SENSITRON
SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 520, REV. B

SILICON SCHOTTKY RECTIFIER DIE
Very Low Forward Voltage Drop
200°C Operating Temperature

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 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**
- **Out Performs 100 Volt Ultrafast Rectifiers**

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	100	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 (1)	280	A
Non-Repetitive Avalanche Energy	E_{AS}	T_J = 25 °C, I_{AS} = 0.53 A, L = 56 mH	8.0	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	0.53	A
Max. Junction Temperature	T_J	-	-65 to +200	°C
Max. Storage Temperature	T_{stg}	-	-65 to +200	°C

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 15A, Pulse, T_J = 25 °C	0.84	V
	V_{F2}	@ 15A, Pulse, T_J = 125 °C	0.68	V
Max. Reverse Current	I_{R1}	@V_R = 100V, Pulse, T_J = 25 °C	350	μA
	I_{R2}	@V_R = 100V, Pulse, T_J = 125 °C	8	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p)	500	pF

(1) in SHD package

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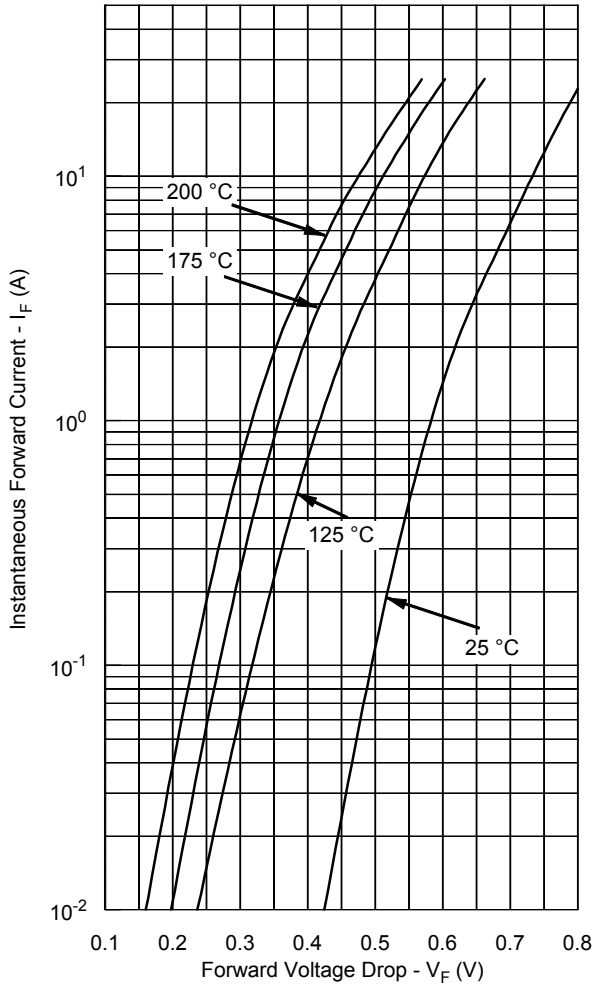
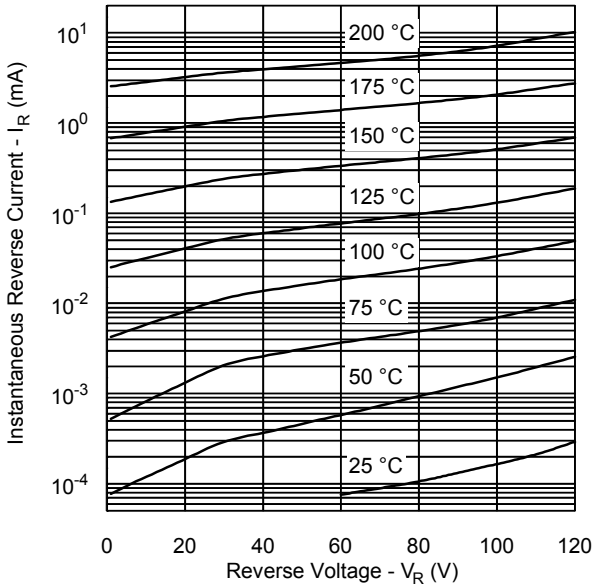
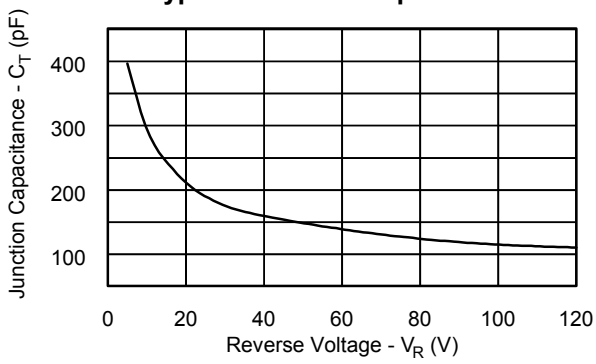
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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Mechanical Dimensions: In Inches / mm

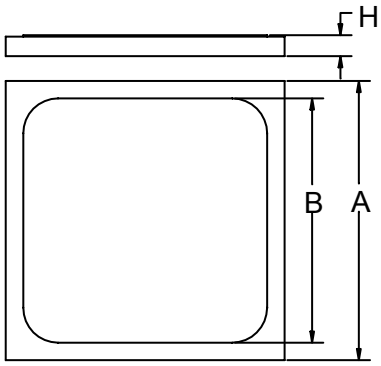

Figure 1

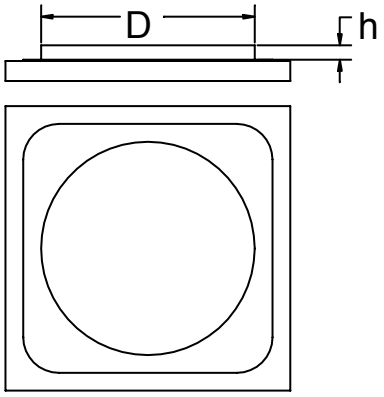

Figure 2

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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