

## **SILICON SCHOTTKY RECTIFIER DIE**

### **Very Low Forward Voltage Drop**

**Applications:**

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

**Features:**

- Soft Reverse Recovery at Low and High Temperature
- Very Low Forward Voltage Drop
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics
- Electrically / Mechanically Stable during and after Packaging

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	200	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 <sup>(1)</sup>	280	A
Non-Repetitive Avalanche Energy	$E_{AS}$	$T_J = 25\text{ }^{\circ}\text{C}$ , $I_{AS} = 0.6\text{ A}$ , $L = 40\text{mH}$	7.2	mJ
Repetitive Avalanche Current	$I_{AR}$	$I_{AS}$ decay linearly to 0 in 1 $\mu\text{s}$ $f$ limited by $T_J$ max $V_A=1.5V_R$	0.6	A
Max. Junction Temperature	$T_J$	-	-65 to +200	$^{\circ}\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65 to +200	$^{\circ}\text{C}$

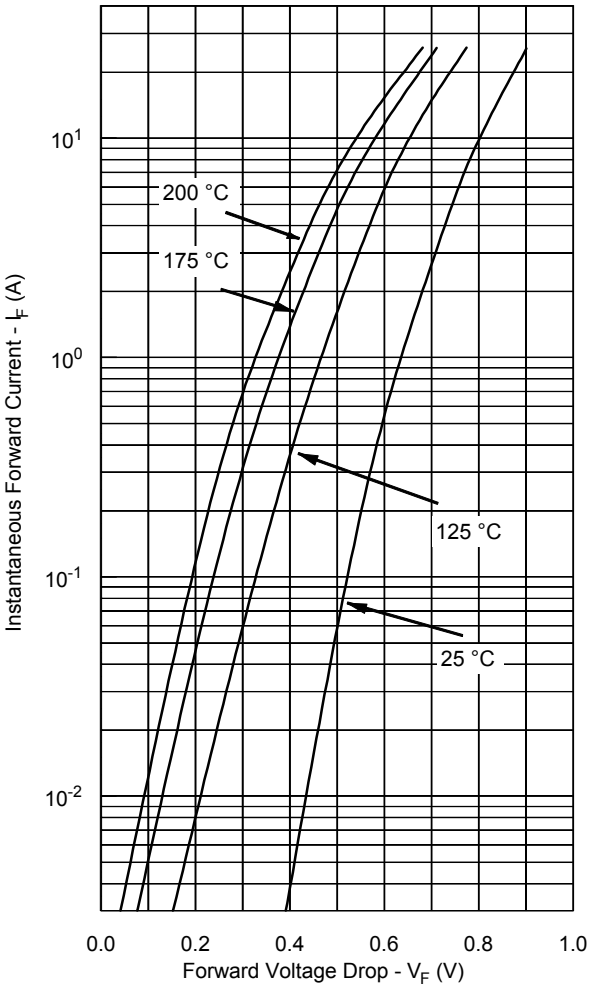
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 15A, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	0.92	V
	$V_{F2}$	@ 15A, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	0.76	V
Max. Reverse Current	$I_{R1}$	@ $V_R = 200\text{V}$ , Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	350	$\mu\text{A}$
	$I_{R2}$	@ $V_R = 200\text{V}$ , Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	8	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)	300	pF

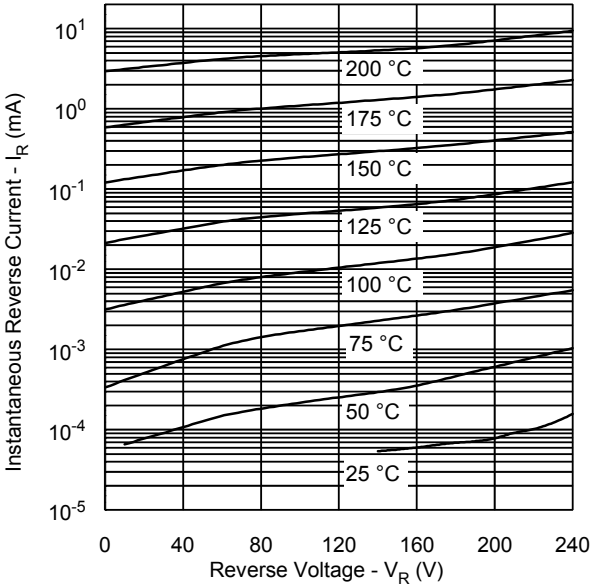
(1) in SHD package

**SENSITRON**  
**TECHNICAL DATA**  
**DATASHEET 4938, Rev A**

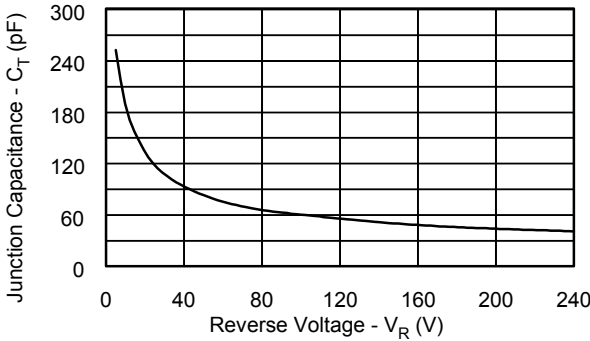
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



## SENSITRON

TECHNICAL DATA  
DATASHEET 4938, Rev A

## Mechanical Dimensions: In Inches / mm

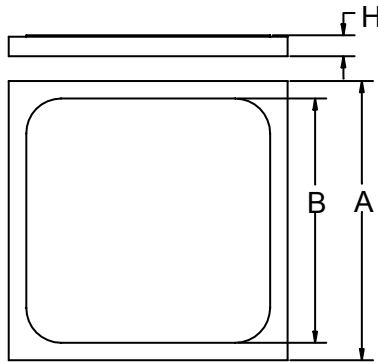


Figure 1

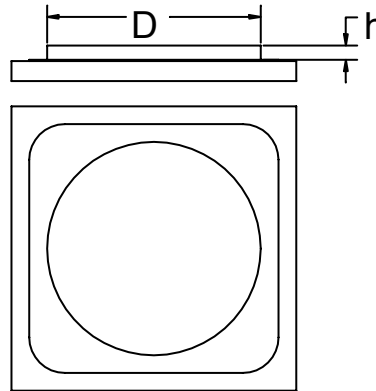


Figure 2

A	B	D	H	h
0.125±0.003	0.116±0.003	0.070±0.005	0.0155±0.001	0.010±0.002

Top side (Anode) metallization:

A = Al - 25 kÅ minimum, Figure 1

B = Ag - 30 kÅ minimum, Figure 1

C = Au - 12 kÅ min, Figure 2

Bottom side (Cathode) metallization:

A, B, C = Ti/Ni/Ag - 30 kÅ minimum.

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