

## 10A, 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

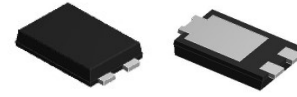
Moisture sensitivity level: level 1, per J-STD-020

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

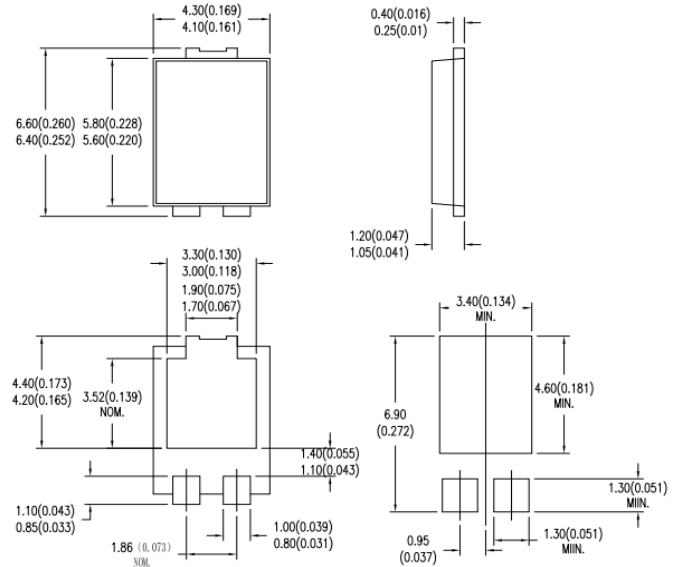
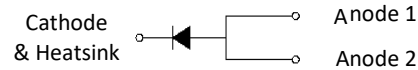
Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 0.095g (approximately)



TO-277B



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER			SYMBOL	SP1045	UNIT
Maximum repetitive peak reverse voltage			V <sub>RRM</sub>	45	V
Maximum average forward rectified current			I <sub>F(AV)</sub>	10	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I <sub>FSM</sub>	180	A
Maximum instantaneous forward voltage per diode (Note 1)	I <sub>F</sub> = 10A	T <sub>J</sub> = 25°C	V <sub>F</sub>	0.55	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			15	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

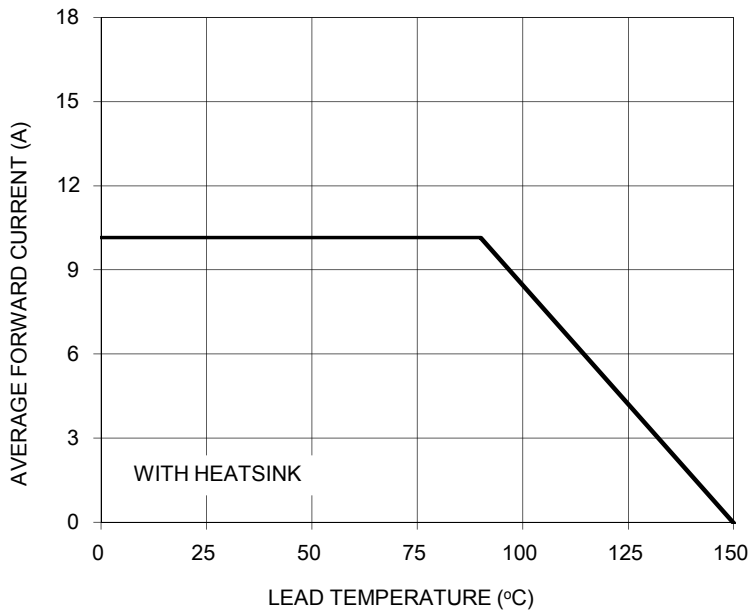


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

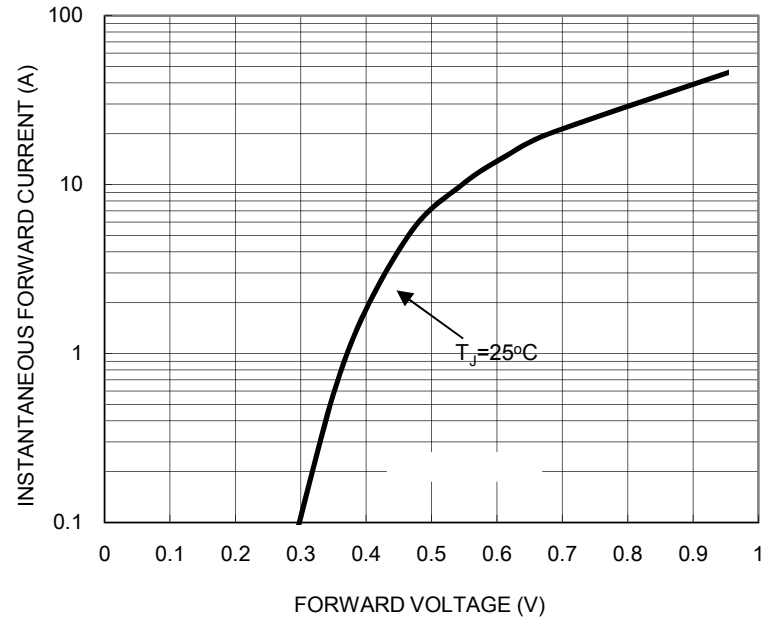


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

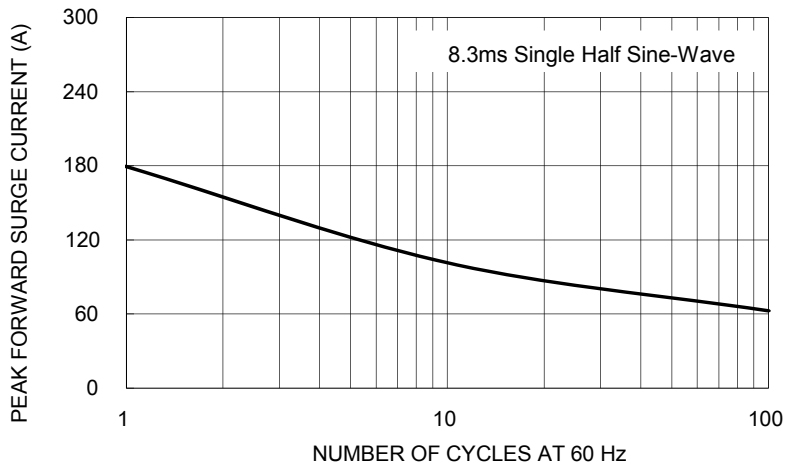


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

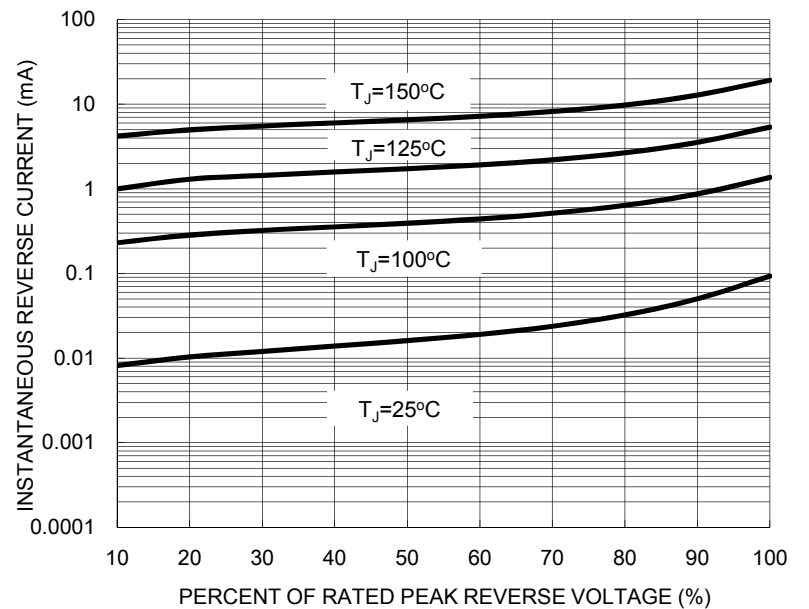


FIG. 5 TYPICAL JUNCTION CAPACITANCE

