

TECHNICAL DATA  
DATA SHEET 4028, Rev. A

**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 150 Volt Ultrafast Rectifiers

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	150	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	120	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, Sine pulse <sup>(1)</sup>	1650	A
Max. Junction Temperature	$T_J$	-	-65 to +200	°C
Max. Storage Temperature	$T_{stg}$	-	-65 to +200	°C

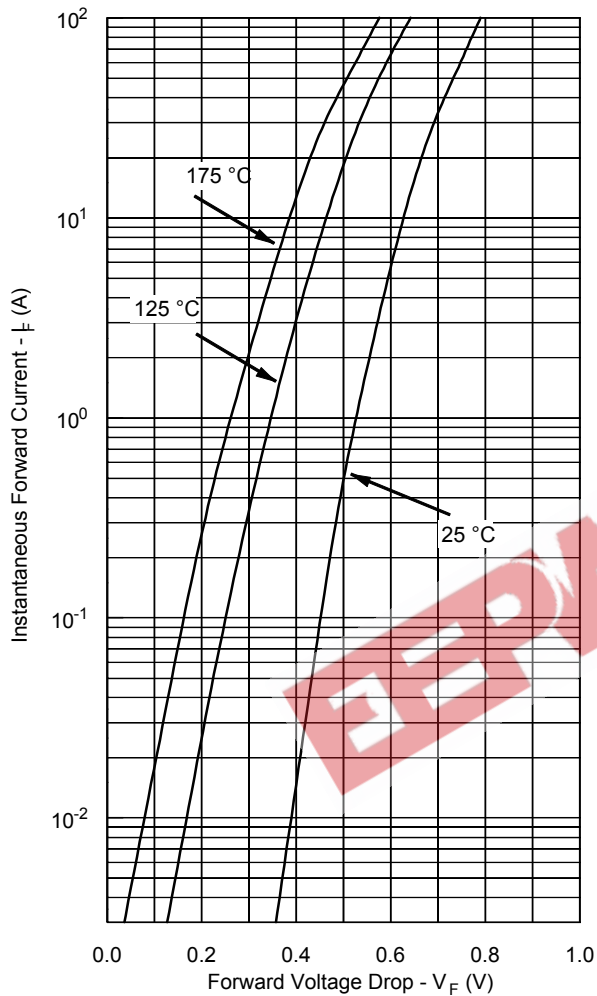
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 120A, Pulse, $T_J = 25\text{ °C}$	0.87	V
	$V_{F2}$	@ 120A, Pulse, $T_J = 125\text{ °C}$	0.72	V
Max. Reverse Current	$I_{R1}$	@ $V_R = 150V$ , Pulse, $T_J = 25\text{ °C}$	3.0	mA
	$I_{R2}$	@ $V_R = 150V$ , Pulse, $T_J = 125\text{ °C}$	48	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 5V$ , $T_C = 25\text{ °C}$ $f_{SIG} = 1MHz$ , $V_{SIG} = 50mV$ (p-p)	3000	pF

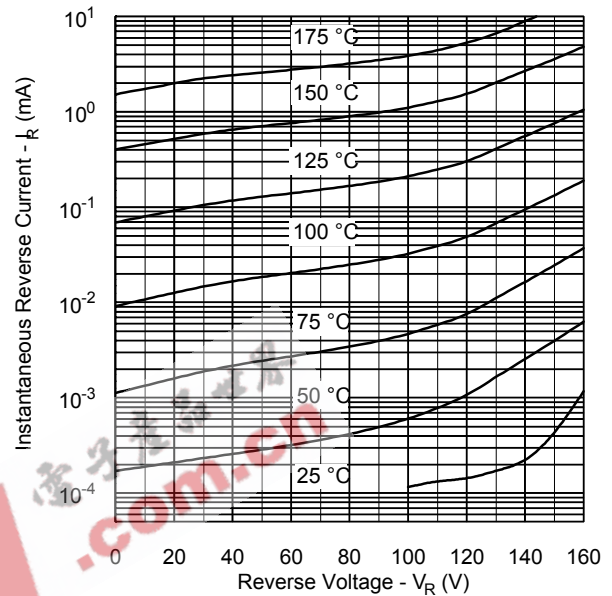
(1) in SHD package

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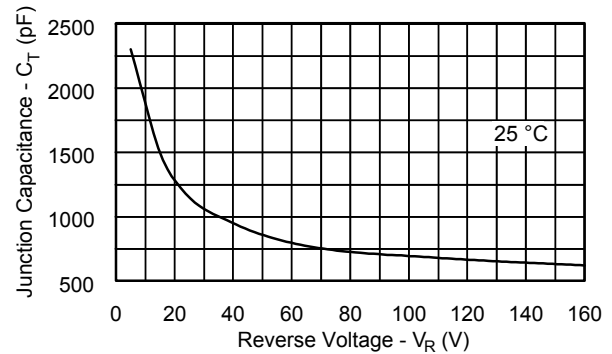
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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**Mechanical Dimensions: In Inches / mm**

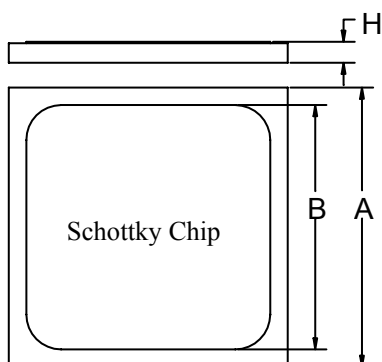


Figure 1

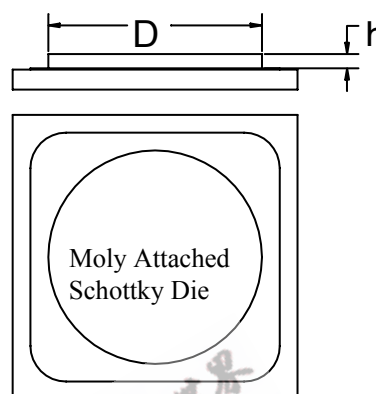


Figure 2

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.

A	B	D	H	h
0.275±0.003	0.267±0.003	0.220±0.005	0.0155±0.001	0.011±0.002

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