

TECHNICAL DATA  
DATA SHEET 413, REV. PRELIMINARY

**SCHOTTKY RECTIFIER**  
**Ultra Low Reverse Leakage**  
**200°C Operating Temperature**  
Add Suffix "S" to Part Number for S-100 Screening.

**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:**

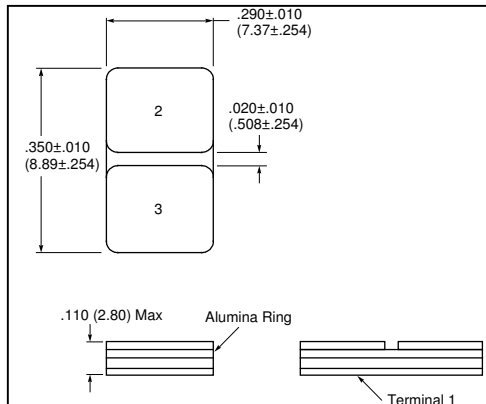
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	6.0	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine wave	55	A
Non-Repetitive Avalanche Energy (per leg)	$E_{AS}$	$T_J = 25\text{ }^\circ\text{C}$ , $I_{AS} = 0.23\text{A}$ , $L = 130\text{ mH}$	3.5	mJ
Repetitive Avalanche Current (per leg)	$I_{AR}$	$I_{AS}$ decay linearly to 0 in 1 $\mu\text{s}$ $f$ limited by $T_J$ max $V_A=1.5V_R$	0.23	A
Maximum Thermal Resistance (Junction to Mounting Surface)	$R_{\theta JC}$	Common Cathode	1.8	$^\circ\text{C/W}$
Maximum Thermal Resistance (Junction to Mounting Surface)	$R_{\theta JC}$	Common Anode	4.2	$^\circ\text{C/W}$
Max. Junction Temperature	$T_J$	-	-65 to +200	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	$^\circ\text{C}$

**Electrical Characteristics:**

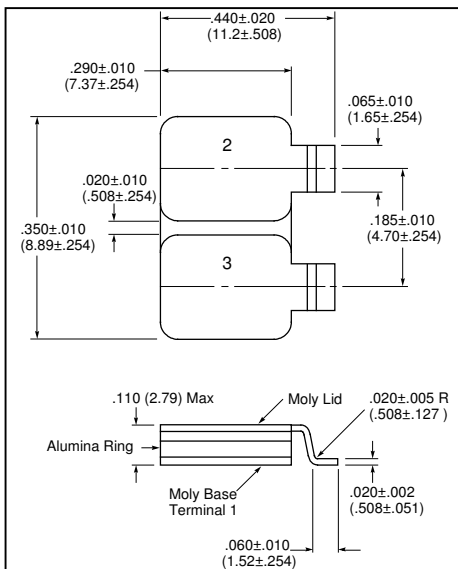
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	$V_{F1}$	@ 3A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.84	V
	$V_{F2}$	@ 3A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.68	V
Max. Reverse Current (per leg)	$I_{R1}$	@ $V_R = 100\text{V}$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	5.0	$\mu\text{A}$
	$I_{R2}$	@ $V_R = 100\text{V}$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.25	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)	100	pF

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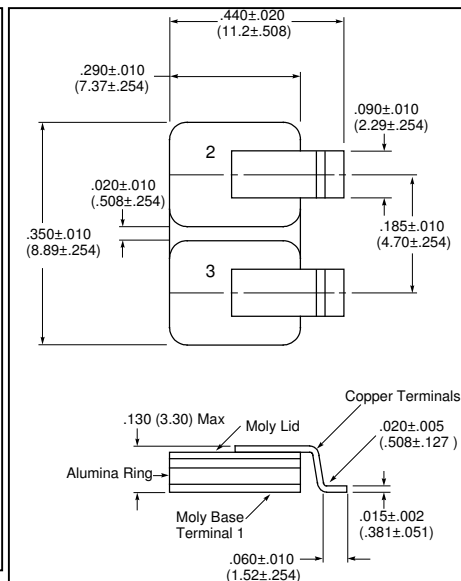
**Mechanical Dimensions: In Inches / mm**



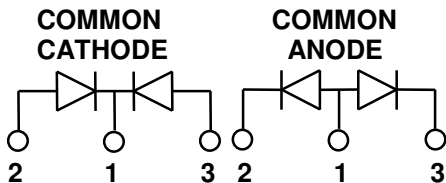
**SHD-4**



**SHD-4A**



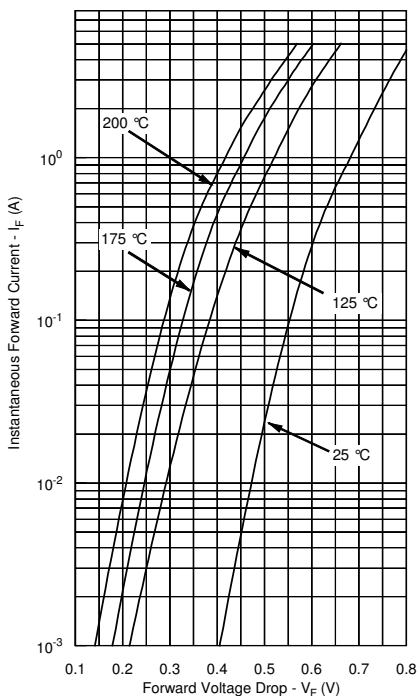
**SHD-4B**



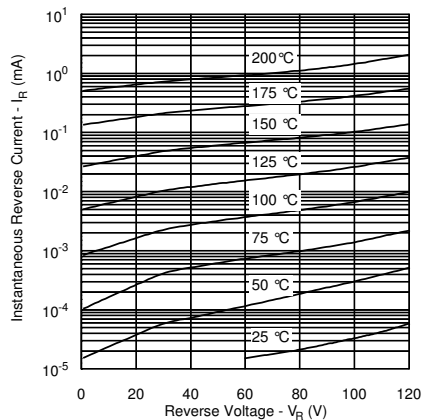
**PINOUT TABLE**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
DUAL RECTIFIER, COMMON CATHODE (P)	COMMON CATHODE	ANODE 1	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	COMMON ANODE	CATHODE 1	CATHODE 2

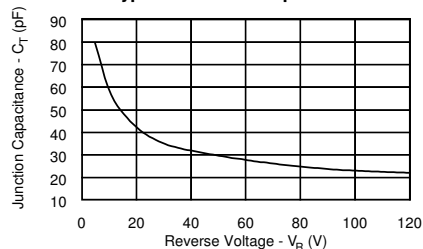
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**TECHNICAL DATA**

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