TECHNICAL DATA
DATA SHEET 371, REV. A

# SCHOTTKY RECTIFIER
# Very Low Forward Voltage Drop
# 200°C Operating Temperature

## Applications:

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

## Features:

- **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**
- **Out Performs 100 Volt Ultrafast Rectifiers**

## Maximum Ratings:

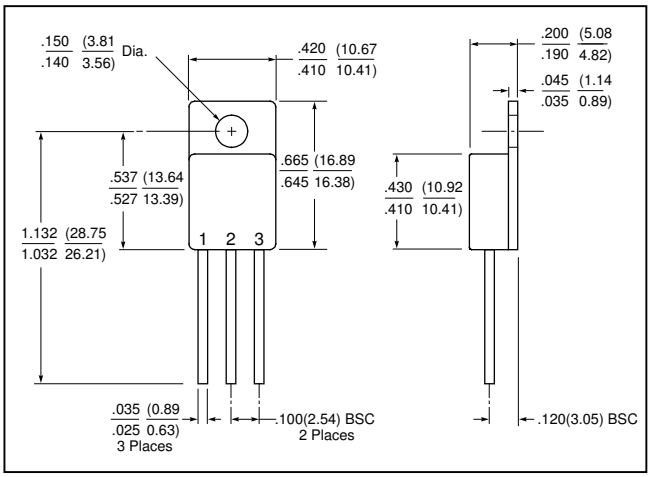
| Characteristics | Symbol | Condition | Max. | Units |
|---|---|---|---|---|
| Peak Inverse Voltage | $V_{RWM}$ | - | 100 | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form<br>-Common Cathode (P) / Anode (N)<br>-Doubler (D) | <br><br>6.0<br>3.0 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$ | 8.3 ms, half Sine wave | 55 | A |
| Non-Repetitive Avalanche Energy | $E_{AS}$ | $T_J$ = 25 °C, $I_{AS}$ = 0.23 A, L = 130 mH | 3.5 | mJ |
| Repetitive Avalanche Current | $I_{AR}$ | $I_{AS}$ decay linearly to 0 in 1 µs<br>$f$ limited by $T_J$ max $V_A$=1.5$V_R$ | 0.23 | A |
| Maximum Thermal Resistance (Junction to Mounting Surface)<br>(per leg) | $R_{\theta JC}$ | - | 9.2 | °C/W |
| Max. Junction Temperature | $T_J$ | - | -65 to +200 | °C |
| Max. Storage Temperature | $T_{stg}$ | - | -65 to +175 | °C |

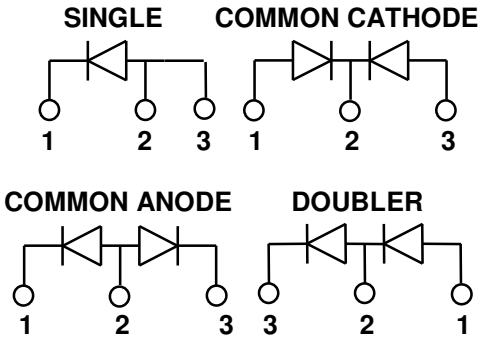
## Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---|---|---|---|---|
| Max. Forward Voltage Drop (per leg) | $V_{F1}$ | @ 3A, Pulse, $T_J$ = 25 °C | 0.94 | V |
| | $V_{F2}$ | @ 3A, Pulse, $T_J$ = 125 °C | 0.78 | V |
| Max. Reverse Current (per leg) | $I_{R1}$ | @$V_R$ = 100V, Pulse, $T_J$ = 25 °C | 0.07 | mA |
| | $I_{R2}$ | @$V_R$ = 100V, Pulse, $T_J$ = 125 °C | 1.6 | mA |
| Max. Junction Capacitance (per leg) | $C_T$ | @$V_R$ = 5V, $T_C$ = 25 °C<br>$f_{SIG}$ = 1MHz,<br>$V_{SIG}$ = 50mV (p-p) | 100 | pF |

**TECHNICAL DATA**
**DATA SHEET 371, REV. -**

**Mechanical Dimensions: In Inches / mm**



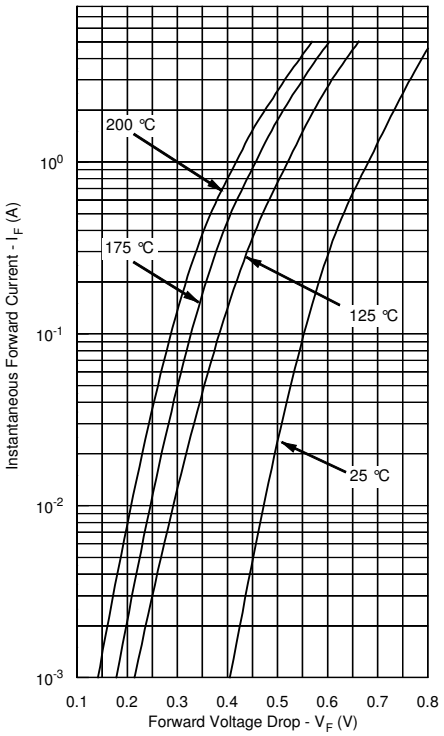




**TO-257**

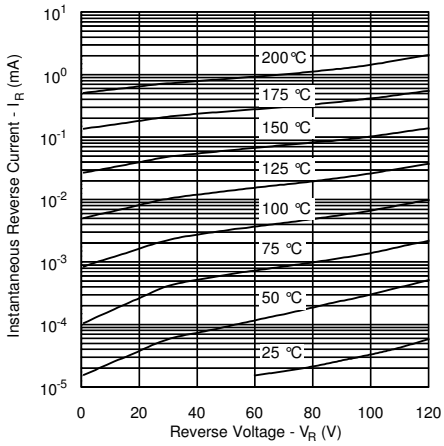
**PINOUT TABLE**

| TYPE | PIN 1 | PIN 2 | PIN 3 |
|---|---|---|---|
| SINGLE RECTIFIER | CATHODE | ANODE | ANODE |
| DUAL RECTIFIER, COMMON CATHODE (P) | ANODE 1 | COMMON CATHODE | ANODE 2 |
| DUAL RECTIFIER, COMMON ANODE (N) | CATHODE 1 | COMMON ANODE | CATHODE 2 |
| DUAL RECTIFIER, DOUBLER (D) | ANODE | ANODE/CATHODE | CATHODE |

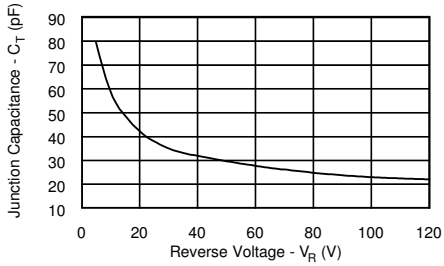
**Typical Forward Characteristics**




**Typical Reverse Characteristics**




**Typical Junction Capacitance**




**Note:** The $V_f$ curves shown are for the SD060SC100 unpackaged die only.

**TECHNICAL DATA**

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