

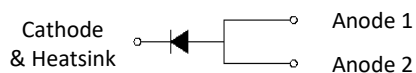
10A 45V Surface Mount Schottky Barrier Diode

Features

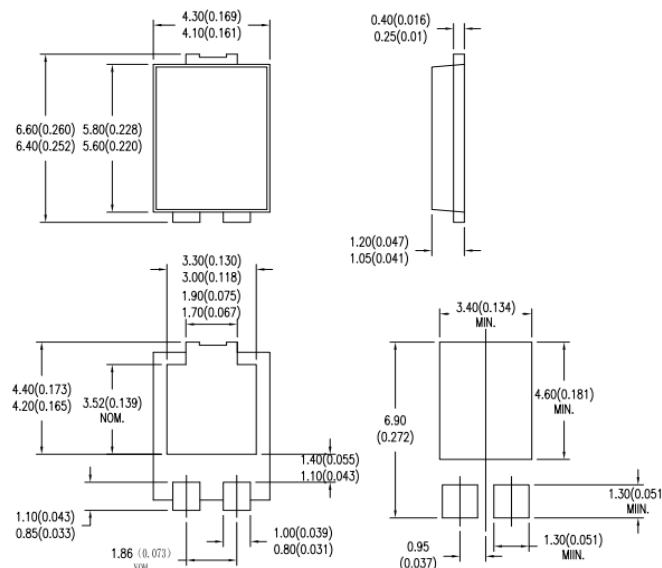
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- Ideal for automated placement
- High forward surge capability
- AEC-Q101 qualified
- Compliant with RoHS standards, halogen-free

Mechanical Data

- Case: TO-277B
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any



TO-277B



Maximum Ratings and Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SP1045Q	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)	$I_F = 10\text{A}$ $T_J = 25^\circ\text{C}$ V_F	0.55	V
Maximum instantaneous reverse current per diode at rated reverse voltage	$T_J = 25^\circ\text{C}$ I_R	100	μA
	$T_J = 125^\circ\text{C}$	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 μs , 1% Duty Cycle



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

FIG.1 FORWARD CURRENT DERATING CURVE

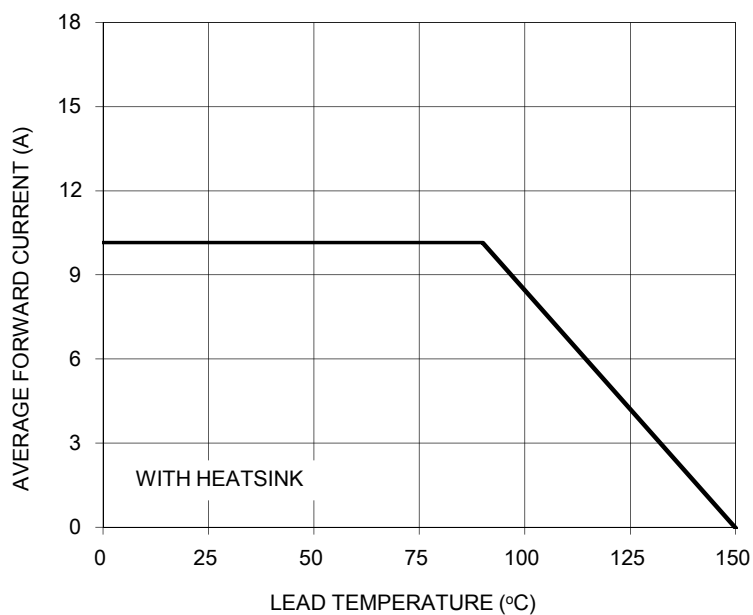


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

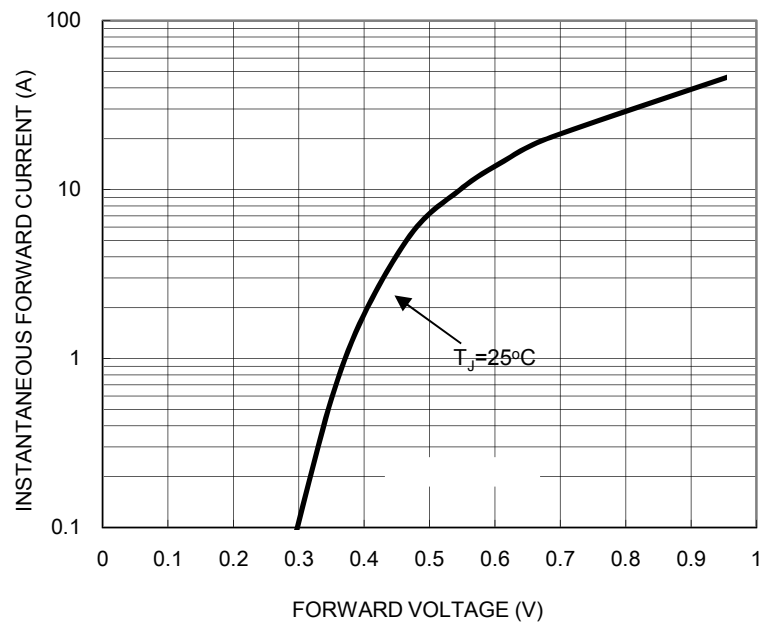


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

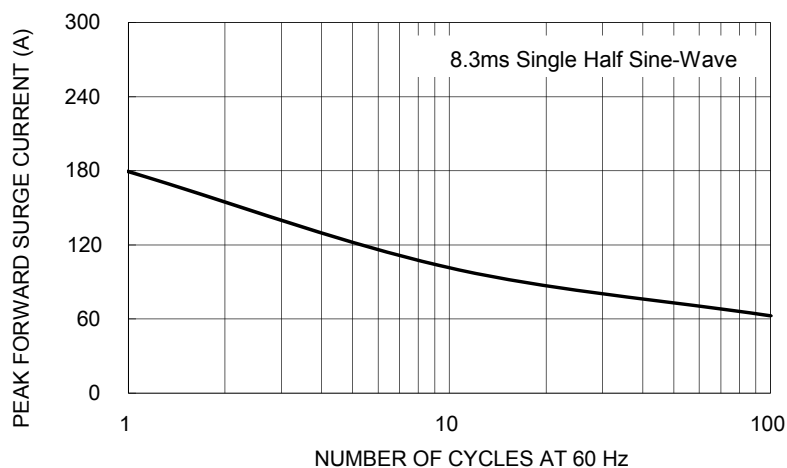


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

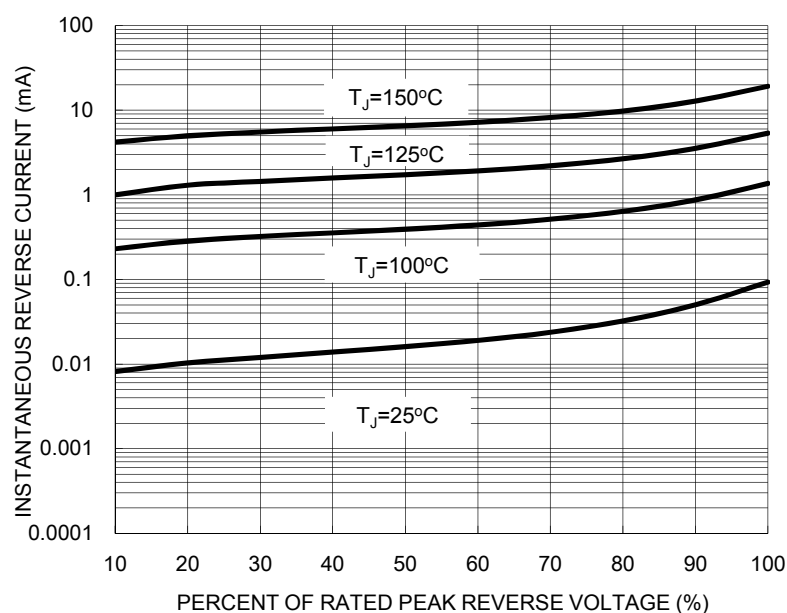


FIG. 5 TYPICAL JUNCTION CAPACITANCE

