

TECHNICAL DATA
DATA SHEET 671, REV. B

SCHOTTKY RECTIFIER Very Low Forward Voltage

Applications:

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

Features:

- Soft Reverse Recovery at Low and High Temperature
- 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
- Add Prefix C to SHD – For Ceramic Seals (SHDC)
- Add Suffix SS For JANS Screening

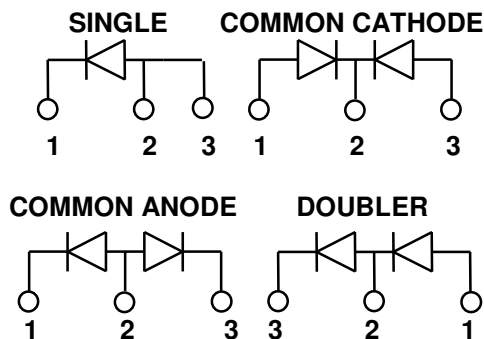
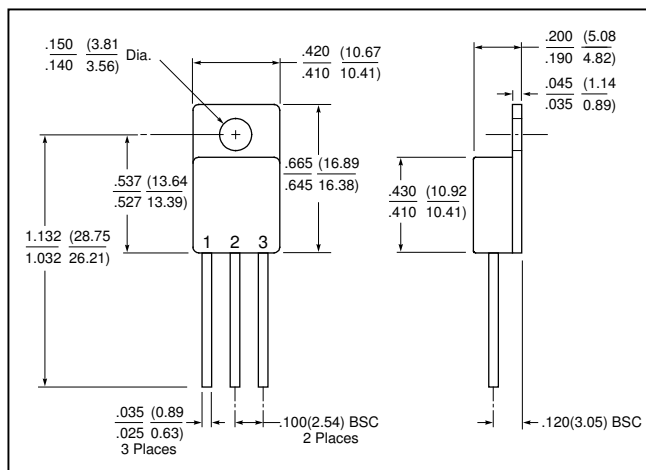
Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|--|-----------------|---|-------------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 45 | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form (Single & Doubler) | 7.5 | A |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form (Common Anode & Common Cathode) | 15 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3 ms, half Sine wave (per leg) | 75 | A |
| Max. Thermal Resistance | $R_{\theta JC}$ | (per leg) | 4.1 | °C/W |
| Max. Junction Temperature | T_J | - | -65 to +150 | °C |
| Max. Storage Temperature | T_{stg} | - | -65 to +150 | °C |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------|----------|--|------|-------|
| Max. Forward Voltage Drop | V_{F1} | @ 7.5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ (per leg) | 0.65 | V |
| | V_{F2} | @ 7.5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ (per leg) | 0.60 | V |
| Max. Reverse Current | I_{R1} | @ $V_R = 45\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$ (per leg) | 0.75 | mA |
| | I_{R2} | @ $V_R = 45\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$ (per leg) | 35 | mA |
| Max. Junction Capacitance | 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) (per leg) | 400 | pF |

Mechanical Dimensions: In Inches / mm

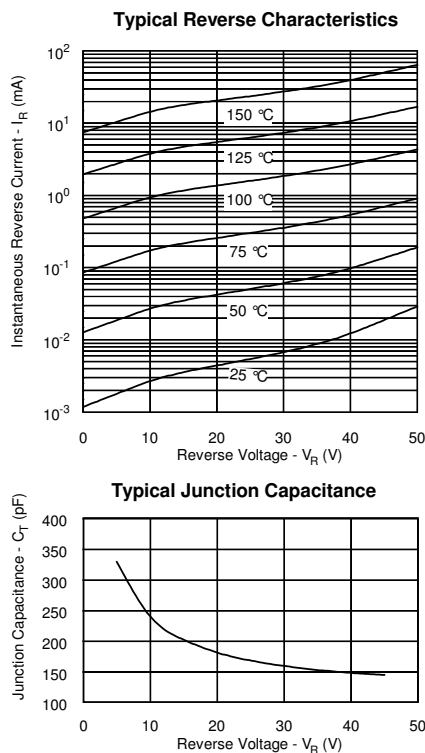
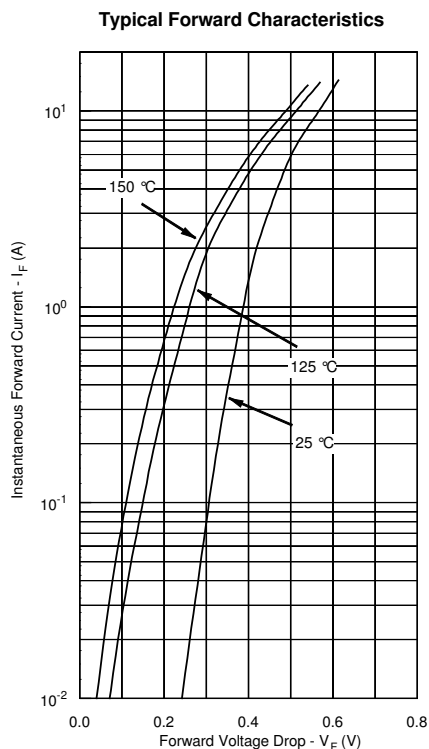


TO-257

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 |

Note: The V_f curves shown are for the SD090SA45 un-packaged die only.



TECHNICAL DATA

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