

TECHNICAL DATA
DATA SHEET 512, REV. B

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 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

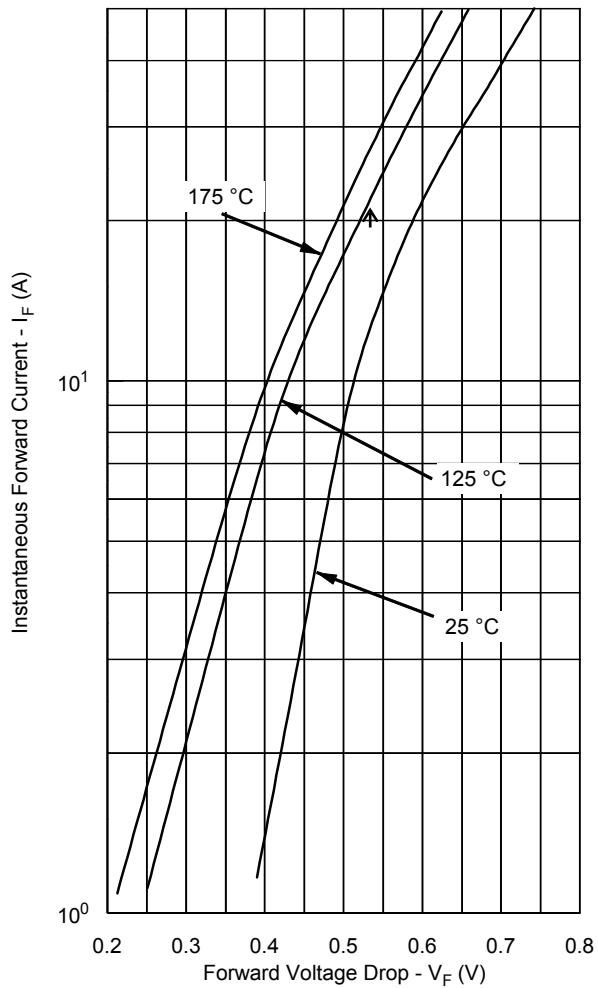
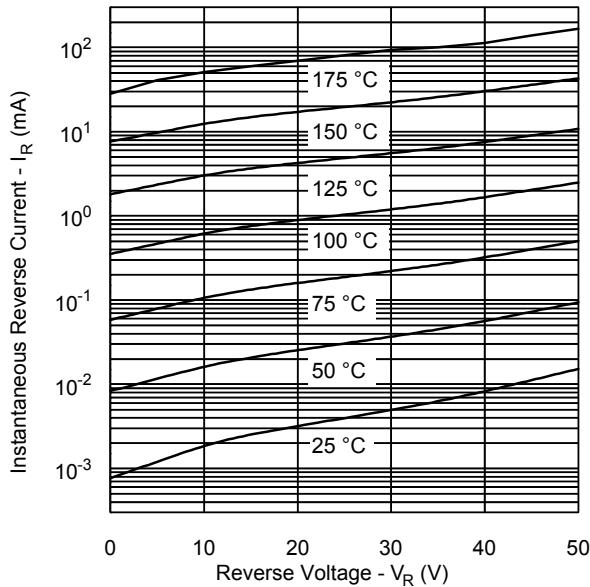
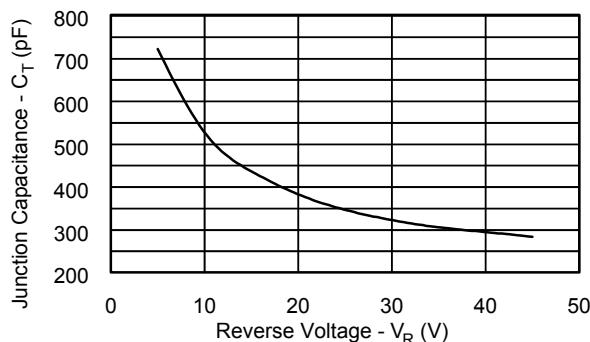
Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	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 ⁽¹⁾	280	A
Non-Repetitive Avalanche Energy	E_{AS}	$T_J = 25^\circ C$, $I_{AS} = 3.0 A$, $L = 4.4 mH$	20	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in 1 μs , f limited by T_J max $V_A = 1.5 V_R$	3.0	A
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, $T_J = 25^\circ C$	0.64	V
	V_{F2}	@ 15A, Pulse, $T_J = 125^\circ C$	0.57	V
Max. Reverse Current	I_{R1}	@ $V_R = 45V$, Pulse, $T_J = 25^\circ C$	400	μA
	I_{R2}	@ $V_R = 45V$, Pulse, $T_J = 125^\circ C$	15	mA
Max. Junction Capacitance	C_T	@ $V_R = 5V$, $T_C = 25^\circ C$, $f_{SIG} = 1MHz$, $V_{SIG} = 50mV$ (p-p)	800	pF

(1) in SHD package

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Mechanical Dimensions: In Inches / mm
Typical Forward Characteristics

Typical Reverse Characteristics

Typical Junction Capacitance


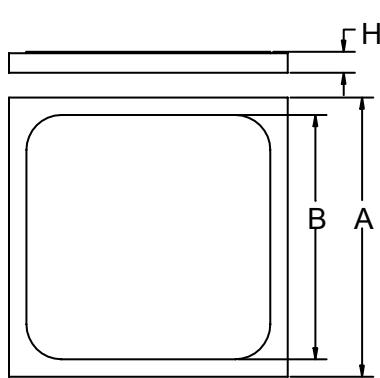
**TECHNICAL DATA
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Mechanical Dimensions: In Inches / mm


Figure 1

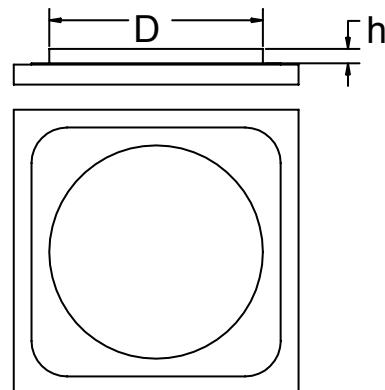


Figure 2

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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