

**TECHNICAL DATA**  
**DATA SHEET 390, REV. C**

## ULTRA LOW REVERSE LEAKAGE POWER SCHOTTKY RECTIFIER

### Very Low Voltage Drop

**DESCRIPTION:** 200 VOLT, 45 AMP, POWER SCHOTTKY RECTIFIER IN A HERMETIC TO-258 PACKAGE.**MAXIMUM RATINGS**ALL RATINGS ARE @  $T_C = 25^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED.

| RATING                                                                                | SYMBOL         | MAX.            | UNITS              |
|---------------------------------------------------------------------------------------|----------------|-----------------|--------------------|
| PEAK INVERSE VOLTAGE                                                                  | PIV            | 200             | Volts              |
| MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ $T_C=100^\circ\text{C}$ )        | $I_O$          | 45              | Amps               |
| MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT<br>( $t = 8.3\text{ms}$ , Sine) (per leg) | $I_{FSM}$      | 200             | Amps               |
| MAXIMUM JUNCTION CAPACITANCE ( $V_r=5\text{V}$ ) (per leg)                            | $C_T$          | 900             | pF                 |
| MAXIMUM THERMAL RESISTANCE (per leg)                                                  | $R\theta_{JC}$ | 1.15            | $^\circ\text{C/W}$ |
| MAXIMUM OPERATING TEMPERATURE RANGE                                                   | Top            | -65 to<br>+ 150 | $^\circ\text{C}$   |
| MAXIMUM STORAGE TEMPERATURE RANGE                                                     | Tstg           | -65 to<br>+ 175 | $^\circ\text{C}$   |

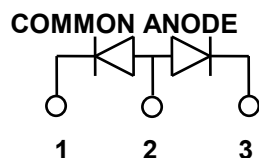
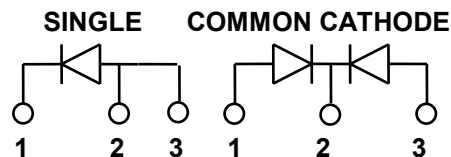
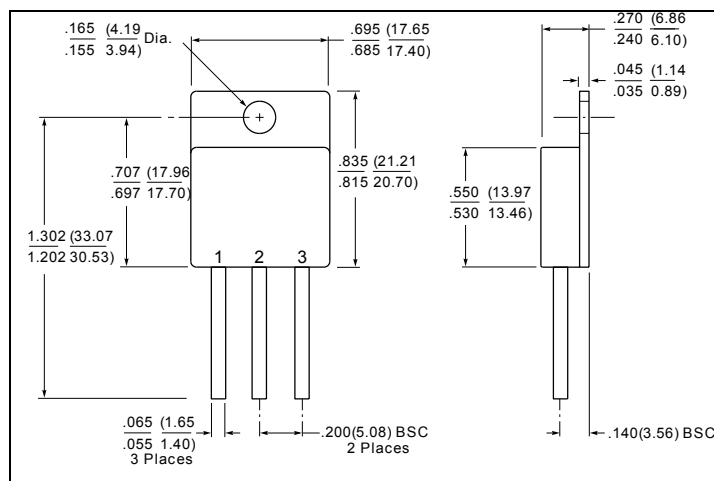
**ELECTRICAL CHARACTERISTICS**

| CHARACTERISTIC                                                                                                                     |          |              |       |
|------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|-------|
| MAXIMUM FORWARD VOLTAGE DROP, Pulsed ( $I_f = 45\text{ Amps}$ ) (per leg)<br>$T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ | $V_f$    | 1.18<br>1.02 | Volts |
| MAXIMUM REVERSE CURRENT ( $I_r$ @ 200V PIV) (per leg)<br>$T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$                     | $I_r$    | 0.3<br>3.0   | mA    |
| REVERSE RECOVERY TIME                                                                                                              | $t_{rr}$ | 32           | ns    |

**SENSITRON**

**DATA SHEET 390, REV. C**

**MECHANICAL DIMENSIONS: In Inches / mm**

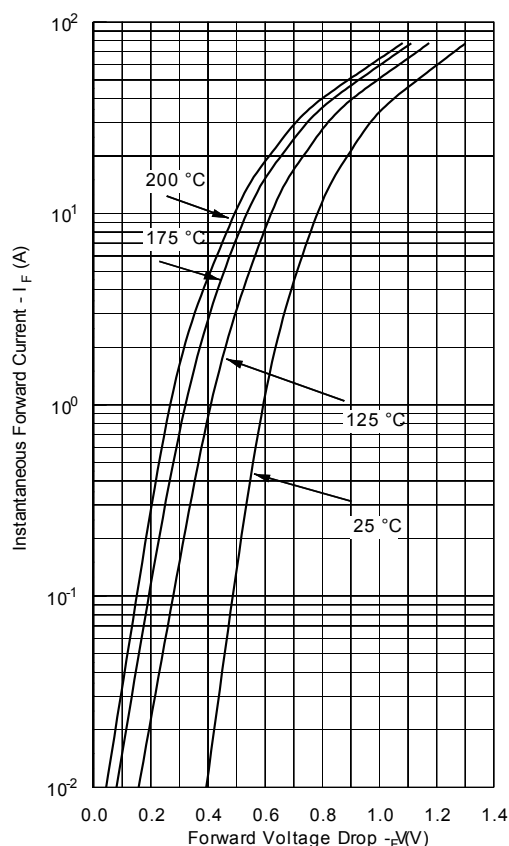


**TO-258**

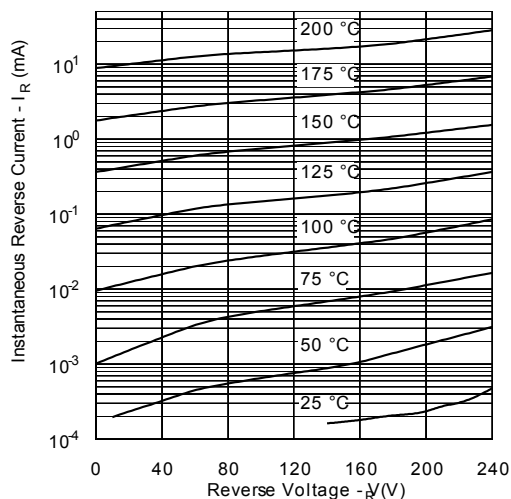
**PINOUT TABLE**

| 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 |

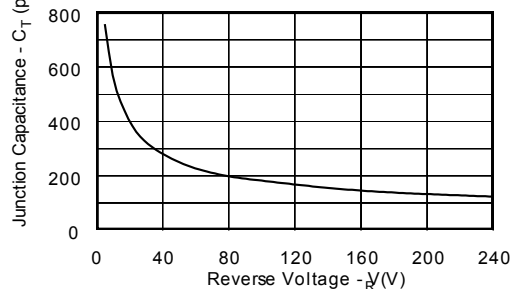
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**SENSITRON**

**DATA SHEET 390, REV. C**

---

**DISCLAIMER:**

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.