

TECHNICAL DATA  
DATA SHEET 4052, REV. B

## HERMETIC POWER SCHOTTKY RECTIFIER Low Forward Voltage

**DESCRIPTION:** A 100-VOLT, 30/45 AMP, POWER SCHOTTKY RECTIFIER IN A HERMETIC TO-254 PACKAGE.

### MAXIMUM RATINGS

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

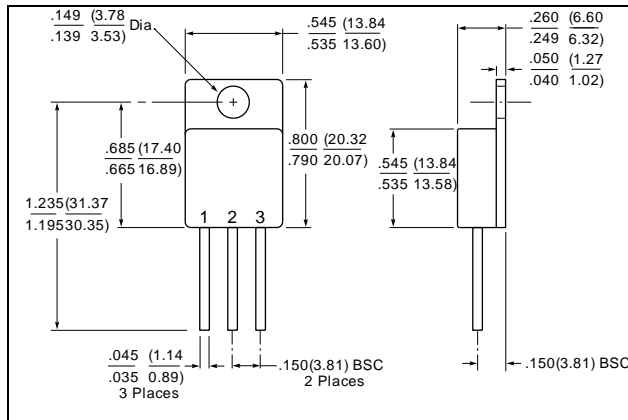
| RATING   | SYMBOL           | MAX.            | UNITS              |
|--|------------------|-----------------|--------------------|
| PEAK INVERSE VOLTAGE   | PIV              | 100             | Volts              |
| MAXIMUM DC OUTPUT CURRENT (@ $T_c=100\text{ }^\circ\text{C}$ ) (Single, Doubler)                 | $I_o$            | 30              | Amps               |
| MAXIMUM DC OUTPUT CURRENT (@ $T_c=100\text{ }^\circ\text{C}$ )<br>(Common Cathode, Common Anode) | $I_o$            | 45              | Amps               |
| MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT ( $t=8.3\text{ms}$ , Sine)                           | $I_{FSM}$        | 200             | Amps               |
| MAXIMUM JUNCTION CAPACITANCE<br>( $V_r=5\text{V}$ )  | $C_T$            | 1200            | pF                 |
| MAXIMUM THERMAL RESISTANCE (PER LEG)<br>(Single, Common Cathode, Common Anode, Doubler)          | $R_{\theta JC}$  | 1.5             | $^\circ\text{C/W}$ |
| MAXIMUM OPERATING TEMPERATURE RANGE  | $T_{op}/T_{stg}$ | -65 to<br>+ 175 | $^\circ\text{C}$   |
| MAXIMUM STORAGE TEMPERATURE RANGE  | $T_{op}/T_{stg}$ | -65 to<br>+ 175 | $^\circ\text{C}$   |

### ELECTRICAL CHARACTERISTICS

| CHARACTERISTIC   | SYMBOL | MAX.         | UNITS |
|--|--------|--------------|-------|
| MAXIMUM FORWARD VOLTAGE DROP, Pulsed ( $I_f = 30\text{ Amps}$ )<br>$T_J = 25\text{ }^\circ\text{C}$<br>$T_J = 125\text{ }^\circ\text{C}$ | $V_f$  | 1.01<br>0.85 | Volts |
| MAXIMUM REVERSE CURRENT ( $I_r$ @ 100 V PIV)<br>$T_J = 25\text{ }^\circ\text{C}$<br>$T_J = 125\text{ }^\circ\text{C}$                    | $I_r$  | 0.75<br>15   | mA    |

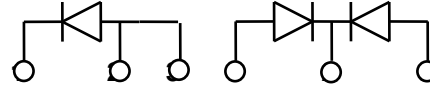
**SENSITRON**  
**DATA SHEET 4052, REV. B**

**Mechanical Dimensions: In inches / mm**



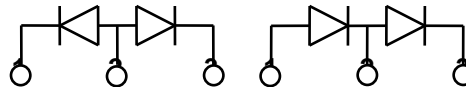
**SINGLE**

**COMMON CATHODE**



**COMMON ANODE**

**DOUBLER**



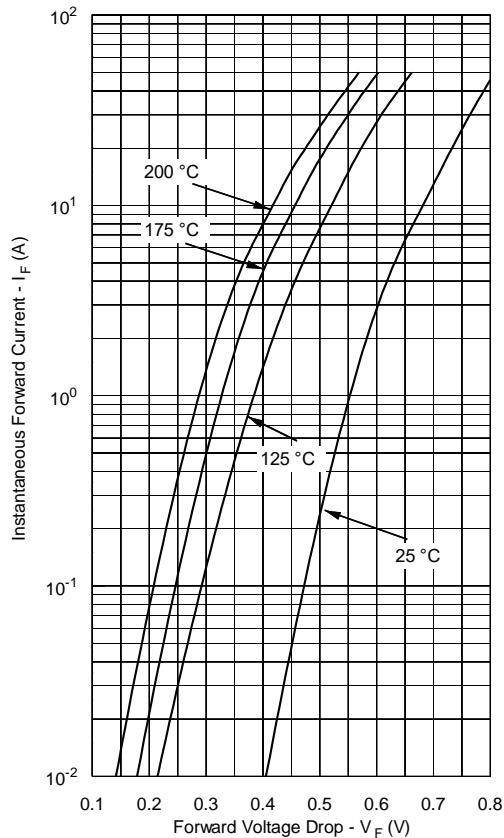
**TO-254**

**PINOUT TABLE**

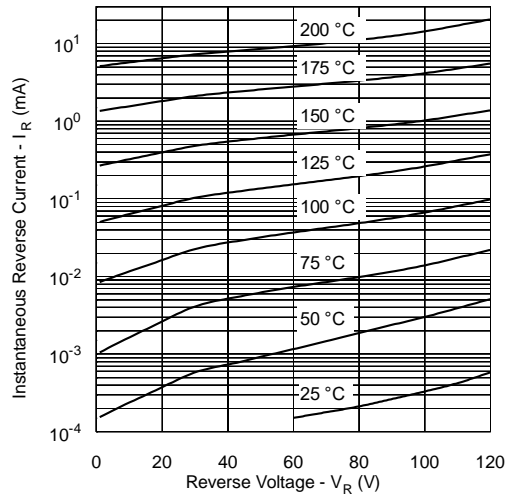
| TYPE                               | PIN 1     | PIN 2          | PIN 3     |
|------------------------------------|-----------|----------------|-----------|
| SINGLE RECTIFIER                   | CATHODE   | ANODE          | ANODE     |
| DUAL RECTIFIER, COMMON CATHODE (P) | ANODE 1   | COMMON CATHODE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

Curves shown are for bare die only.

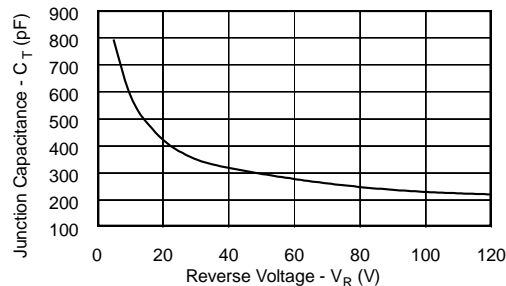
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**SENSITRON**

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**PART ORDERING INFORMATION:**

**SHD125444XX X**

Part Number

**Screening Level (blank is no screening):**

| Suffix | Screened in Accordance with: |
|--------|------------------------------|
| blank  | No screening level           |
| S      | MIL-PRF-19500, TXV Level     |
| SS     | MIL-PRF-19500, S Level       |

**QCI (blank is no QCI):**

| Suffix | Inspection in Accordance with: |
|--------|--------------------------------|
| blank  | No QCI                         |
| Q      | MIL-PRF-19500 QCI              |

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