

10A, 100V Trench Schottky Rectifiers

FEATURES

- Patented Trench Schottky technology
- 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

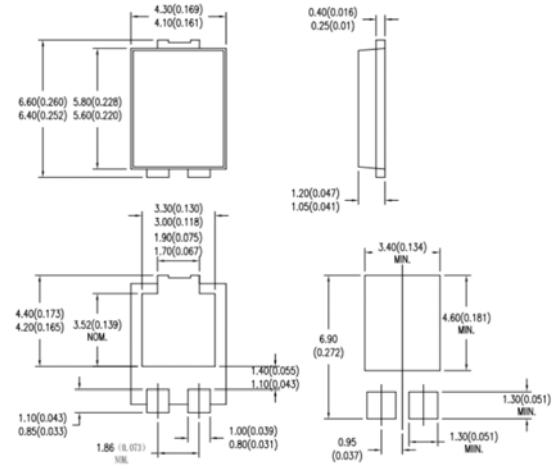
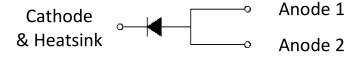
Meet JESD 201 class 2 whisker test

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	SP10100L	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	100	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)	$I_F = 10\text{A}$	$T_J = 25^\circ\text{C}$	V_F	0.70	V
	$I_F = 10\text{A}$	$T_J = 125^\circ\text{C}$		0.65	
Maximum instantaneous reverse current per diode at rated reverse voltage		$T_J = 25^\circ\text{C}$	I_R	100	μA
		$T_J = 125^\circ\text{C}$		20	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 μs , 1% Duty Cycle

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

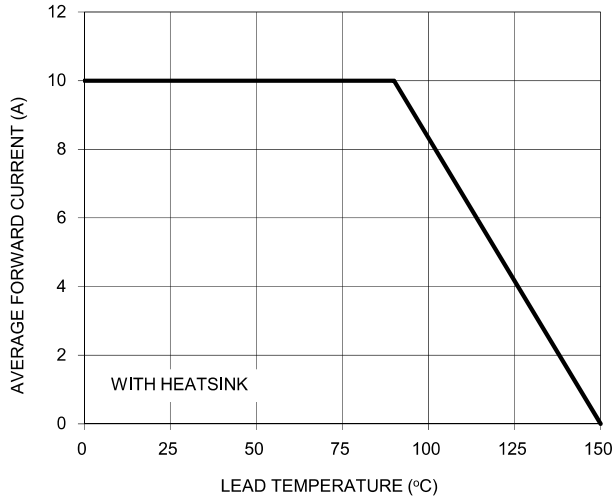


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

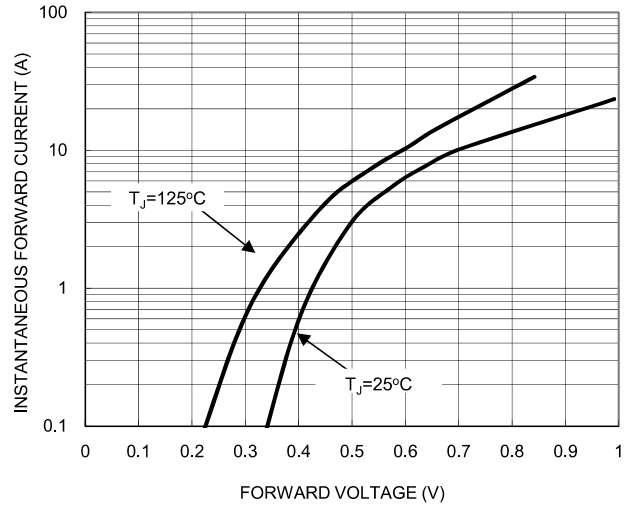


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

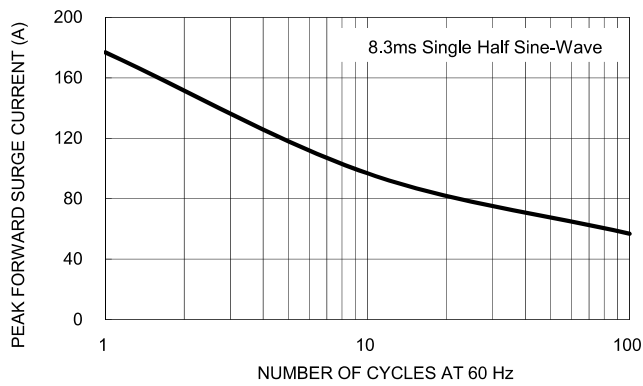


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

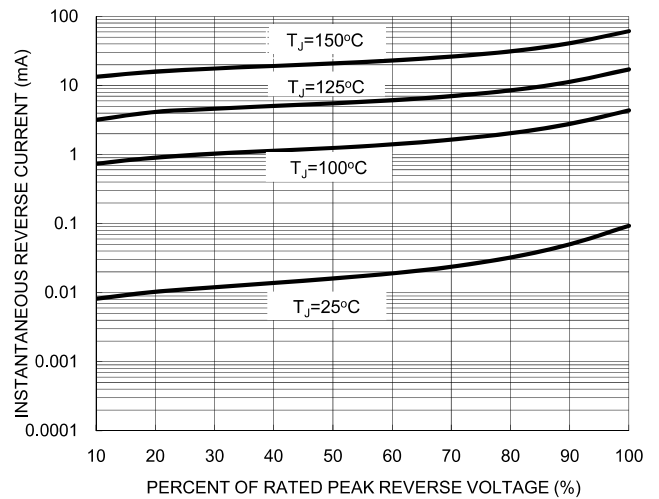


FIG. 5 TYPICAL JUNCTION CAPACITANCE

