

## 20A, 80V 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

### 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

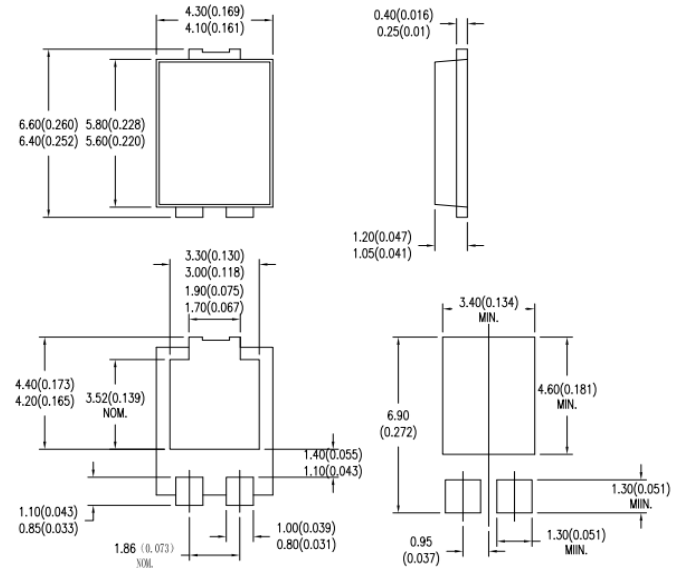
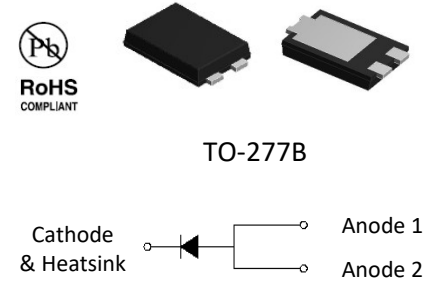
Moisture sensitivity level: level 1, per J-STD-020

**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)



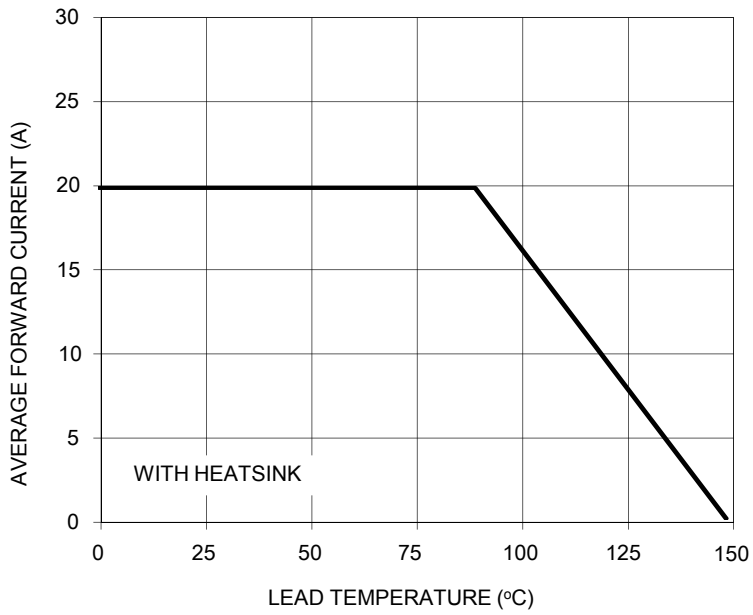
| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)  |                      |                        |                |      |    |
|---|----------------------|------------------------|----------------|------|----|
| PARAMETER   |                      | SYMBOL                 | SP2080L        | UNIT |    |
| Maximum repetitive peak reverse voltage   |                      | V <sub>RRM</sub>       | 80             | V    |    |
| Maximum average forward rectified current   |                      | I <sub>F(AV)</sub>     | 20             | A    |    |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode |                      | I <sub>FSM</sub>       | 280            | A    |    |
| Maximum instantaneous forward voltage per diode (Note 1)                                      | I <sub>F</sub> = 20A | T <sub>J</sub> = 25°C  | V <sub>F</sub> | 0.60 | V  |
| Maximum instantaneous reverse current per diode at rated reverse voltage                      |                      | T <sub>J</sub> = 25°C  | I <sub>R</sub> | 100  | μA |
|   |                      | T <sub>J</sub> = 125°C | I <sub>R</sub> | 10   | mA |
| Typical thermal resistance  |                      | R <sub>θJL</sub>       | 11             | °C/W |    |
| Operating temperature range   |                      | T <sub>J</sub>         | - 55 to +150   | °C   |    |
| Storage temperature range   |                      | T <sub>STG</sub>       | - 55 to +150   | °C   |    |

Note 1: Pulse Test with Pulse Width=300μs, 1% Duty Cycle

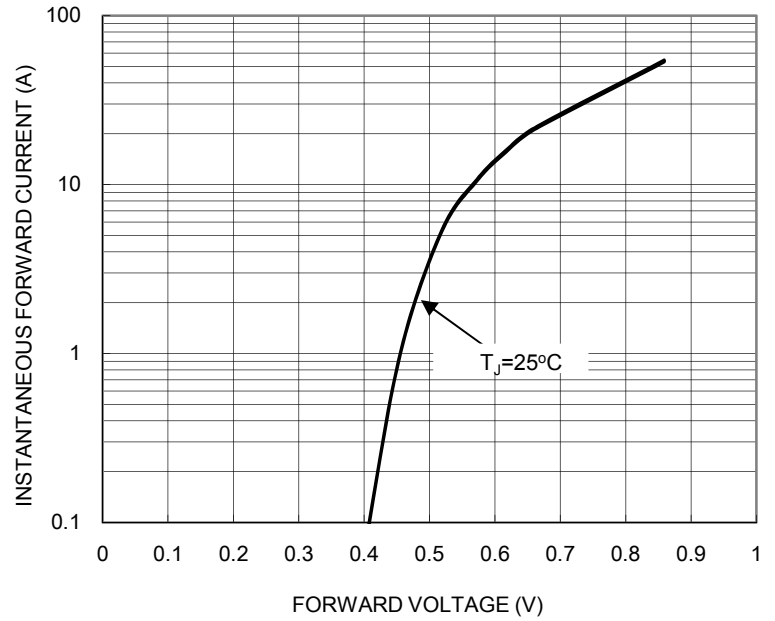
**RATINGS AND CHARACTERISTICS CURVES**

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

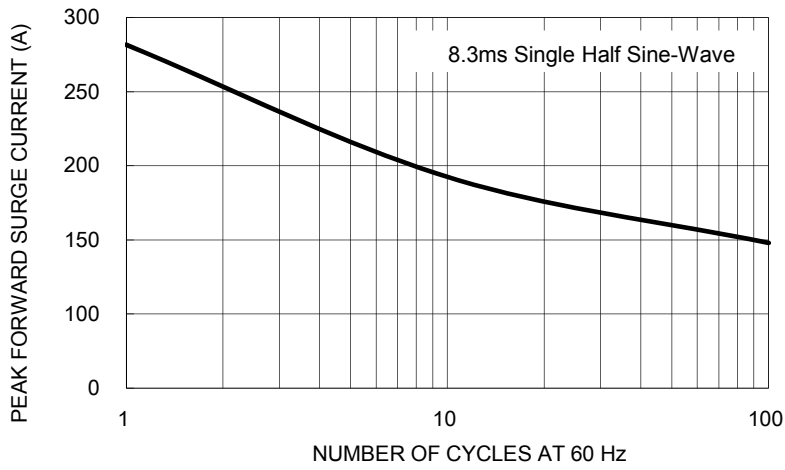
**FIG.1 FORWARD CURRENT DERATING CURVE**



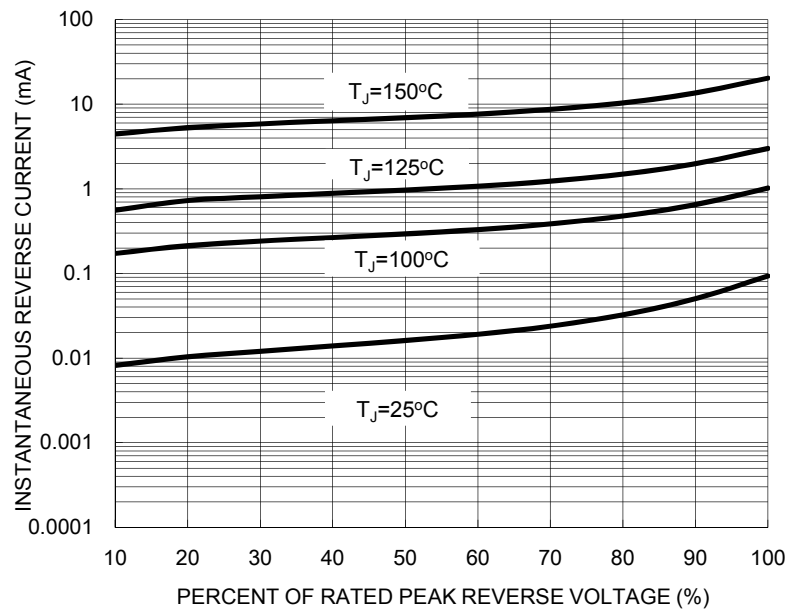
**FIG. 2 TYPICAL FORWARD CHARACTERISTICS**



**FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 4 TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 TYPICAL JUNCTION CAPACITANCE**

