

TECHNICAL DATA
DATA SHEET 4577, REV. A

HERMETIC POWER SCHOTTKY RECTIFIER

Low Forward Voltage Drop

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
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability

DESCRIPTION: A 45-VOLT, 30 AMP DUAL POWER SCHOTTKY RECTIFIER IN A HERMETIC SHD-4/4A/4B PACKAGE.

MAXIMUM RATINGS

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

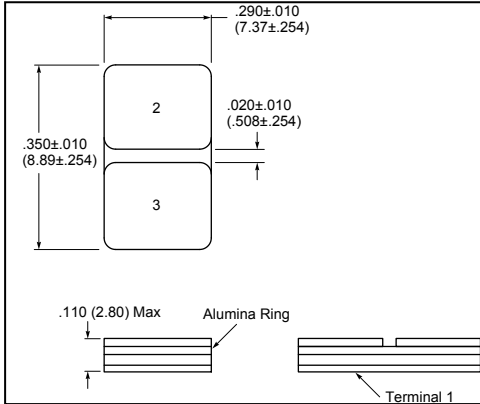
RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	PIV	45	Volts
MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ $T_C=100^\circ\text{C}$)	I_O	30	Amps
MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT ($t=8.3\text{ms}$, Sine)	I_{FSM}	280	Amps
MAXIMUM THERMAL RESISTANCE (Junction to Mounting Surface, Cathode)	$R_{\theta JC}$	1.7	$^\circ\text{C/W}$
MAXIMUM OPERATING TEMPERATURE RANGE	Top/Tstg	-65 to + 175	$^\circ\text{C}$
MAXIMUM STORAGE TEMPERATURE RANGE	Top/Tstg	-65 to + 175	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

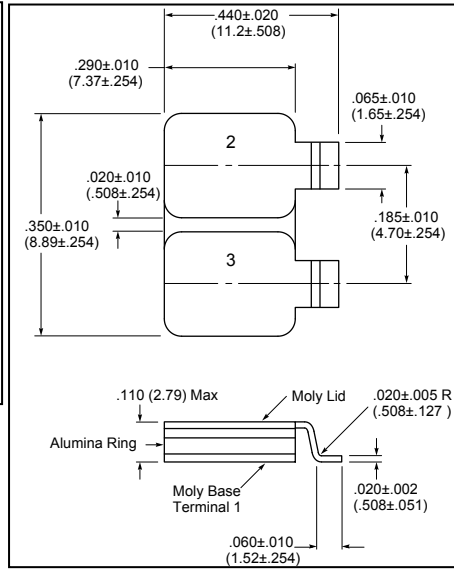
CHARACTERISTIC	SYMBOL	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP, Pulsed ($I_f = 15$ Amps) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	V_f	0.64 0.57	Volts
MAXIMUM REVERSE CURRENT ($I_r @ 45\text{V PIV}$) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_r	0.4 15	mA
MAXIMUM JUNCTION CAPACITANCE ($V_r=5\text{V}$)	C_T	800	pF

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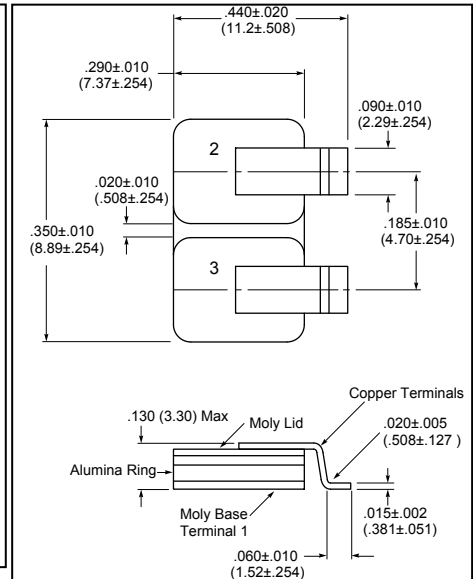
Mechanical Dimensions: In Inches / mm



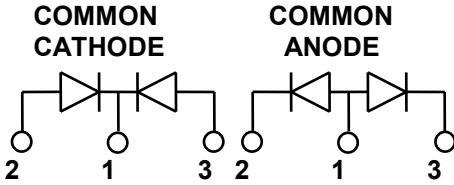
SHD-4



SHD-4A



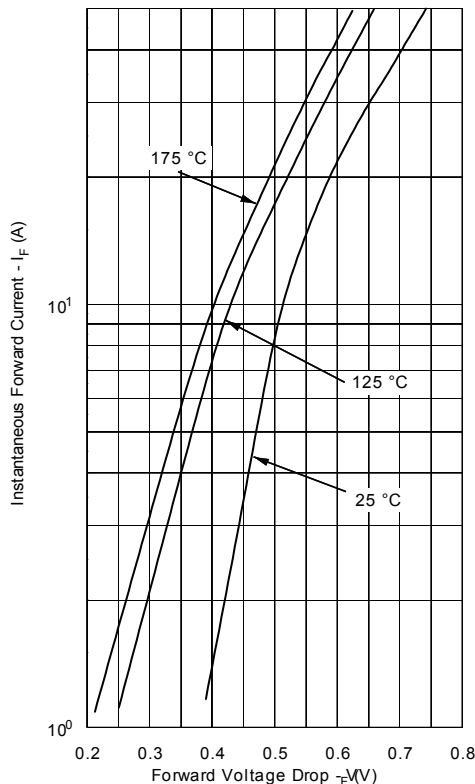
SHD-4B



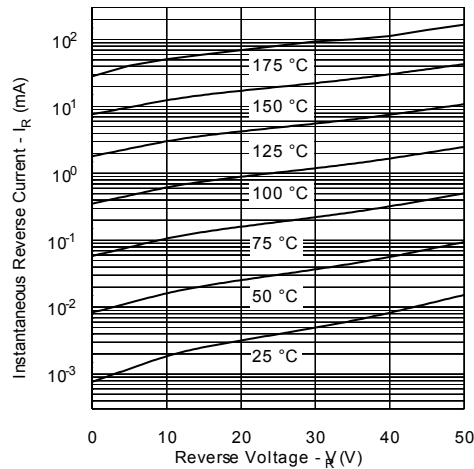
PINOUT TABLE

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

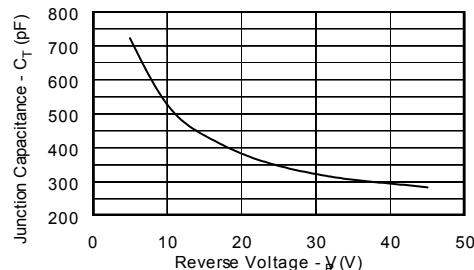
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



$V_F @ 1A -55^{\circ}C \text{ typical} = 0.56V$

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