SEMICONDUCTOR

TECHNICAL DATA DATA SHEET 244, REV. B

SILICON SCHOTTKY RECTIFIER DIE Ultra Low Reverse Leakage 200°C Operating Temperature

Applications:

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

Features:

- Ultra low Reverse Leakage Current
- 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	$I_{F(AV)}$	50% duty cycle, rectangular	120	Α
Current		wave form		
Max. Peak One Cycle Non-	I _{FSM}	8.3 ms, half Sine wave (1)	1650	Α
Repetitive Surge Current				
Non-Repetitive Avalanche	E_{AS}	$T_J = 25 ^{\circ}\text{C}, I_{AS} = 1.3 \text{A},$	19.0	mJ
Energy		L = 24 mH		
Repetitive Avalanche Current	I _{AR}	I _{AS} decay linearly to 0 in 1 μs	1.3	Α
		f limited by T _J max V _A =1.5V _R		
Max. Junction Temperature	TJ	-	-65 to +200	°C
Max. Storage Temperature	T_{stg}	-	-65 to +200	°C

Electrical Characteristics:

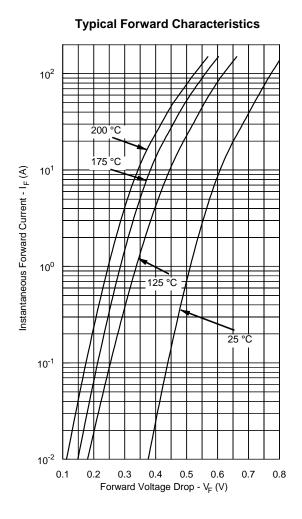
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 120A, Pulse, T _J = 25 °C	0.87	V
	V_{F2}	@ 120A, Pulse, T _J = 125 °C	0.72	V
Max. Reverse Current	I _{R1}	@V _R = 100V, Pulse,	60	mA
		$T_J = 25 ^{\circ}C$		
	I _{R2}	@V _R = 100V, Pulse,	6.0	mA
		T _J = 125 °C		
Max. Junction Capacitance	C _T	$@V_R = 5V, T_C = 25 ^{\circ}C$	3000	pF
		$f_{SIG} = 1MHz,$		
		$V_{SIG} = 50 \text{mV (p-p)}$		

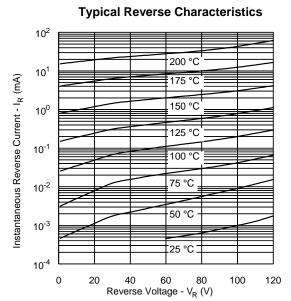
(1) in SHD package

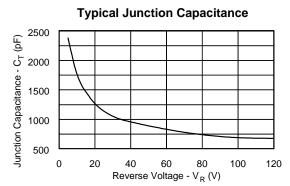
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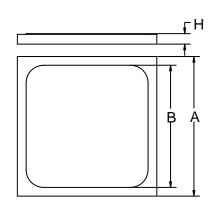


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Mechanical Dimensions: In Inches / mm



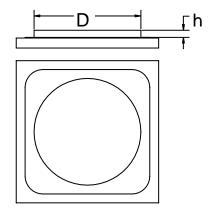


Figure 1 Figure 2

\mathbf{A}	В	D	H	h
0.275±0.003	0.267±0.003	0.220 ± 0.005	0.0155±0.001	0.011±0.002

Top side(Anode) metallization:

A = A1 - 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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