

TECHNICAL DATA
DATA SHEET 521, REV. A

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	30	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave ⁽¹⁾	570	A
Non-Repetitive Avalanche Energy	E_{AS}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 0.75\text{ A}$, $L = 40\text{ mH}$	11.25	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in 1 μs f limited by T_J max $V_A=1.5V_R$	0.75	A
Max. Junction Temperature	T_J	-	-65 to +200	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +200	$^\circ\text{C}$

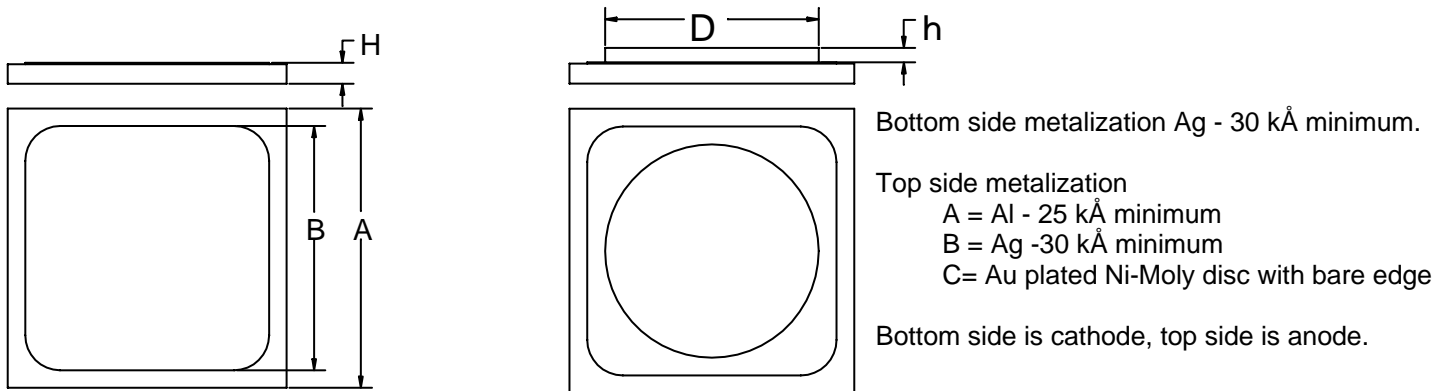
Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 30A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.84	V
	V_{F2}	@ 30A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.68	V
Max. Reverse Current	I_{R1}	@ $V_R = 100\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	750	μA
	I_{R2}	@ $V_R = 100\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	15	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)	1000	pF

(1) in SHD package

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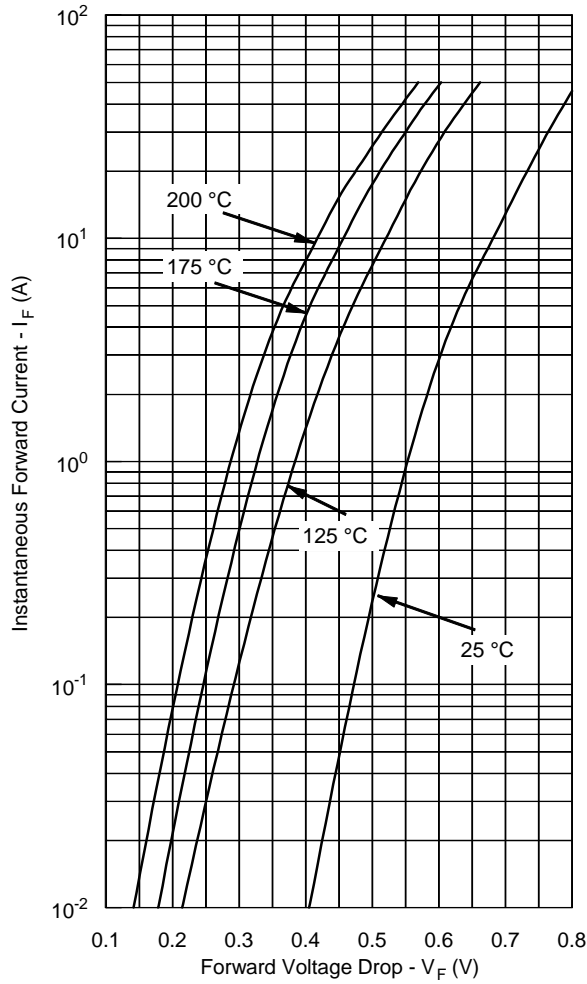
Mechanical Dimensions: In Inches / mm



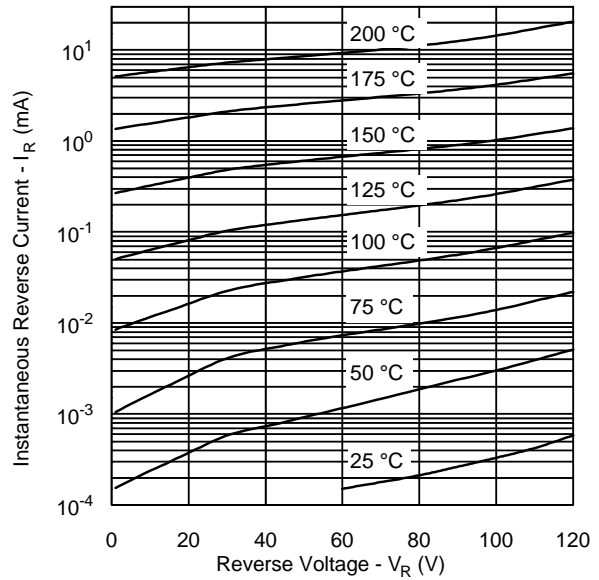
A	B	D	H	h
0.175 ± 0.003 (4.45 ± 0.077)	0.163 ± 0.003 (4.14 ± 0.077)	.120 ± 0.003	0.0105 ± 0.001, for Al top 0.0155 ± 0.001, for Ag top	.011 ± 0.0008

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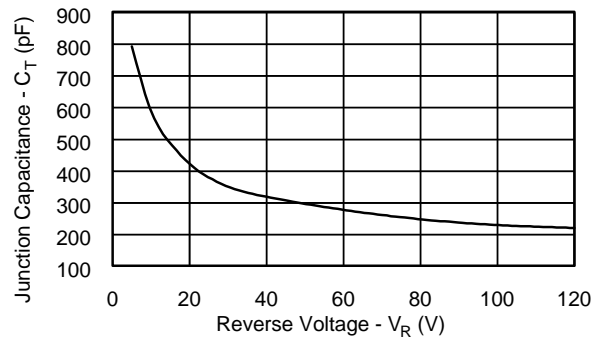
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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