

TECHNICAL DATA
DATA SHEET 5145, REV. B

SILICON SCHOTTKY RECTIFIER Very Low Forward Voltage Drop

Features:

- Soft Reverse Recovery at Low and High Temperature
- Very Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics

Maximum Ratings

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	45	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	15	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave	280	A
Non-Repetitive Avalanche Energy	E_{AS}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 3.0\text{ A}$, $L = 4.4\text{ mH}$	20	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in $1\text{ }\mu\text{s}$ f limited by $T_J\text{ max } V_A=1.5V_R$	3.0	A
Maximum Thermal Resistance	$R_{\theta JC}$	(Junction to Mounting Surface, Cathode)	1.7	$^\circ\text{C/W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$

Electrical Characteristics

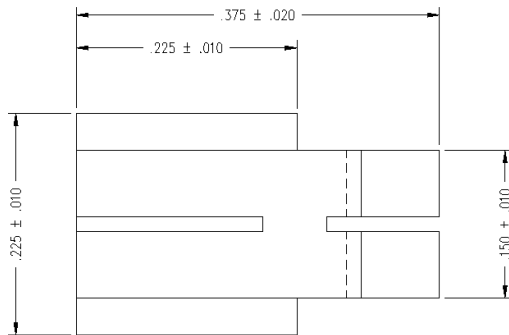
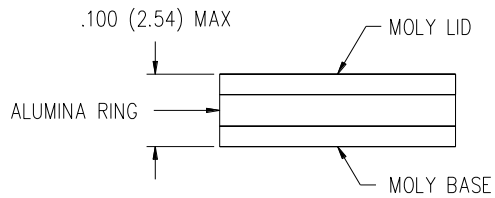
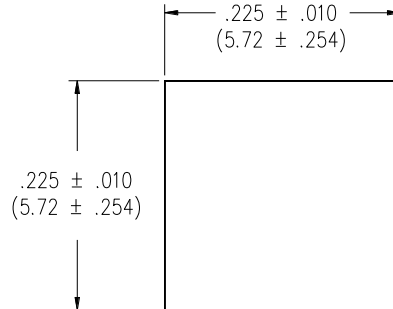
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.73	V
	V_{F2}	@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.66	V
Max. Reverse Current	I_{R1}	@ $V_R = 45\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	2	mA
	I_{R2}	@ $V_R = 45\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	15	mA
Max. Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 50\text{mV (p-p)}$	800	pF

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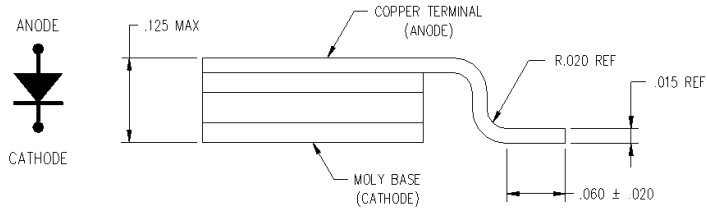
MECHANICAL DIMENSIONS: In Inches / mm

*Dimensions shown are with solder dipping.

SHD-1 HIGH PROFILE



SHD-1B HIGH PROFILE

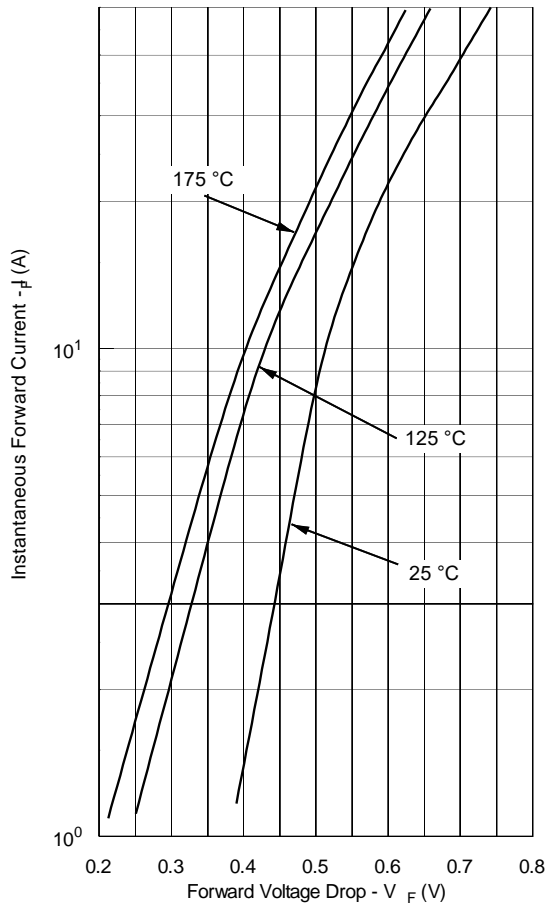


PINOUT TABLE

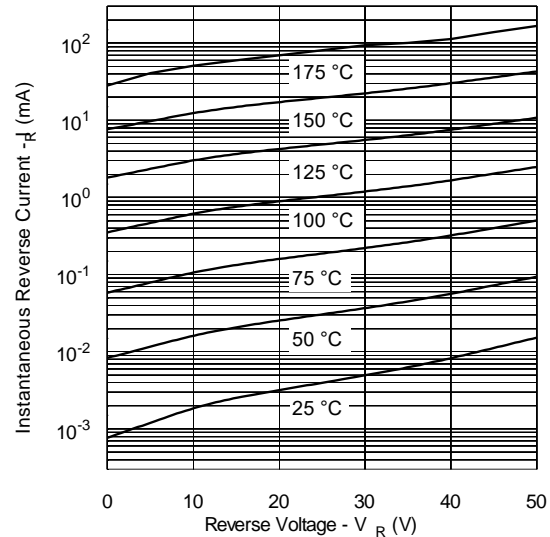
TYPE	PIN 1 (Base)	PIN 2
SINGLE RECTIFIER in a Surface Mount Package	CATHODE	ANODE

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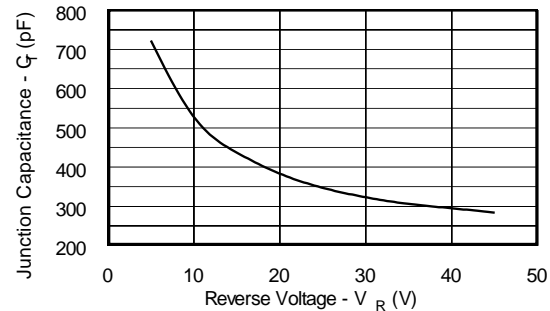
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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