

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

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

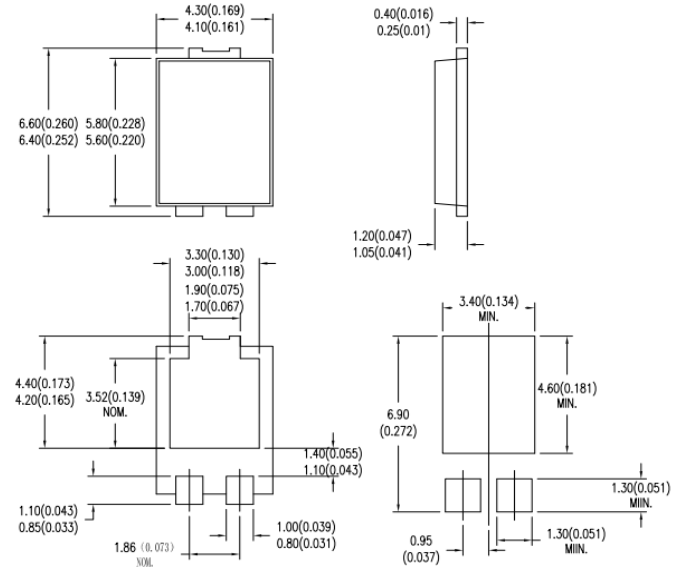
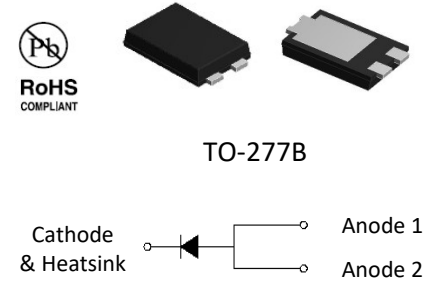
Moisture sensitivity level: level 1, per J-STD-020

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°C unless otherwise noted) | | | | | |
|---|----------------------|------------------------|----------------|------|------|
| PARAMETER | | SYMBOL | SP1545L-C | | 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} | 300 | | A |
| Maximum instantaneous forward voltage per diode (Note 1) | I _F = 15A | T _J = 25°C | V _F | 0.52 | V |
| Maximum instantaneous reverse current per diode at rated reverse voltage | | T _J = 25°C | I _R | 150 | μA |
| | | T _J = 125°C | | 15 | mA |
| Typical thermal resistance | | R _{θJL} | 11 | | °C/W |
| Operating temperature range | | T _J | - 55 to +150 | | °C |
| Storage temperature range | | T _{STG} | - 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

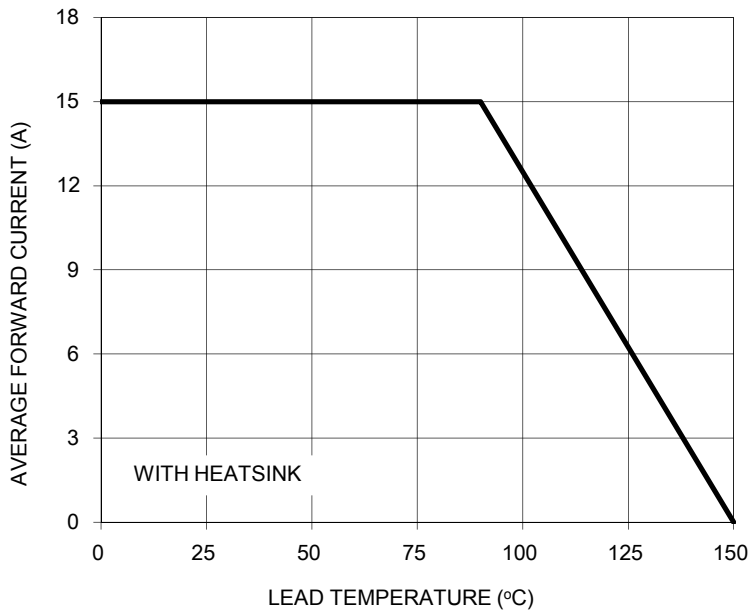


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

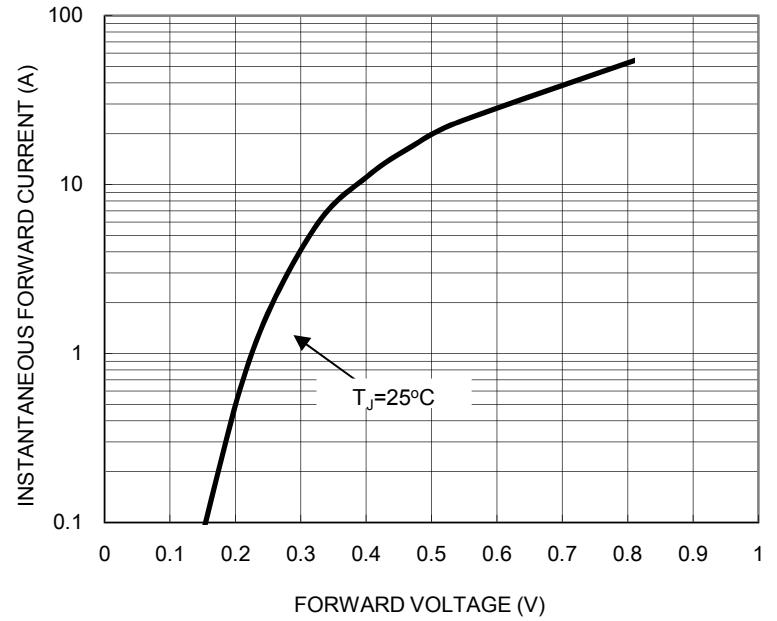


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

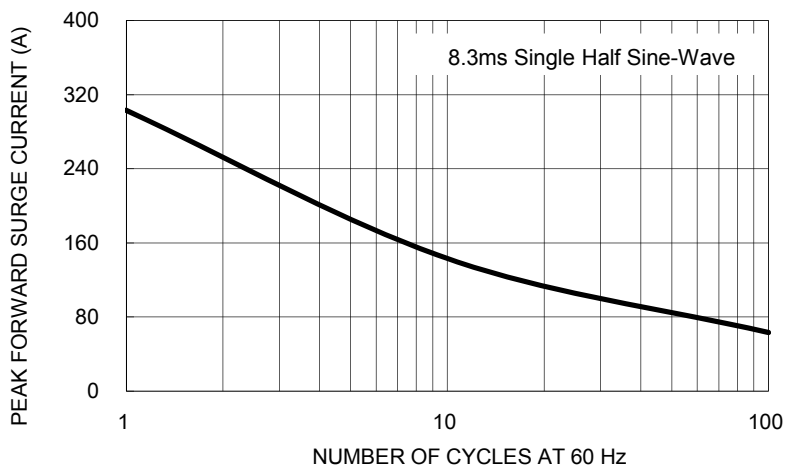
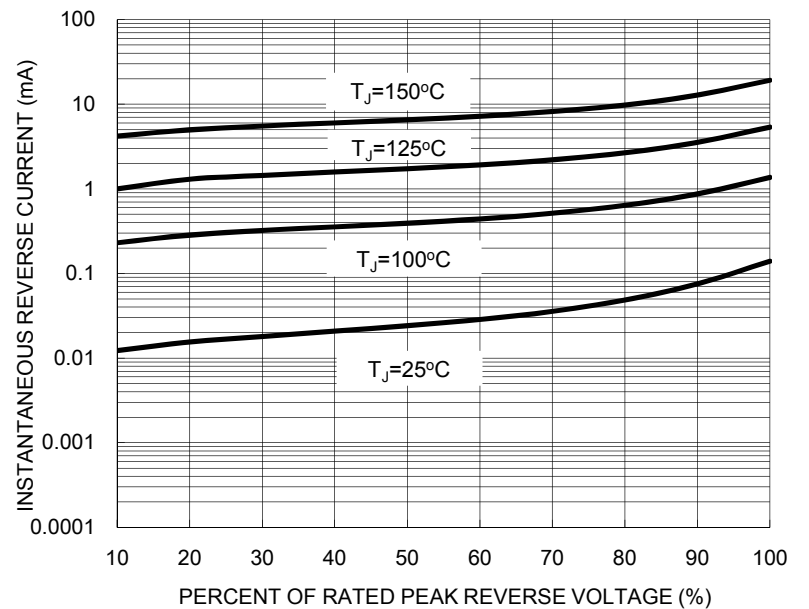


FIG. 4 TYPICAL REVERSE CHARACTERISTICS



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