SENSITRON SEMICONDUCTOR

TECHNICAL DATA DATA SHEET 4650, REV. -

HERMETIC SCHOTTKY RECTIFIER Very Low Forward Voltage Drop

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

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 (Single)	7.5	A
Max. Peak One Cycle Non- Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine wave (per leg)	140	A
Non-Repetitive Avalanche Energy	E_{AS}	T _J = 25 °C, I _{AS} = 3.0 A, L = 4.4 mH (per leg)	20	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
Maximum Thermal Resistance	$R_{ ext{ heta}JC}$	-	2.45	°C/W
Max. Junction Temperature	ΤJ	-	-65 to +150	°C
Max. Storage Temperature	T _{stg}	-	-65 to +150	°C

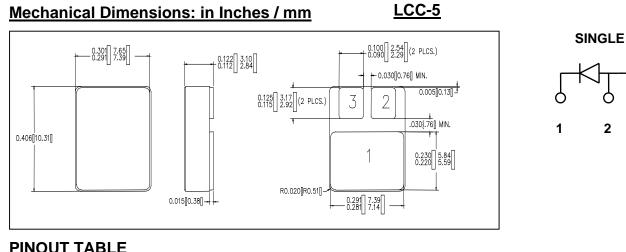
Electrical Characteristics

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V _{F1}	@ 7.5A, Pulse, T _J = 25 °C	0.62	V
(per leg)	V _{F2}	@ 7.5A, Pulse, T _J = 125 °C	0.57	V
Max. Reverse Current	I _{R1}	$@V_R = 45V$, Pulse,	0.75	mA
		T _J = 25 °C		
(per leg)	I _{R2}	$@V_R = 45V$, Pulse,	35	mA
		T _J = 125 °C		
Max. Junction Capacitance	CT	@V _R = 5V, T _C = 25 °C	400	pF
(per leg)		f _{SIG} = 1MHz,		
		$V_{SIG} = 50 \text{mV} (\text{p-p})$		

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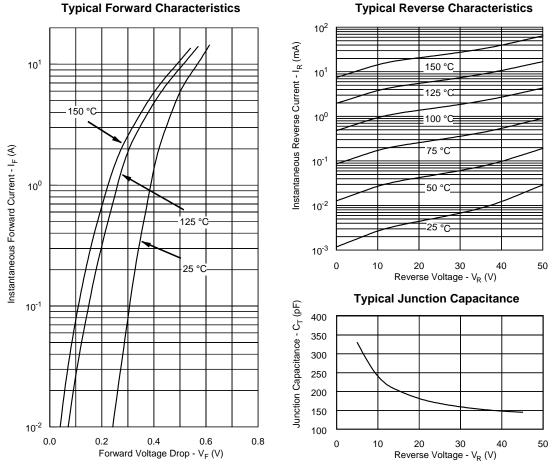
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DEVICE TYPE	PIN 1	PIN 2	PIN 3			
SINGLE RECTIFIER	CATHODE	ANODE	ANODE			

Note: The V_f curves shown are for the SD90SA45 unpackaged die only.



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Typical Reverse Characteristics



TECHNICAL DATA

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