

TECHNICAL DATA
DATA SHEET 4541, REV. B.1

HERMETIC SCHOTTKY RECTIFIER

Low Forward Voltage Drop

Features:

- Soft Reverse Recovery at Low and High Temperature
- 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

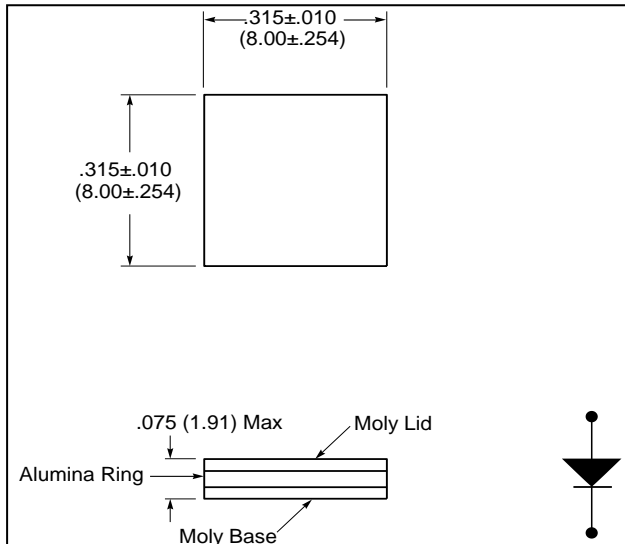
Maximum Ratings

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Single)	30	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Common Cathode)	60	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave (per leg)	570	A
Non-Repetitive Avalanche Energy	E_{AS}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 3.0\text{ A}$, $L = 4.4\text{ mH}$ (per leg)	20	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in $1\text{ }\mu\text{s}$ f limited by T_J max $V_A=1.5V_R$	3.0	A
Maximum Thermal Resistance	$R_{\theta JC}$	DC operation	0.9	$^\circ\text{C/W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$

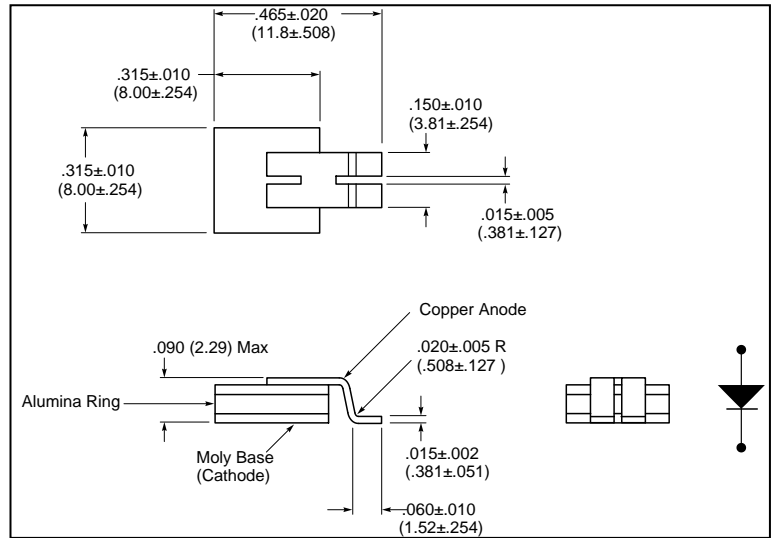
Electrical Characteristics

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 30A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.92	V
	V_{F2}	@ 30A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.76	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R = 200\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.7	mA
	I_{R2}	@ $V_R = 200\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	16	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 50\text{mV}$ (p-p)	600	pF

MECHANICAL DIMENSIONS: In Inches / mm



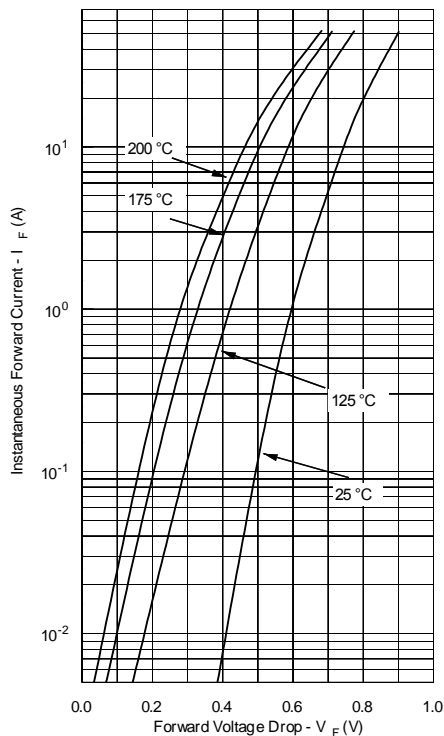
SHD-2



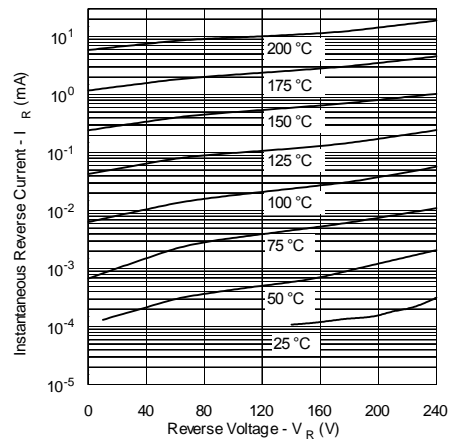
SHD-2B

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

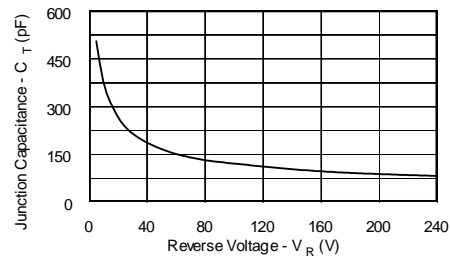
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



PART ORDERING INFORMATION:

SHD115446 XX X

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Part Number

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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