

TECHNICAL DATA  
DATASHEET 290, REV. B

**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

**MAXIMUM RATINGS**

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

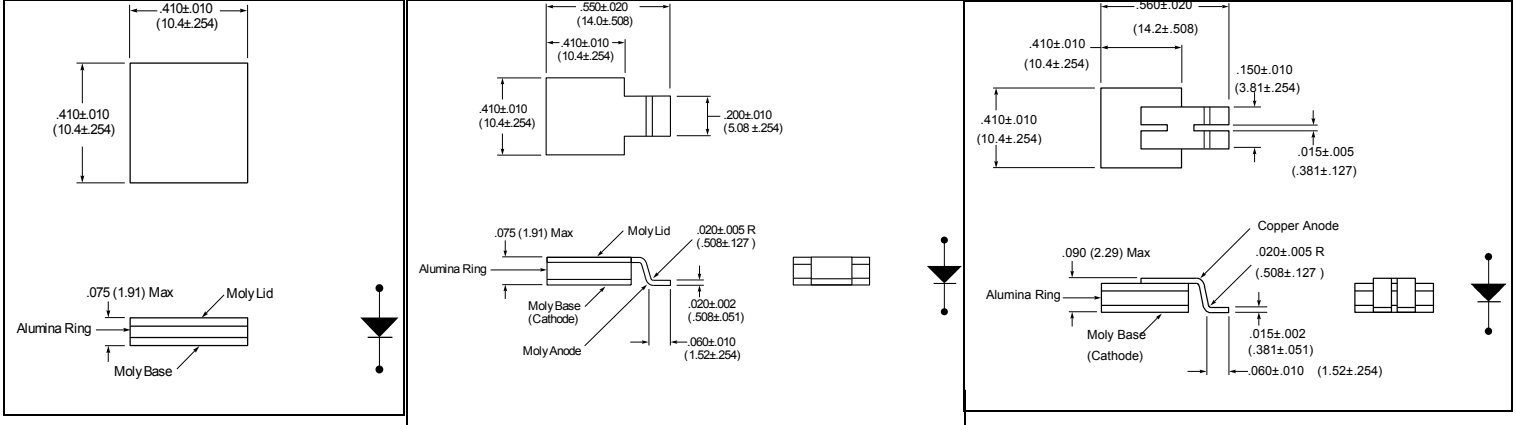
RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	PIV	100	Volts
MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ $T_C=100\text{ }^\circ\text{C}$ )	$I_O$	120	Amps
MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT ( $t = 8.3\text{ms}$ , Sine)	$I_{FSM}$	1650	Amps
MAXIMUM JUNCTION CAPACITANCE ( $V_r=5\text{V}$ )	$C_T$	3000	pF
MAXIMUM THERMAL RESISTANCE (Junction to Mounting Surface, Cathode)	$R_{\theta JC}$	0.38	$^\circ\text{C/W}$
MAXIMUM OPERATING JUNCTION TEMPERATURE RANGE	Top	-65 to +200	$^\circ\text{C}$
MAXIMUM STORAGE TEMPERATURE RANGE	Tstg	-65 to +175	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS**

CHARACTERISTIC	SYMBOL	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP, Pulsed ( $I_f = 120\text{ Amps}$ ) $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$	$V_f$	0.87 0.72	Volts
MAXIMUM REVERSE CURRENT ( $I_r @ 100\text{ V PIV}$ ) $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$	$I_r$	0.60 6.0	mA

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**MECHANICAL DIMENSIONS: In Inches / mm**



**SHD-3**

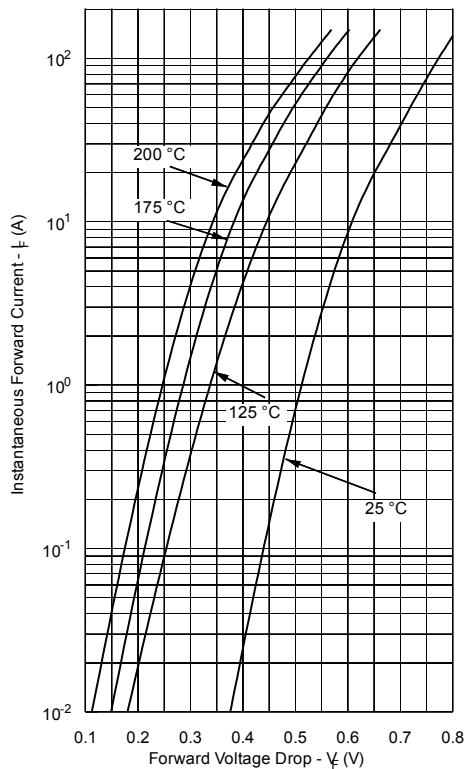
**SHD-3A**

**SHD-3B**

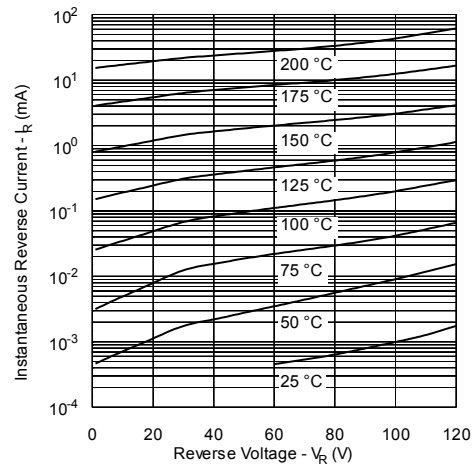
**PINOUT TABLE**

TYPE	PIN 1 (Base)	PIN 2
SINGLE RECTIFIER	CATHODE	ANODE

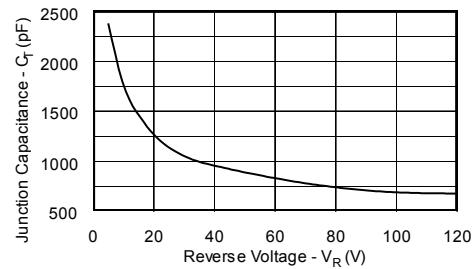
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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