

TECHNICAL DATA  
DATA SHEET 786, REV. C

## 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
- Excellent Reverse Avalanche Characteristics

### Maximum Ratings

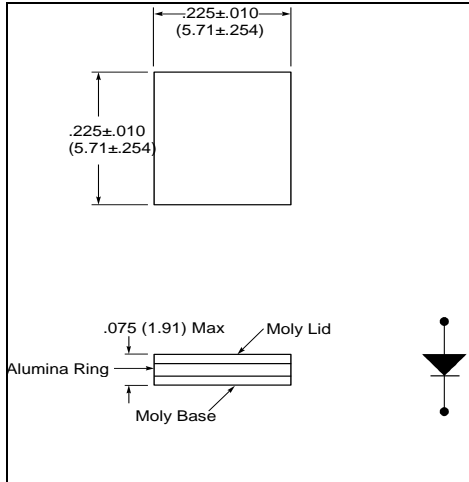
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	60	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	30	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine wave	280	A
Non-Repetitive Avalanche Energy	$E_{AS}$	$T_J = 25\text{ }^\circ\text{C}$ , $I_{AS} = 11.5\text{ A}$ , $L = 11.5\text{ mH}$	13 (typ)	mJ
Repetitive Avalanche Current	$I_{AR}$	$I_{AS}$ decay linearly to 0 in $1\text{ }\mu\text{s}$ $f$ limited by $T_J\text{ max } V_A=1.5V_R$	1.5	A
Maximum Thermal Resistance	$R_{\theta JC}$		1.7	$^\circ\text{C/W}$
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics

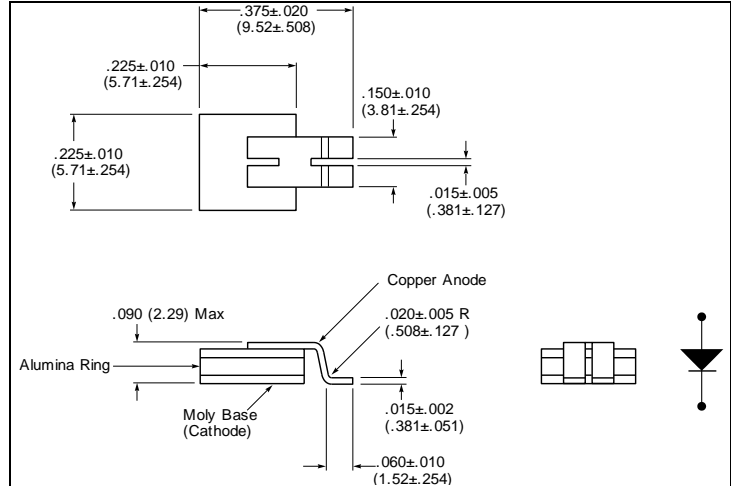
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.60	V
	$V_{F2}$	@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.56	V
Max. Reverse Current	$I_{R1}$	@ $V_R = 60\text{V}$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.8	mA
	$I_{R2}$	@ $V_R = 60\text{V}$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$	45	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ , $V_{SIG} = 50\text{mV (p-p)}$	720	pF

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**MECHANICAL DIMENSIONS: In Inches / mm**

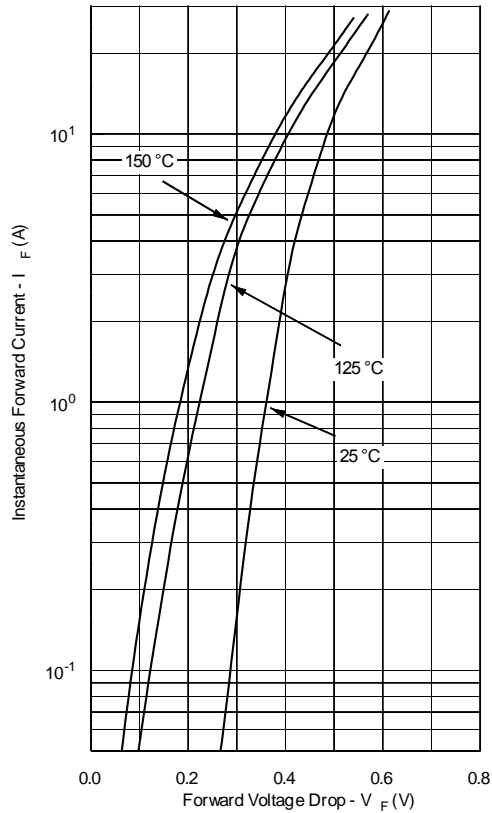


**SHD-1**

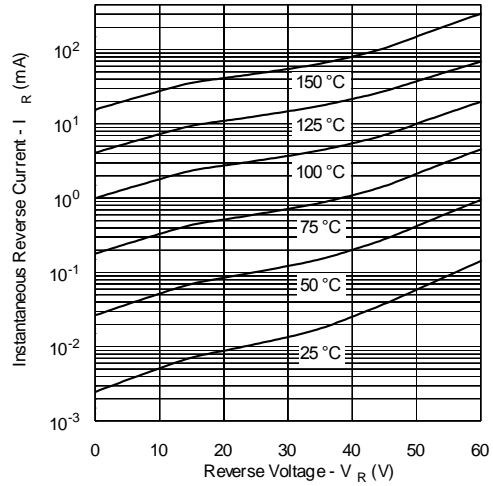


**SHD-1B**

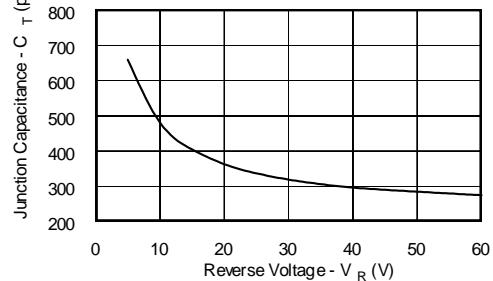
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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