

TECHNICAL DATA  
DATA SHEET 4559, REV. C**HERMETIC POWER SCHOTTKY RECTIFIER**  
**Very Low Forward Voltage Drop****Applications:**

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

**Features:**

- Very Low Forward Voltage Drop
- High Efficiency
- High Frequency Application
- Guard Ring for Enhanced Durability and Long Term Reliability

**MAXIMUM RATINGS**ALL RATINGS ARE @  $T_C = 25^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED.

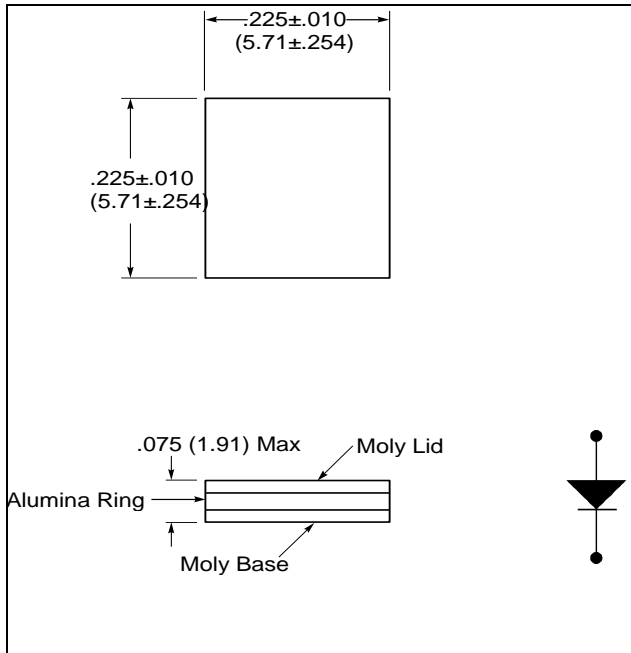
RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	PIV	30	Volts
MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ $T_C=100^\circ\text{C}$ )	$I_O$	7.5	Amps
MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT ( $t=8.3\text{ms}$ , Sine)	$I_{FSM}$	140	Amps
MAXIMUM THERMAL RESISTANCE (Junction to Mounting Surface, Cathode)	$R_{\theta JC}$	3.20	$^\circ\text{C/W}$
MAXIMUM OPERATING TEMPERATURE RANGE	$T_{op}$	-65 to + 150	$^\circ\text{C}$
MAXIMUM STORAGE TEMPERATURE RANGE	$T_{stg}$	-65 to + 150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS**

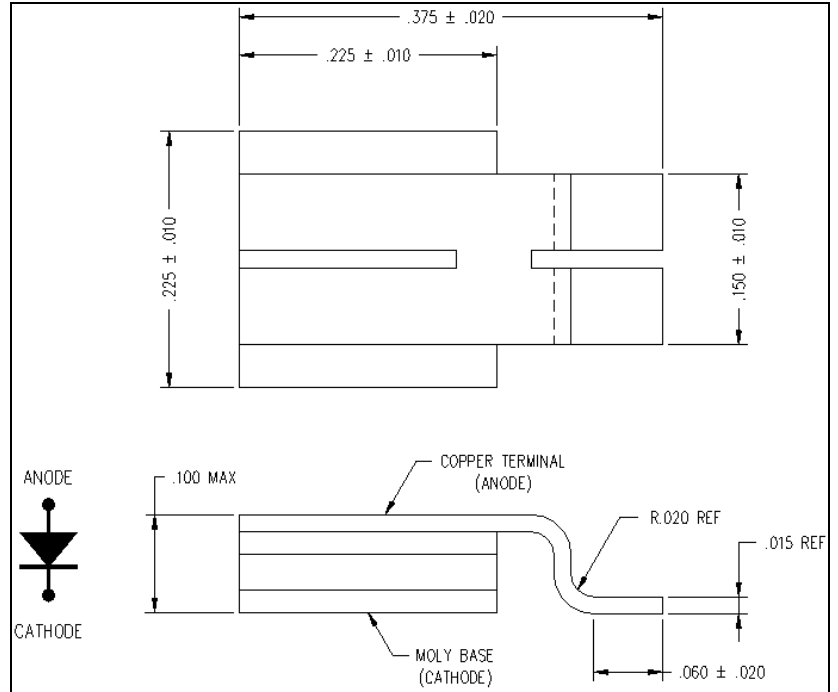
CHARACTERISTIC	SYMBOL	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP, Pulsed ( $I_f = 7.5$ Amps) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	$V_f$	0.49 0.39	Volts
MAXIMUM REVERSE CURRENT ( $I_r$ @ 30V PIV) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	$I_r$	1 50	mA
MAXIMUM JUNCTION CAPACITANCE ( $V_r=5\text{V}$ )	$C_T$	550	pF

**SENSITRON**  
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**MECHANICAL DIMENSIONS: In Inches / mm**

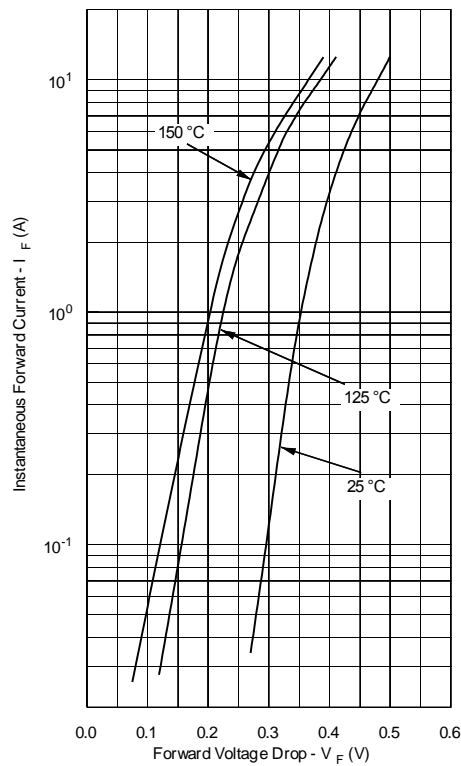


**SHD-1**

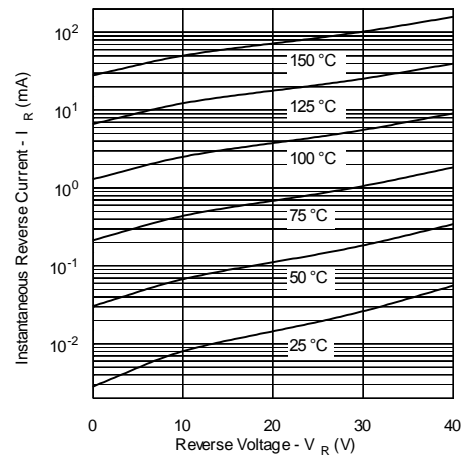


**SHD-1B**

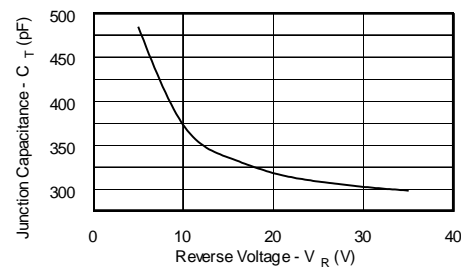
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**SENSITRON**

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