SENSITRON
SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 642, REV. A
Formerly part number SHD1162/A/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 °C, I_{AS} = 3.0 A, L = 4.4 mH	20	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in 1 μs f limited by T_J max V_A=1.5V_R	3.0	A
Maximum Thermal Resistance	$R_{\theta JC}$	(Junction to Mounting Surface, Cathode)	.85	°C/W
Max. Junction Temperature	T_J	-	-65 to +175	°C
Max. Storage Temperature	T_{stg}	-	-65 to +175	°C

Electrical Characteristics

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 15A, Pulse, T_J = 25 °C	0.64	V
	V_{F2}	@ 15A, Pulse, T_J = 125 °C	0.57	V
Max. Reverse Current	I_{R1}	@V_R = 45V, Pulse, T_J = 25 °C	400	μA
	I_{R2}	@V_R = 45V, Pulse, T_J = 125 °C	15	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p)	800	pF

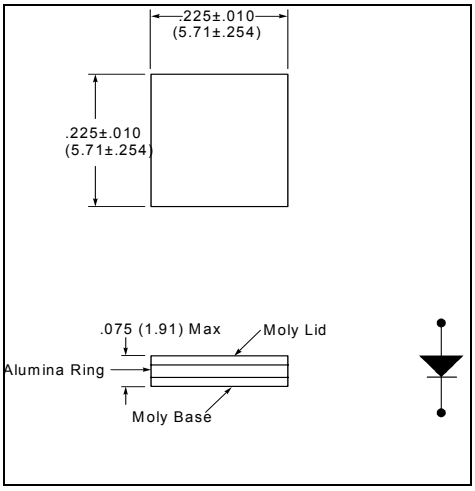
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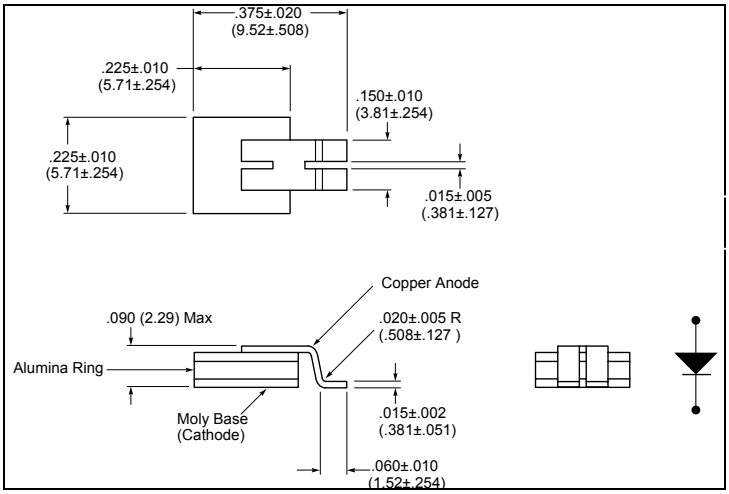
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MECHANICAL DIMENSIONS: In Inches / mm

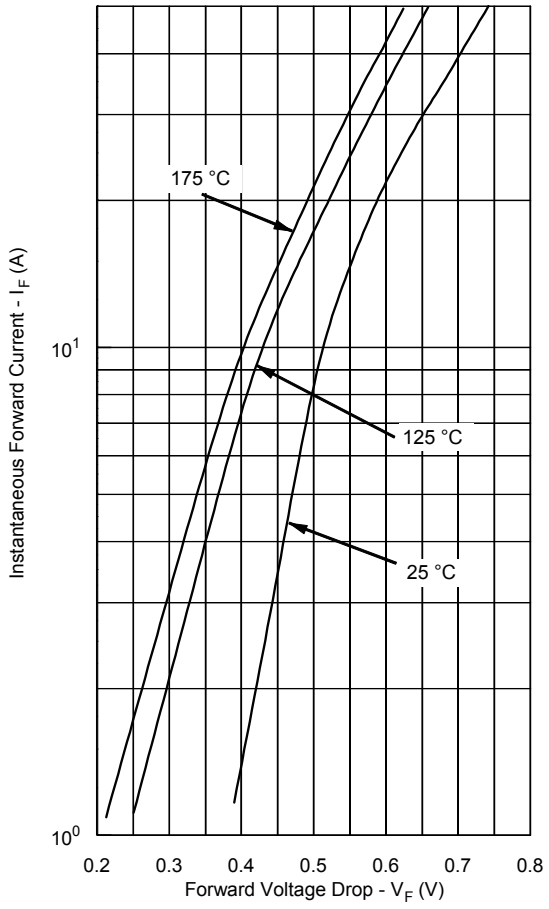
SHD-1



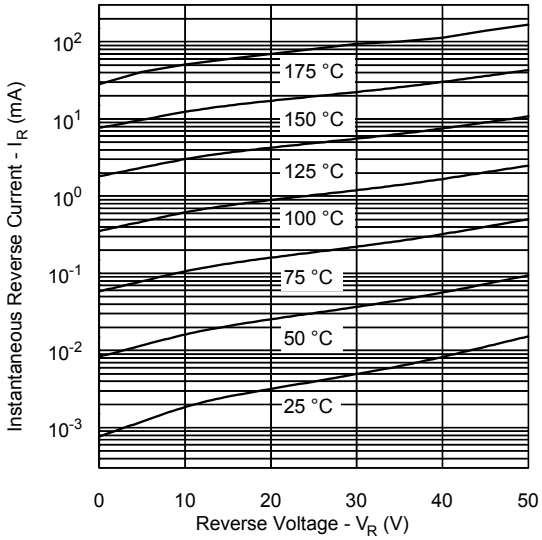
SHD-1B



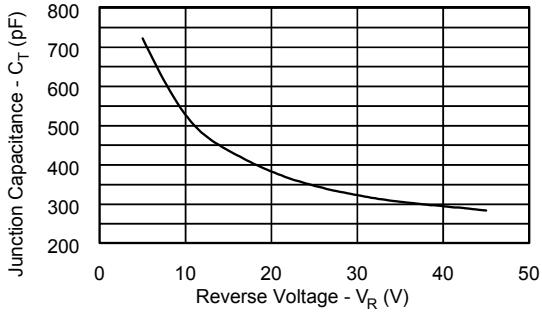
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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