SEMICONDUCTOR

TECHNICAL DATA DATA SHEET 515, REV. A

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	120	Α
Max. Peak One Cycle Non- Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine wave (1)	1650	А
Non-Repetitive Avalanche Energy	E _{AS}	T _J = 25 °C, I _{AS} = 11 A, L = 1.2 mH	76	mJ
Repetitive Avalanche Current	I _{AR}	I_{AS} decay linearly to 0 in 1 μ s f limited by T_J max V_A =1.5 V_R	11	А
Max. Junction Temperature	Τ _J	-	-65 to +175	°C
Max. Storage Temperature	T _{stg}	-	-65 to +175	°C

Electrical Characteristics:

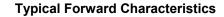
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 120A, Pulse, T _J = 25 °C	0.66	V
	V_{F2}	@ 120A, Pulse, T _J = 125 °C	0.59	V
Max. Reverse Current	I_{R1}	@V _R = 45V, Pulse,	2.4	mA
		T _J = 25 °C		
	I_{R2}	@V _R = 45V, Pulse,	90	mA
		T _J = 125 °C		
Max. Junction Capacitance	C_T	$@V_R = 5V, T_C = 25 ^{\circ}C$	4800	pF
		$f_{SIG} = 1MHz,$		
		$V_{SIG} = 50 \text{mV (p-p)}$		

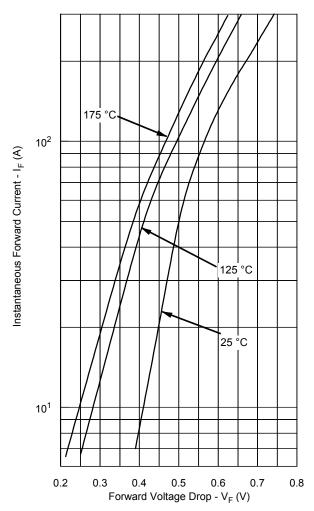
(1) in SHD package

^{• 221} West Industry Court ☐ Deer Park, NY 11729-4681 ☐ (631) 586-7600 FAX (631) 242-9798 •

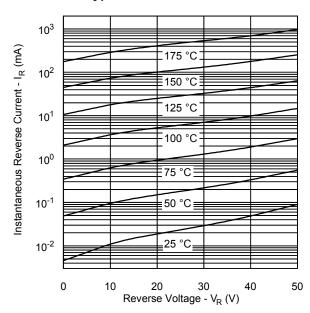
[•] World Wide Web Site - http://www.sensitron.com • E-Mail Address - sales@sensitron.com •

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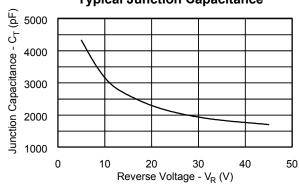




Typical Reverse Characteristics

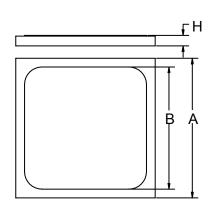


Typical Junction Capacitance



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Mechanical Dimensions: In Inches / mm



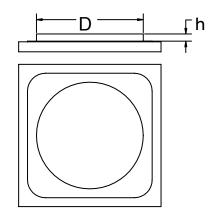


Figure 1

Figure 2

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.

A	В	D	Н	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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