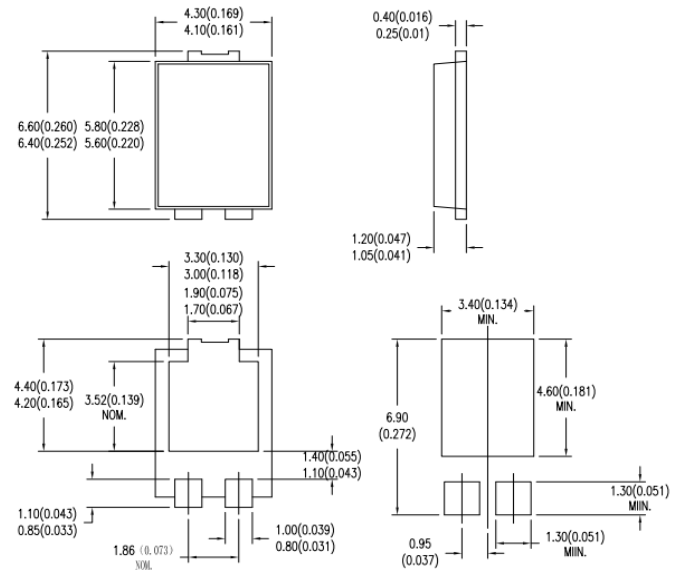
Moisture sensitivity level: level 1, per J-STD-020

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 0.095g (approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER   | SYMBOL          | <b>SB1545</b>             |                          | UNIT               |   |
|---|-----------------|---------------------------|--------------------------|--------------------|---|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 45                        |                          | V                  |   |
| Maximum average forward rectified current   | $I_{F(AV)}$     | 15                        |                          | A                  |   |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode | $I_{FSM}$       | 200                       |                          | A                  |   |
| Maximum instantaneous forward voltage per diode (Note 1)                                      | $V_F$           | $I_F = 15\text{A}$        | $T_J = 25^\circ\text{C}$ | 0.55               | V |
| Maximum instantaneous reverse current per diode at rated reverse voltage                      | $I_R$           | $T_J = 25^\circ\text{C}$  | 50                       | $\mu\text{A}$      |   |
|   |                 | $T_J = 125^\circ\text{C}$ | 15                       | mA                 |   |
| Typical thermal resistance  | $R_{\theta JL}$ | 11                        |                          | $^\circ\text{C/W}$ |   |
| Operating temperature range   | $T_J$           | - 55 to +150              |                          | $^\circ\text{C}$   |   |
| Storage temperature range   | $T_{STG}$       | - 55 to +150              |                          | $^\circ\text{C}$   |   |

Note 1: Pulse Test with Pulse Width=300 $\mu\text{s}$ , 1% Duty Cycle

RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

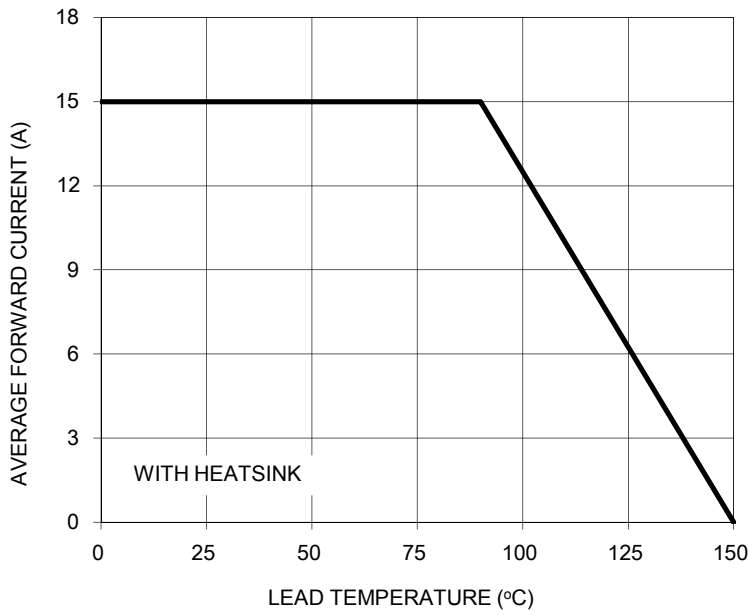


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

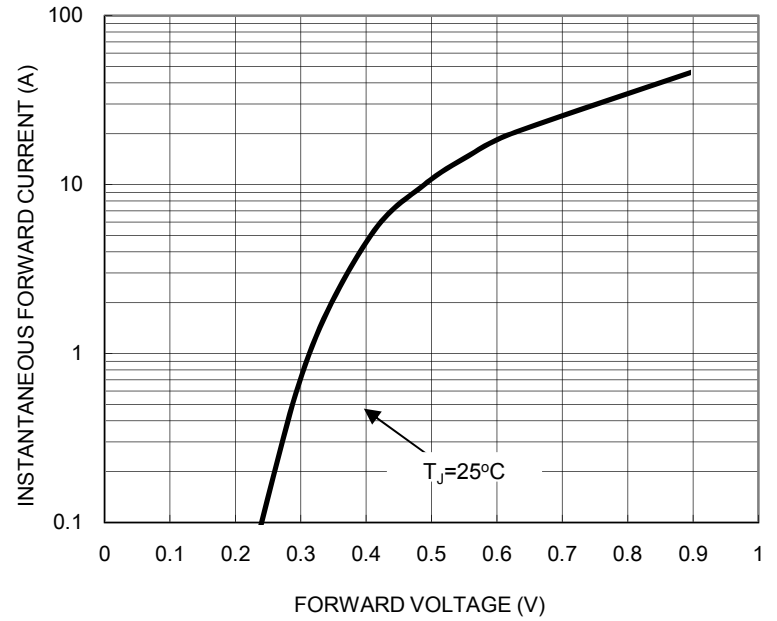


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

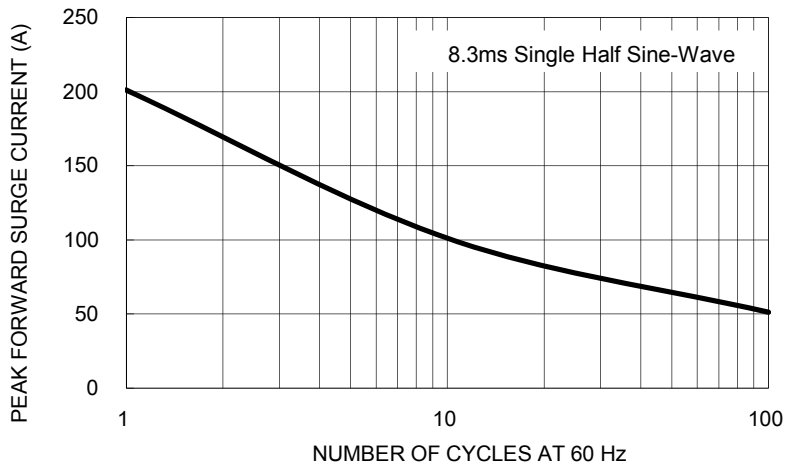


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

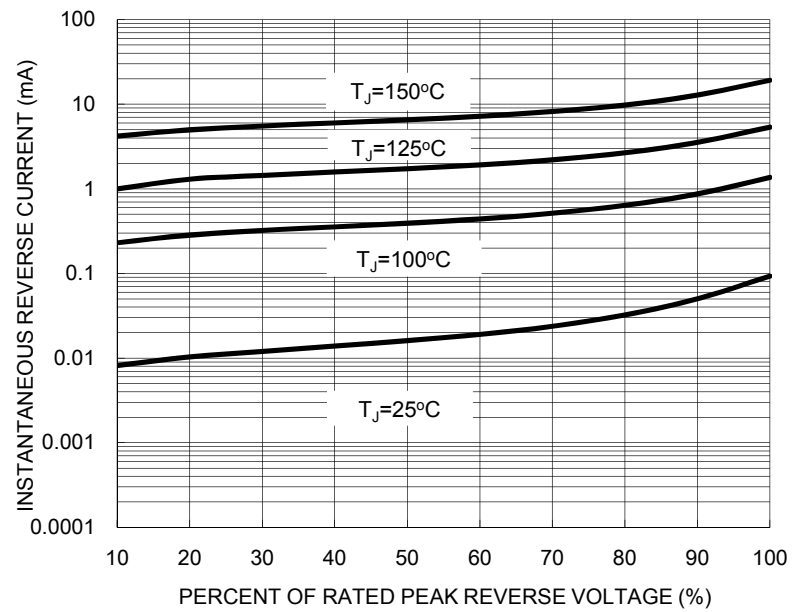


FIG. 5 TYPICAL JUNCTION CAPACITANCE

