SENSITRON
SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 4170, REV. A

HERMETIC POWER SCHOTTKY RECTIFIER
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**
- **Out Performs 100 Volt Ultrafast Rectifiers**
- **Add Prefix C to SHD – For Ceramic Seals (SHDC)**
- **Add Suffix S for TX/TXV screening, SS For JANS Screening**

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	15	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave	150	A
Max. Thermal Resistance	$R_{\theta JC}$		2.1	°C/W
Max. Junction Temperature	T_J	-	-65 to +200	°C
Max. Storage Temperature	T_{stg}	-	-65 to +175	°C

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 15A, Pulse, T_J = 25 °C	0.93	V
	V_{F2}	@ 15A, Pulse, T_J = 125 °C	0.84	V
Max. Reverse Current	I_{R1}	@V_R = 100V, Pulse, T_J = 25 °C	.1	mA
	I_{R2}	@V_R = 100V, Pulse, T_J = 125 °C	1.0	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p)	500	pF

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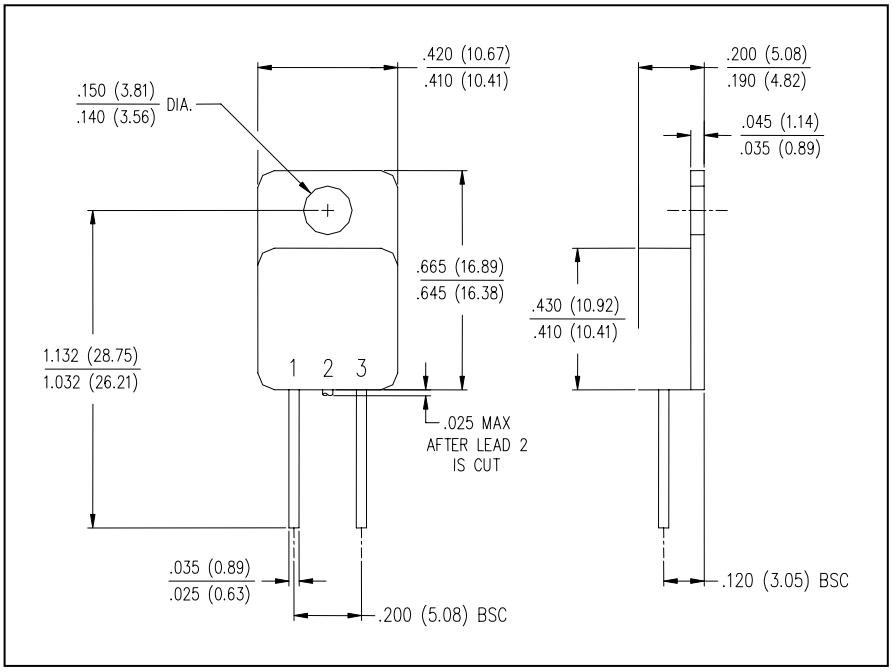
Mechanical Dimensions: In Inches / mm



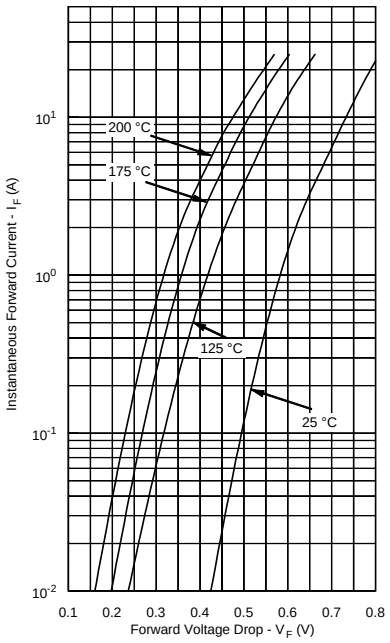
MODIFIED TO-257

PINOUT TABLE

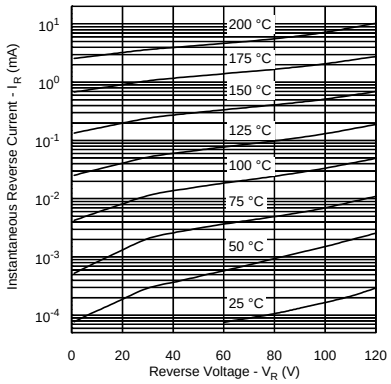
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	-	ANODE

Note: The V_f curves shown are for the SD125SCU100 unpackaged die only.

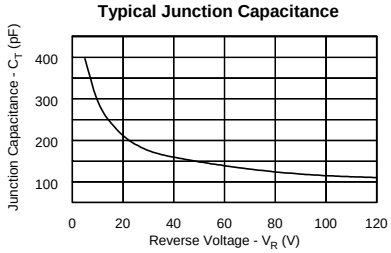
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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