

TECHNICAL DATA
DATA SHEET 373, 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:

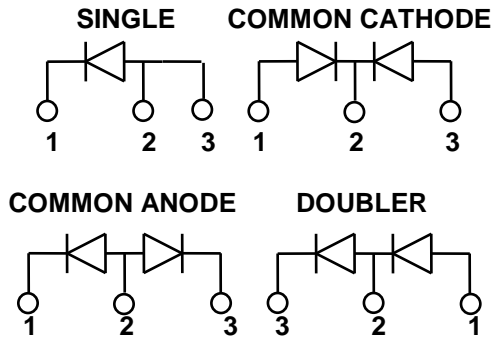
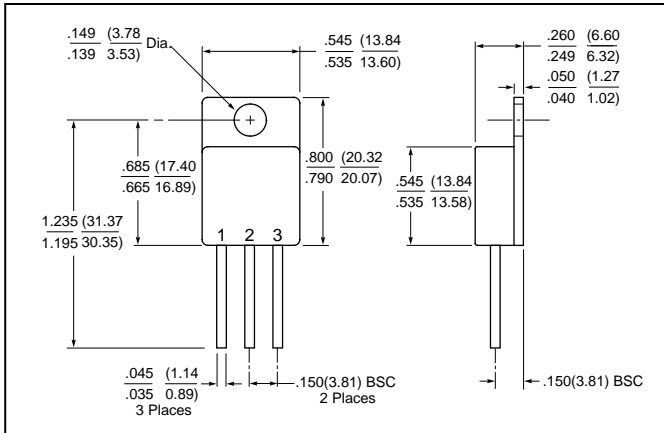
| Characteristics | Symbol | Condition | Max. | Units |
|---|-----------------|--|-------------|--------------------|
| Peak Inverse Voltage | V_{RWM} | - | 100 | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form -Common Cathode (P) / Anode (N) -Doubler (D) | 6.0 3.0 | 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 μs f limited by T_J max $V_A=1.5V_R$ | 0.23 | A |
| Maximum Thermal Resistance (Junction to Mounting Surface) (per leg) | $R_{\theta JC}$ | - | 9.2 | $^\circ\text{C/W}$ |
| 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, $T_J = 25\text{ }^\circ\text{C}$ | 0.94 | V |
| | V_{F2} | @ 3A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.78 | V |
| Max. Reverse Current (per leg) | I_{R1} | @ $V_R = 100\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.07 | mA |
| | I_{R2} | @ $V_R = 100\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 1.6 | 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

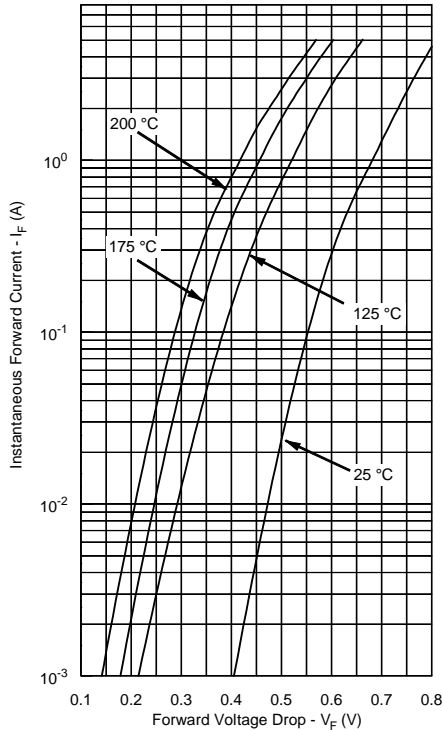


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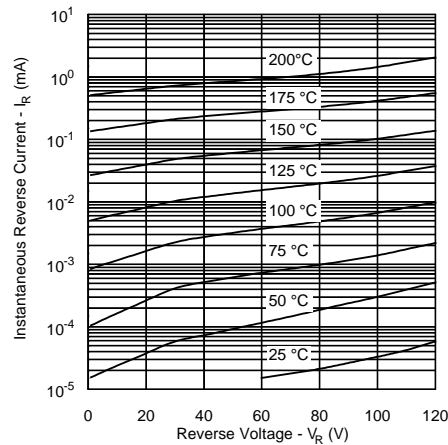
PINOUT TABLE

| 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 |

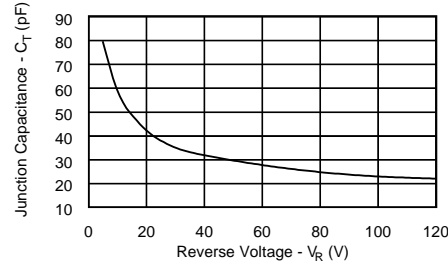
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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