

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:

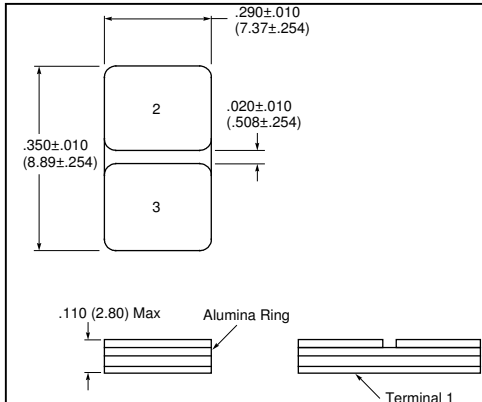
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	6.0	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine wave	55	A
Non-Repetitive Avalanche Energy (per leg)	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 $1\text{ }\mu\text{s}$ 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:

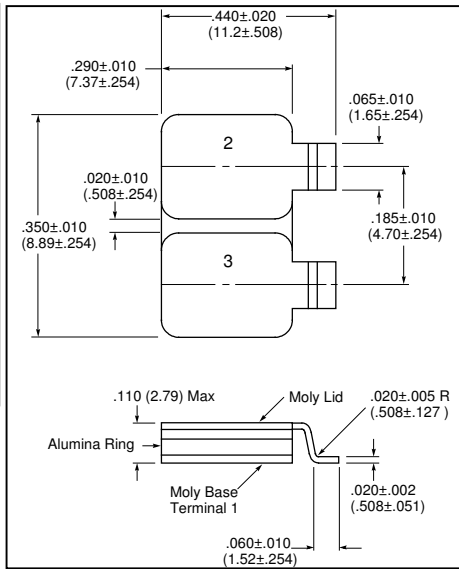
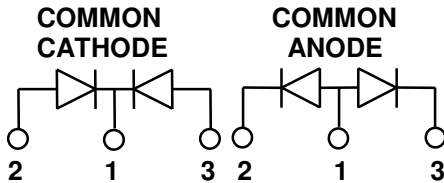
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 3A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.84	V
	V_{F2}	@ 3A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.68	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R = 100\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	5.0	μA
	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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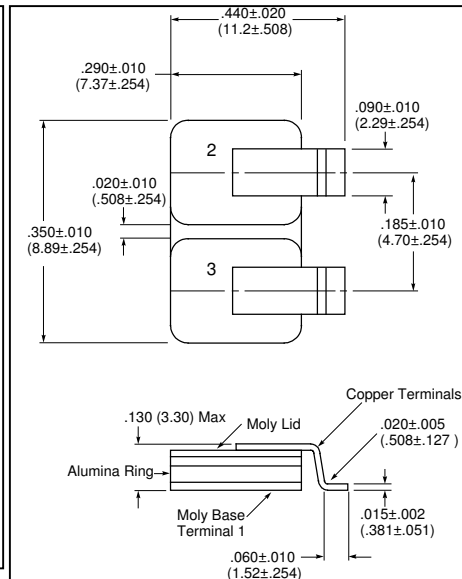
Mechanical Dimensions: In Inches / mm



SHD-4



SHD-4A

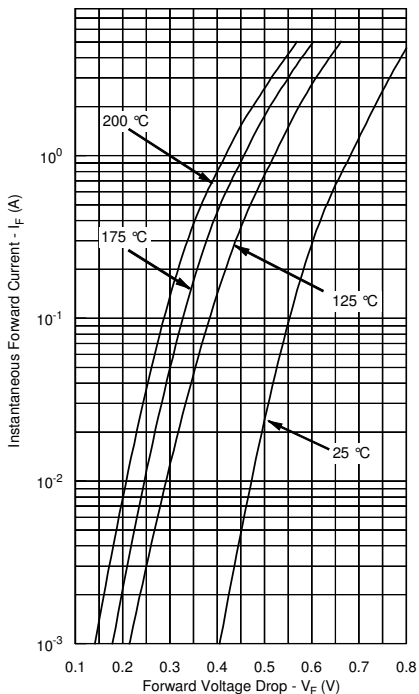


SHD-4B

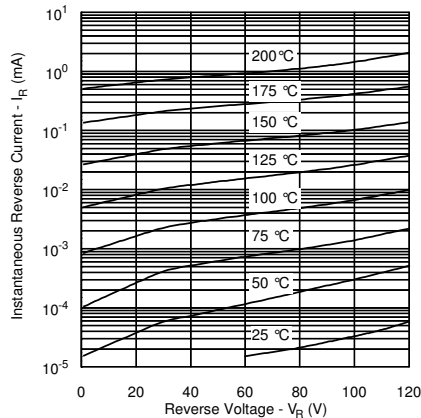
PINOUT TABLE

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

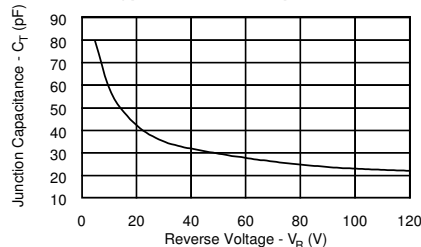
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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