

## 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

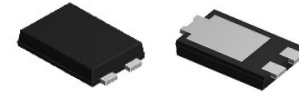
Moisture sensitivity level: level 1, per J-STD-020

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

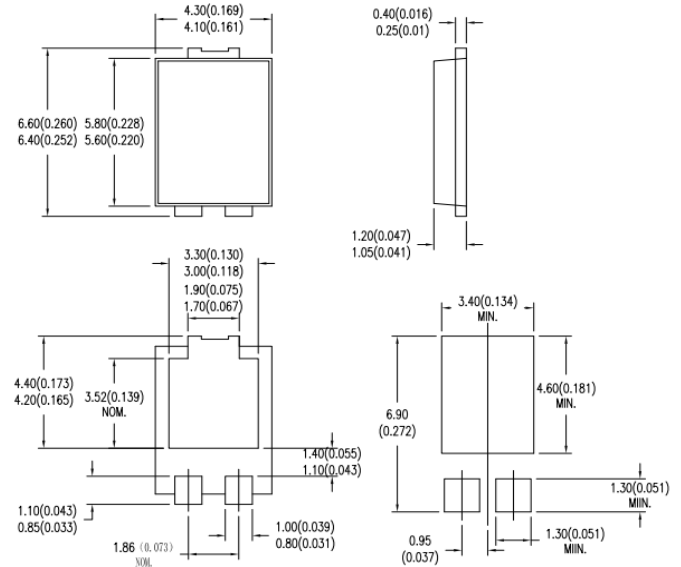
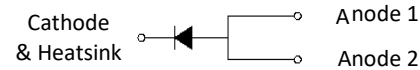
Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 0.095g (approximately)



TO-277B



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

PARAMETER	SYMBOL	SP1045	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	45	V
Maximum average forward rectified current	$I_{F(AV)}$	10	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$	180	A
Maximum instantaneous forward voltage per diode (Note 1)	$V_F$	0.55	V
Maximum instantaneous reverse current per diode at rated reverse voltage	$T_J = 25^\circ\text{C}$	100	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$	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

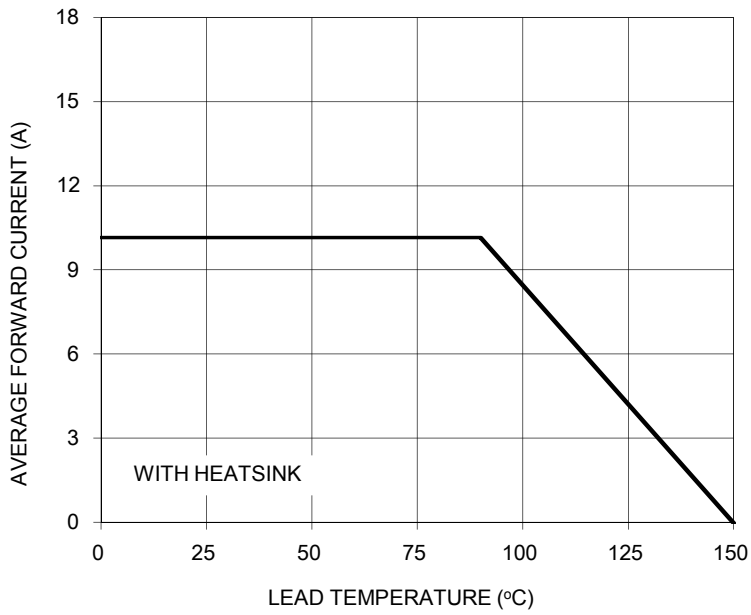


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

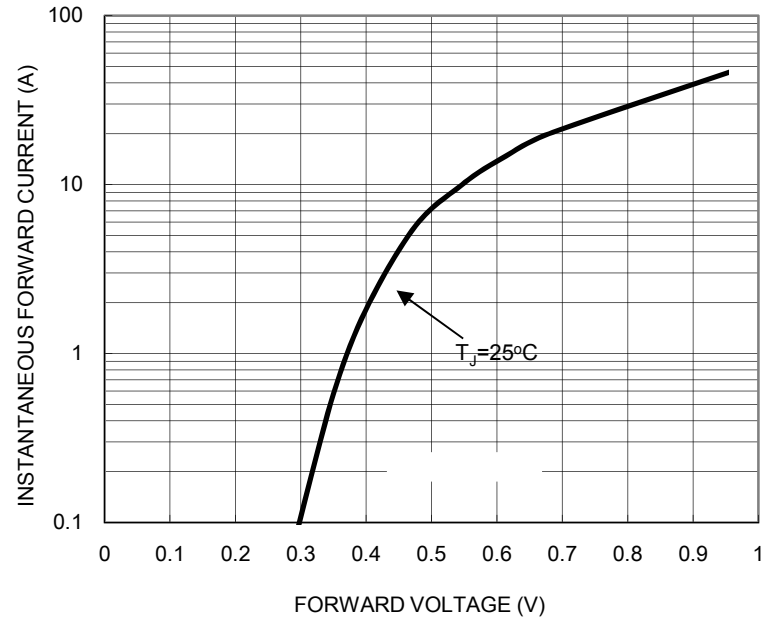


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

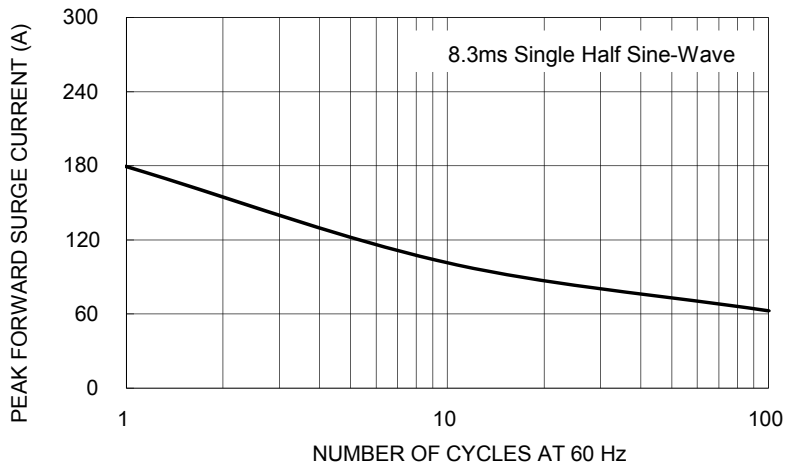


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

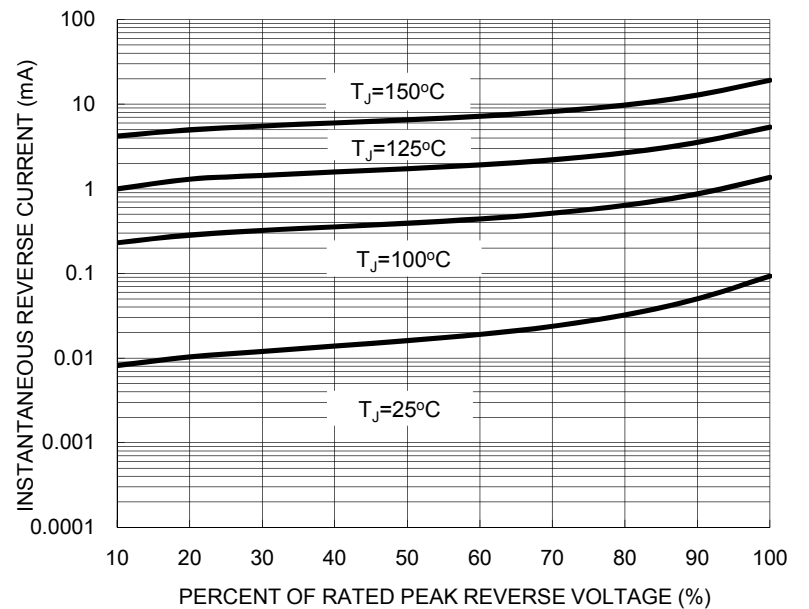
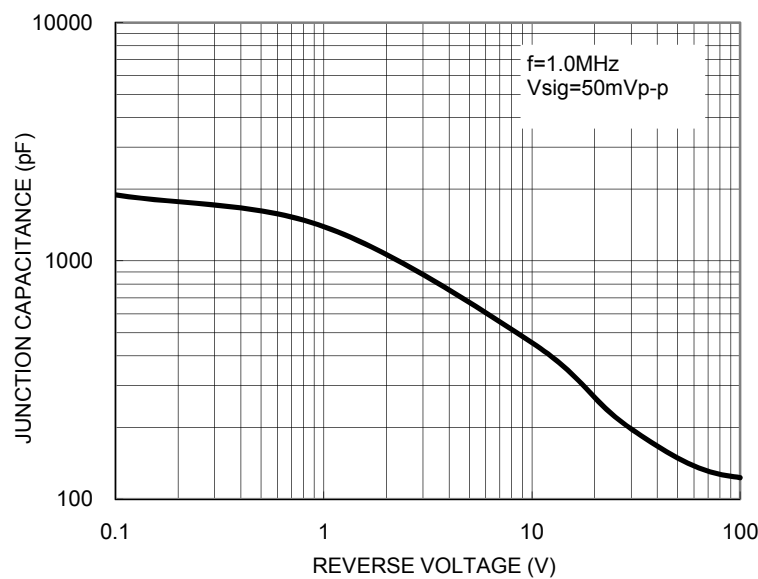


FIG. 5 TYPICAL JUNCTION CAPACITANCE



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