

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

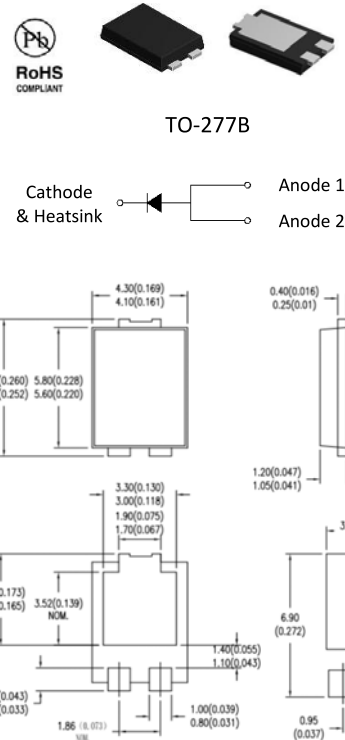
Moisture sensitivity level: level 1, per J-STD-020

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)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°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)	I _F = 10A	T _J = 25°C	V _F	0.55		V
Maximum instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R	100		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

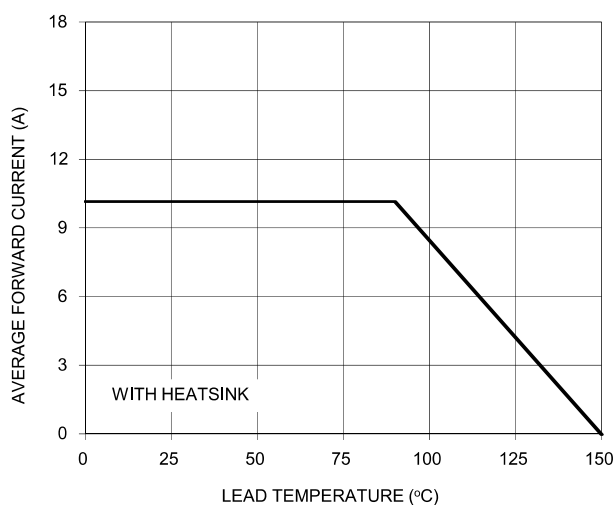


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

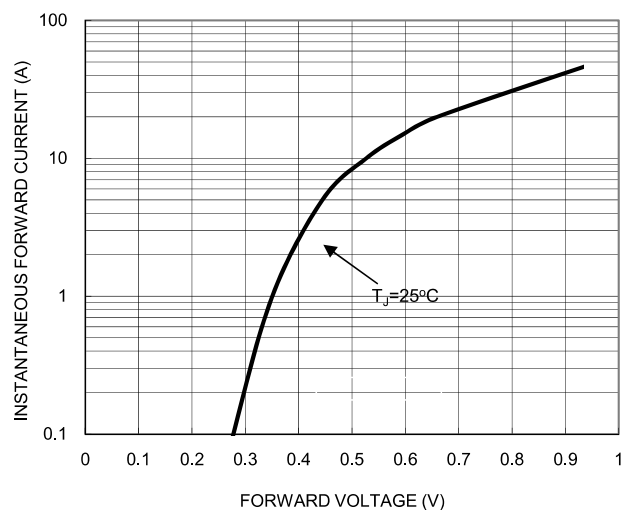


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

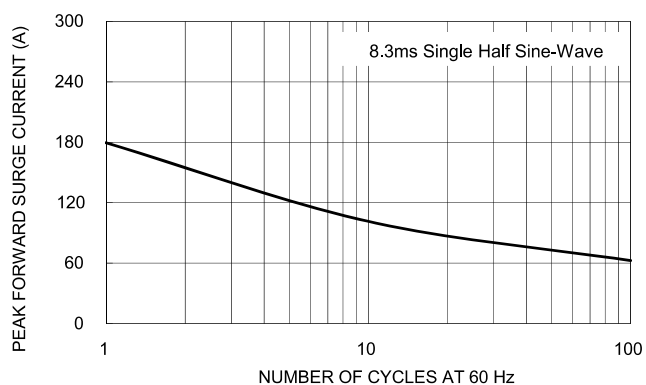


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

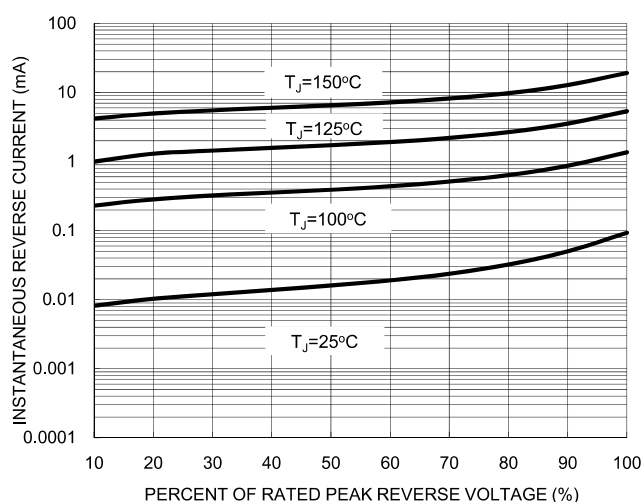


FIG. 5 TYPICAL JUNCTION CAPACITANCE

