

Technical Data
Data Sheet 4956, Rev. A

SILICON SCHOTTKY RECTIFIER DIE

Very Low Forward Voltage Drop (150 °C T_J Operation)

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⁽¹⁾:

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} = 2.0 A, L = 8 mH	16.0	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	3.0	A
Max. Junction Temperature	T _J	-	-65 to +150	°C
Max. Storage Temperature	T _{stg}	-	-65 to +150	°C

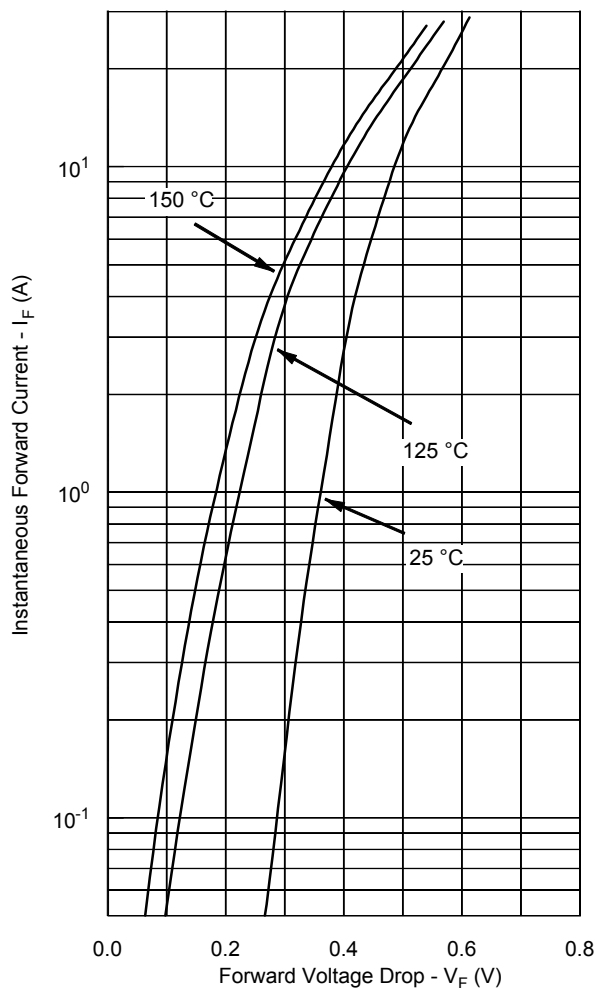
Electrical Characteristics⁽¹⁾:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V _{F1}	@ 15A, Pulse, T _J = 25 °C	0.56	V
	V _{F2}	@ 15A, Pulse, T _J = 125 °C	0.51	V
Max. Reverse Current	I _{R1}	@V _R = 45V, Pulse, T _J = 25 °C	1.5	mA
	I _{R2}	@V _R = 45V, Pulse, T _J = 125 °C	70	mA
Max. Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz, V _{SIG} = 50mV (p-p)	800	pF

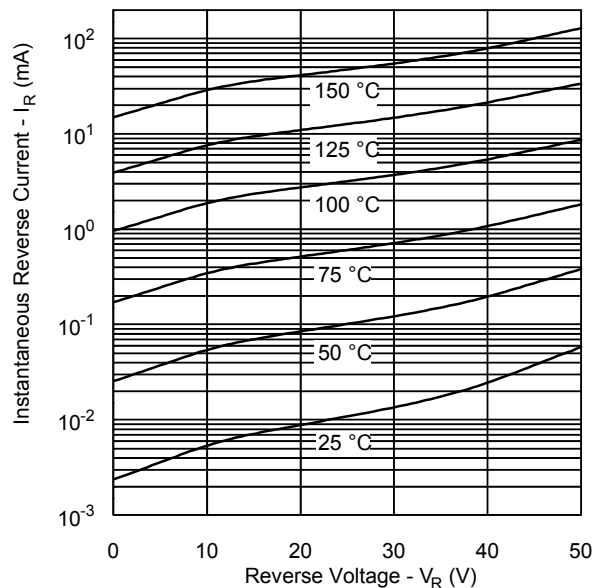
(1) in SHD package

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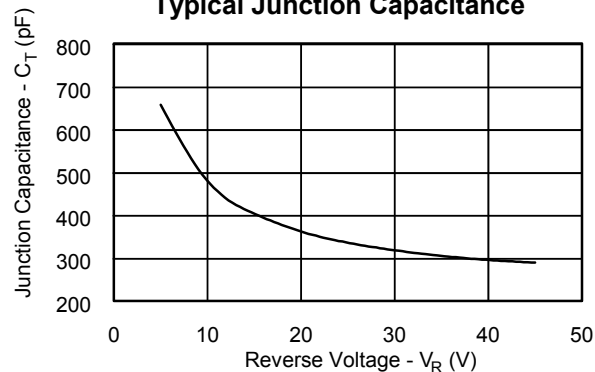
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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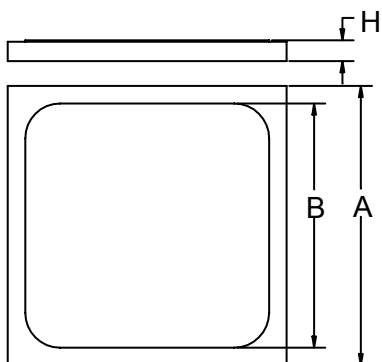


Figure 1

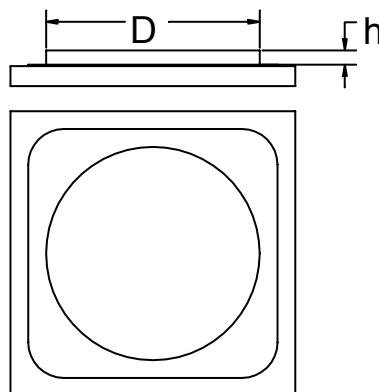


Figure 2

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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