

## 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

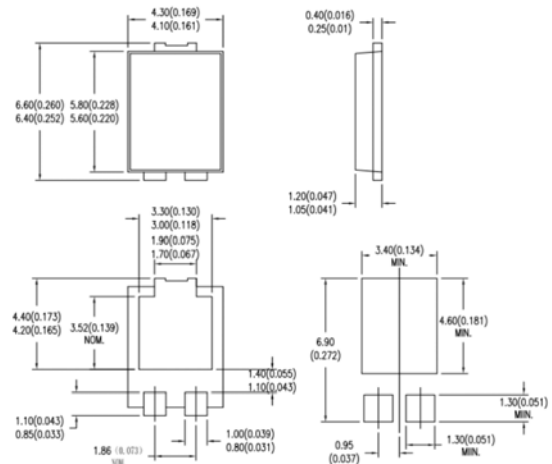
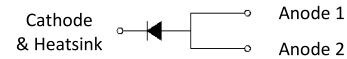
Meet JESD 201 class 2 whisker test

**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)

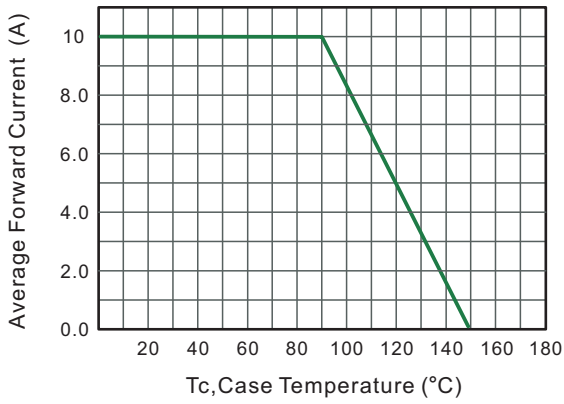
PARAMETER	SYMBOL	SP10U100L	UNIT		
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V		
Maximum average forward rectified current	$I_{F(AV)}$	10	A		
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$	200	A		
Maximum instantaneous forward voltage per diode (Note 1)	$I_F = 10\text{A}$	$T_J = 25^\circ\text{C}$	$V_F$	0.63	V
	$I_F = 10\text{A}$	$T_J = 125^\circ\text{C}$		0.58	
Maximum instantaneous reverse current per diode at rated reverse voltage	$I_R$	$T_J = 25^\circ\text{C}$	100	$\mu\text{A}$	
		$T_J = 125^\circ\text{C}$	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 $\mu\text{s}$ , 1% Duty Cycle

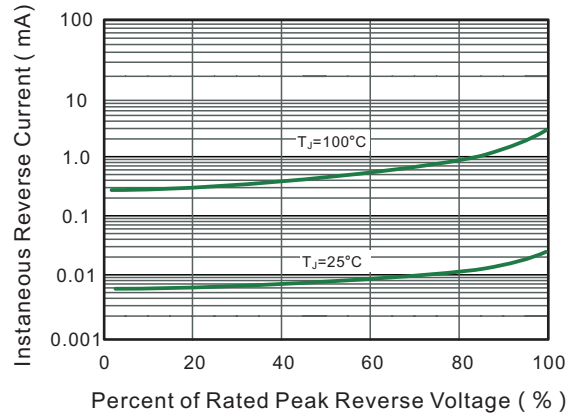
**RATINGS AND CHARACTERISTICS CURVES**

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

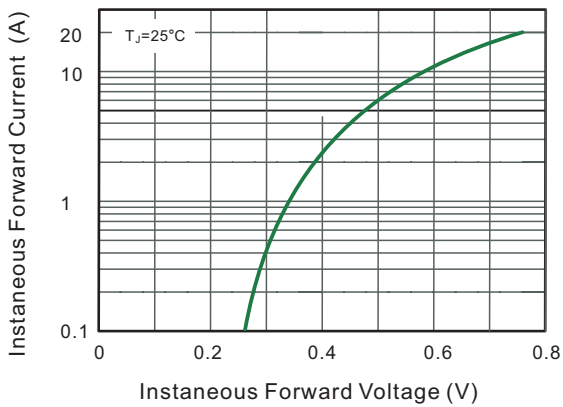
**Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE**



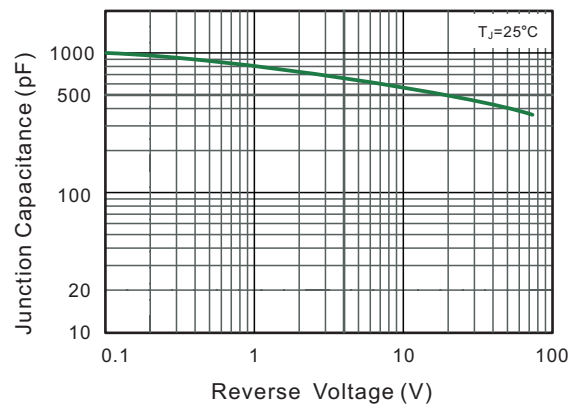
**Fig.2 Typical Reverse Characteristics**



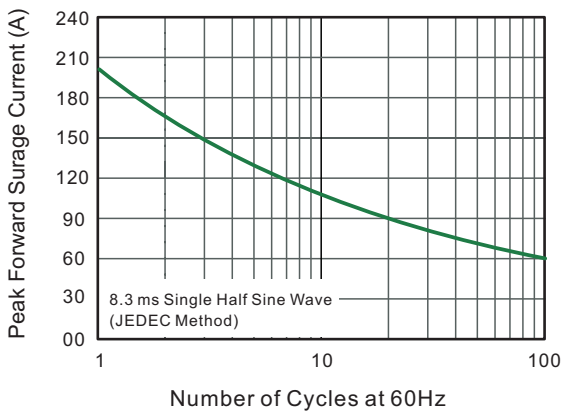
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.6- Typical Transient Thermal Impedance**

