

TECHNICAL DATA
DATA SHEET 4564, REV. –

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HERMETIC POWER SCHOTTKY RECTIFIER

Very 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, 3.0 AMP DUAL POWER SCHOTTKY RECTIFIER IN A HERMETIC SHD-4/4A/4B PACKAGE.

MAXIMUM RATINGS

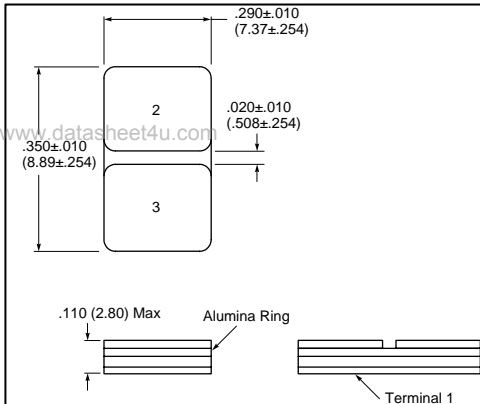
ALL RATINGS ARE @ $T_C = 25\text{ }^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

| RATING | SYMBOL | MAX. | UNITS |
|---|-----------------|-------------|--------------------|
| PEAK INVERSE VOLTAGE | PIV | 45 | Volts |
| MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ $T_C=100\text{ }^\circ\text{C}$) (Single) | I_o | 3.0 | Amps |
| MAXIMUM DC OUTPUT CURRENT With Cathode Maintained (@ $T_C=100\text{ }^\circ\text{C}$) (Common Cathode) | I_o | 6.0 | Amps |
| MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT (t=8.3ms, Sine) | I_{FSM} | 55 | Amps |
| MAXIMUM THERMAL RESISTANCE (Junction to Mounting Surface, Cathode) | $R_{\theta JC}$ | 1.8 | $^\circ\text{C/W}$ |
| MAXIMUM OPERATING TEMPERATURE RANGE | Top/Tstg | -65 to +150 | $^\circ\text{C}$ |
| MAXIMUM STORAGE TEMPERATURE RANGE | Top/Tstg | -65 to +150 | $^\circ\text{C}$ |

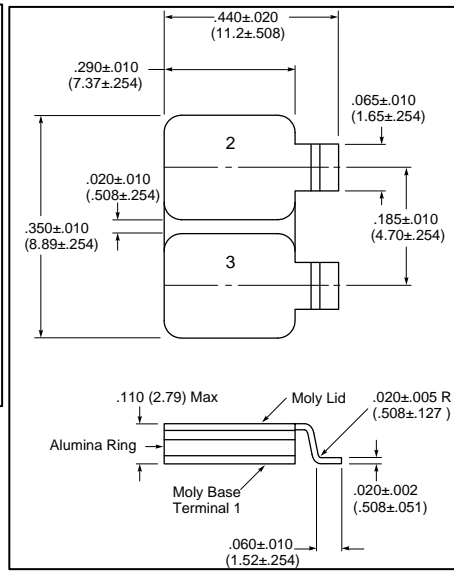
ELECTRICAL CHARACTERISTICS

| CHARACTERISTIC | SYMBOL | MAX. | UNITS |
|---|--------|--------------|-------|
| MAXIMUM FORWARD VOLTAGE DROP, Pulsed ($I_f = 3.0$ Amps) $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$ | V_f | 0.56 0.51 | Volts |
| MAXIMUM REVERSE CURRENT (I_r @ 45V PIV) $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$ | I_r | 0.3 14 | mA |
| MAXIMUM JUNCTION CAPACITANCE ($V_r=5V$) | C_T | 220 | pF |

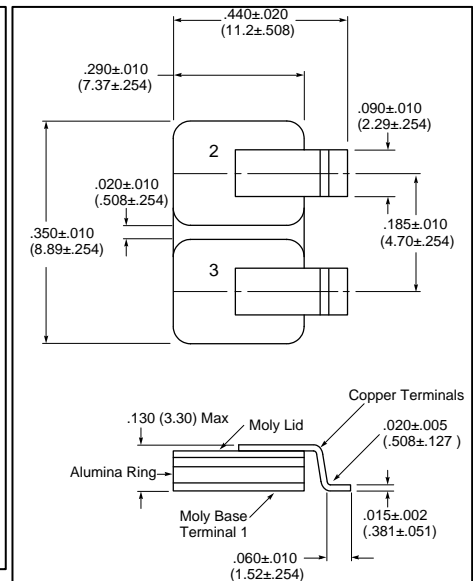
Mechanical Dimensions: In Inches / mm



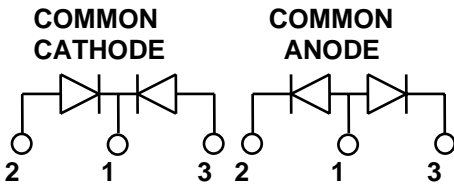
SHD-4



SHD-4A



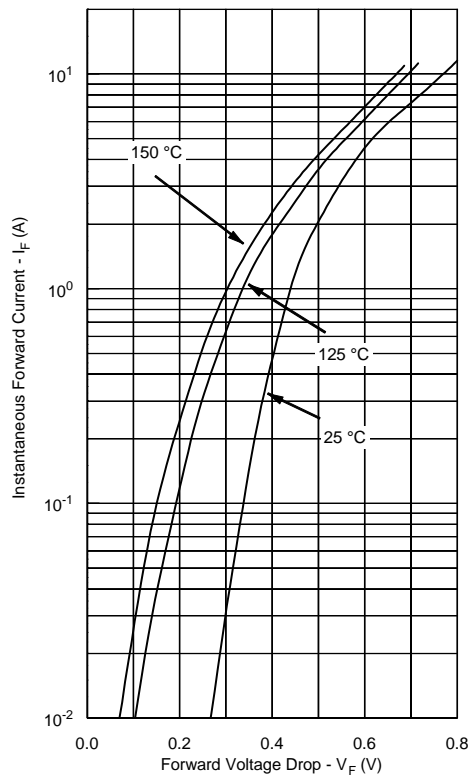
SHD-4B



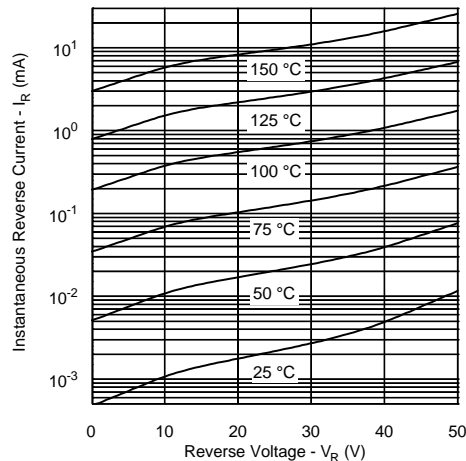
PINOUT TABLE

| 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 |

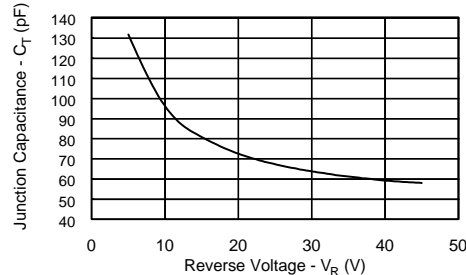
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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

TECHNICAL DATA

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