

TECHNICAL DATA
DATASHEET 1049, REV. B

HERMETIC POWER SCHOTTKY RECTIFIER
175°C Maximum Operation Temperature
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 Reverse Leakage Current
- 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.

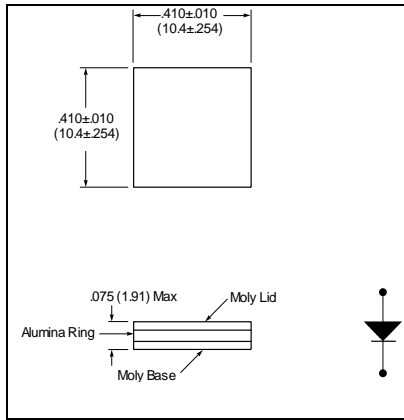
RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	PIV	200	Volts
MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ $T_C=100\text{ }^\circ\text{C}$)	I_O	60	Amps
MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT ($t=8.3\text{ms}$, Sine)	I_{FSM}	860	Amps
MAXIMUM THERMAL RESISTANCE (Junction to Mounting Surface, Cathode)	$R_{\theta JC}$	0.70	$^\circ\text{C/W}$
MAXIMUM JUNCTION TEMPERATURE RANGE	T_{op}/T_{stg}	-65 to + 175	$^\circ\text{C}$
MAXIMUM STORAGE TEMPERATURE RANGE	T_{op}/T_{stg}	-65 to + 175	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

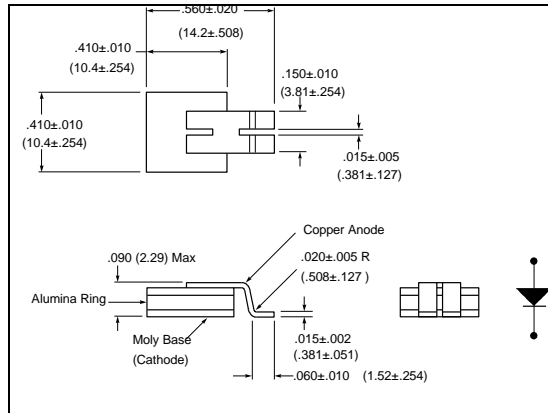
CHARACTERISTIC	SYMBOL	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP, Pulsed ($I_f = 60\text{ Amps}$) $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$	V_f	0.95 0.79	Volts
MAXIMUM REVERSE CURRENT (I_r @ 200V PIV) $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$	I_r	1.1 24	mA
MAXIMUM JUNCTION CAPACITANCE ($V_r=5\text{V}$)	C_T	900	pF

*Due to the nature of the 200V Schottky devices, some degradation in t_{rr} performance at high temperatures should be expected, unlike conventional lower voltage Schottkys.

MECHANICAL DIMENSIONS: In Inches / mm

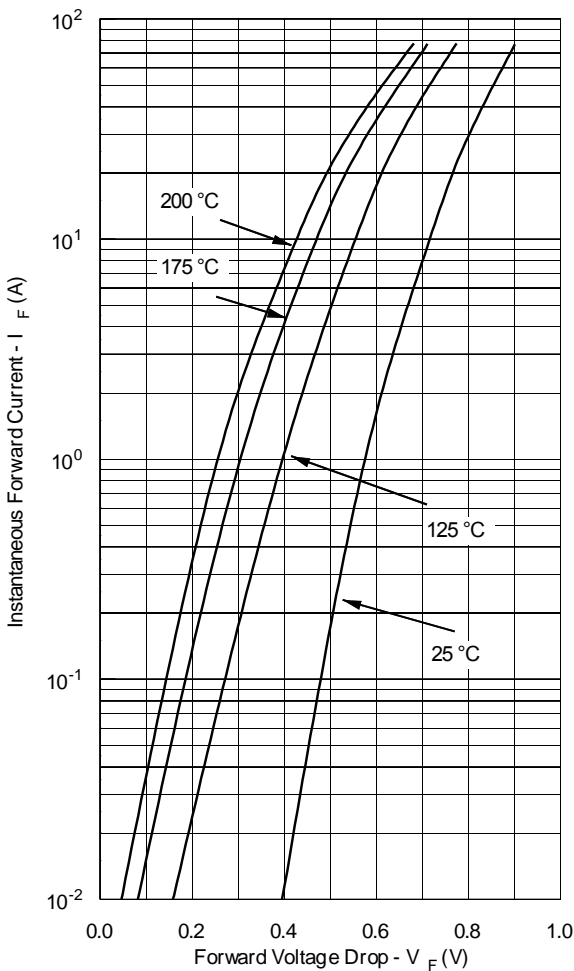


SHD-3

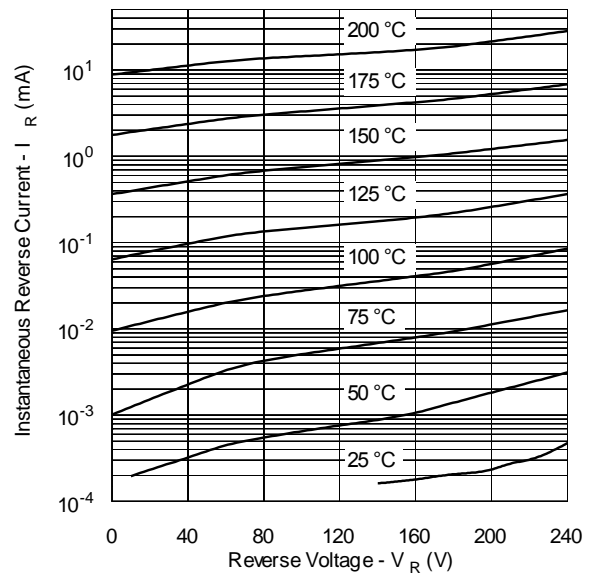


SHD-3B

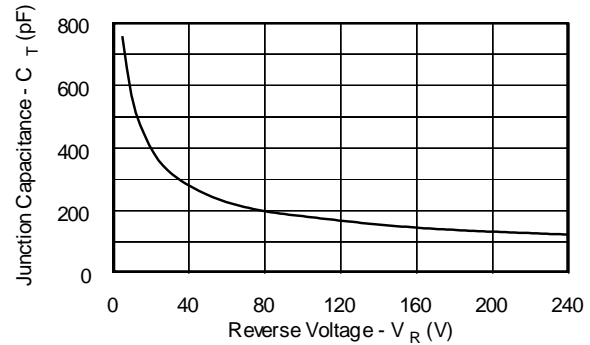
Typical Forward Characteristics



Typical Reverse Characteristics

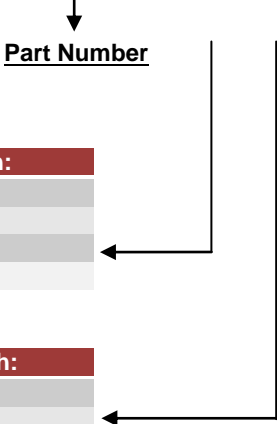


Typical Junction Capacitance



PART ORDERING INFORMATION:

SHD114546 XX X



Screening Level (blank is no screening):

Suffix	Screened in Accordance with:
blank	No screening level
SX*	MIL-PRF-19500, TX Level
SV*	MIL-PRF-19500, TXV Level
SS*	MIL-PRF-19500, S Level

QCI (blank is no QCI):

Suffix	Inspection in Accordance with:
blank	No QCI
Q*	MIL-PRF-19500 QCI

*The 200V schottky diodes may be de-rated to 170V. In addition, PDA requirement may be modified to not include delta removals for reverse leakage current.

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