

TECHNICAL DATA
DATA SHEET 578, REV. -

HERMETIC SCHOTTKY RECTIFIER Very Low Forward Voltage Drop (2A, 30V, SHD-23 Package)

Applications:

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

Features:

- 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} | - | 30 | V |
| Max. Average Forward Current (Common Cathode Device) | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form @ $T_C = 100\text{ }^\circ\text{C}$ | 2 | A |
| Max. Average Forward Current (Single Diode) | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form @ $T_C = 100\text{ }^\circ\text{C}$ | 1 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 25 | A |
| Non-Repetitive Avalanche Energy (per leg) | E_{AS} | $T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 0.74\text{ A}$, $L = 12\text{ mH}$ | 3.2 | 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 $V_A = 1.5V_R$ | 0.74 | A |
| Max. Junction Temperature | T_J | - | -65 to +150 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -65 to +150 | $^\circ\text{C}$ |

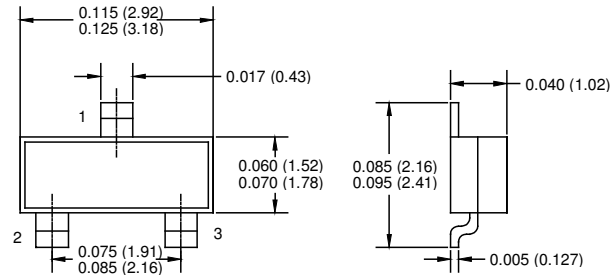
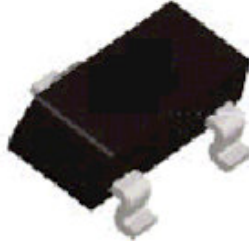
Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|-------------------------------------|-----------------|---|---------------------------------|--------------------|
| Max. Forward Voltage Drop (per leg) | V_{F1} | @ 1A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.49 | V |
| | V_{F2} | @ 1A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.39 | V |
| Max. Reverse Current (per leg) | I_{R1} | @ $V_R = 30\text{ V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 100 | μA |
| | I_{R2} | @ $V_R = 30\text{ V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.12 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{ V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{ MHz}$, $V_{SIG} = 50\text{ mV (p-p)}$ | 6.0 | pF |
| Maximum Thermal Resis. (per leg) | $R_{\theta JC}$ | - | 15 (to bottom) 30 (to anode) | $^\circ\text{C/W}$ |

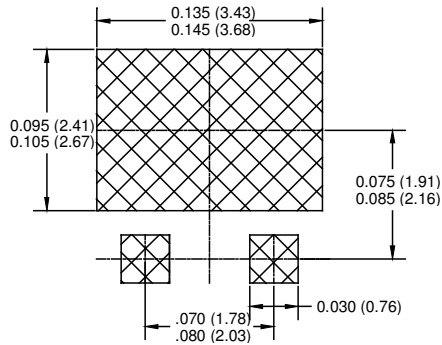
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Mechanical Dimensions: In Inches / mm

SHD-23



Land Pattern Recommendation

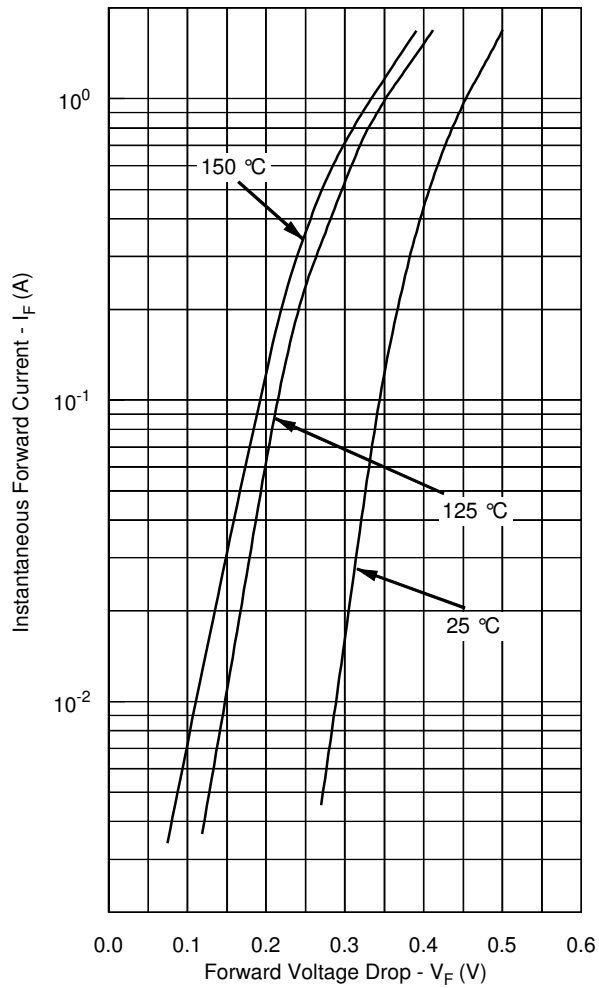


PINOUTS - SHD-23

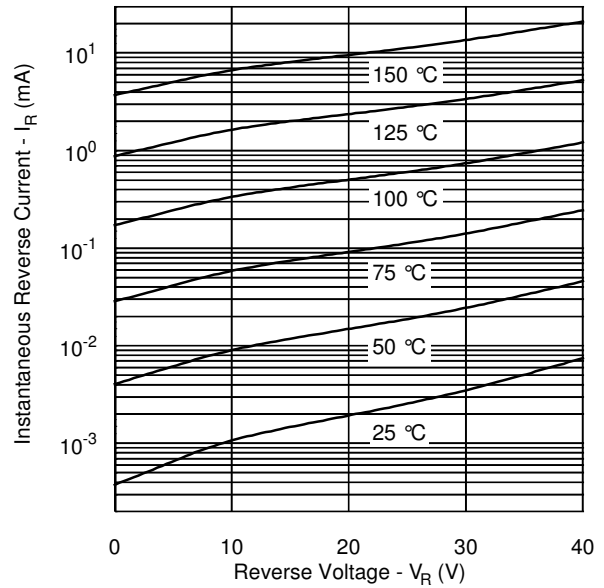
| DEVICE TYPE | PIN 1 | PIN 2 | PIN 3 |
|--------------------------|---------|-------|-------|
| SINGLE RECTIFIER | CATHODE | ANODE | ANODE |
| COMMON CATHODE RECTIFIER | CATHODE | ANODE | ANODE |

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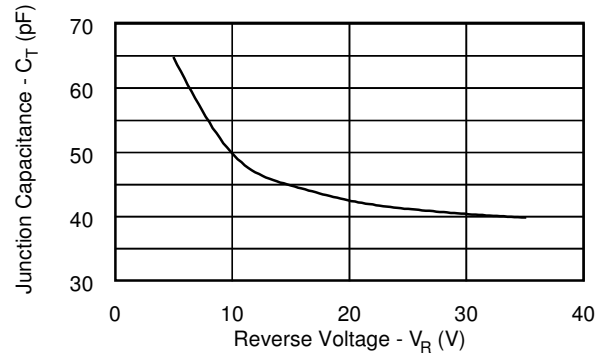
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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