

# **SENSITRON** **SEMICONDUCTOR**

## TECHNICAL DATA DATA SHEET 4972, REV B

### HIGH CURRENT AXIAL LEAD/SURFACE MOUNT RECTIFIERS

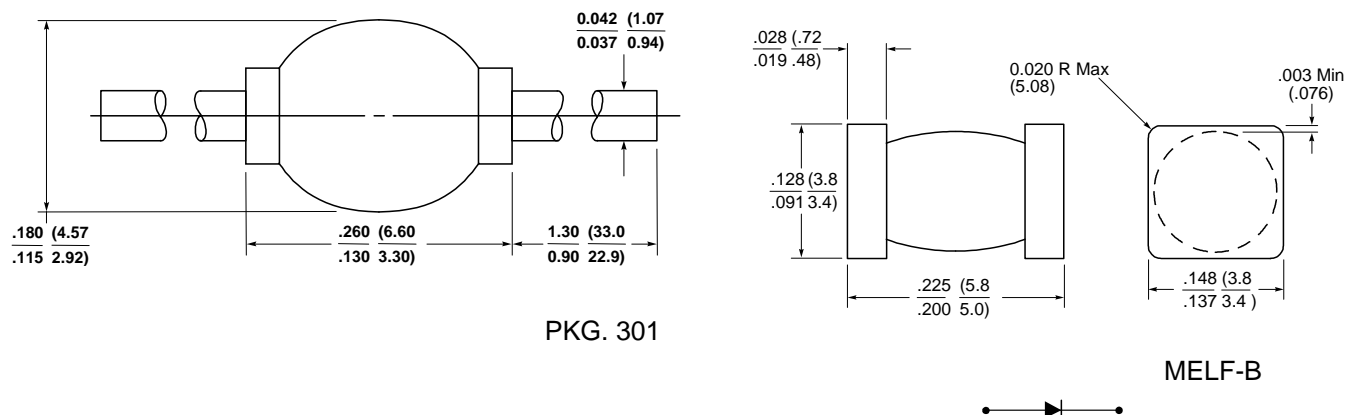
- Hermetic, non-cavity glass package
- Metallurgically bonded
- Manufacture & screen to JANS per MIL-PRF-19500/411 using Sensitron specification, 7700-409X
- Physical dimensions: Axial lead similar to DO-35 and surface mount similar to D-5

### DESCRIPTION: 400 VOLT, 3.0 AMP, 150 NANOSECOND RECTIFIER

**MAX. RATINGS / ELECTRICAL CHARACTERISTICS** All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.

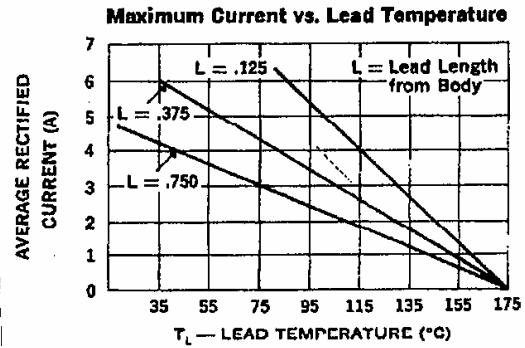
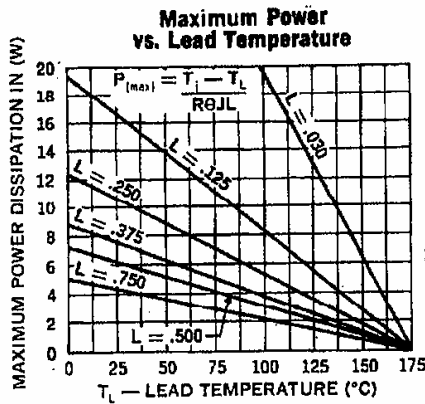
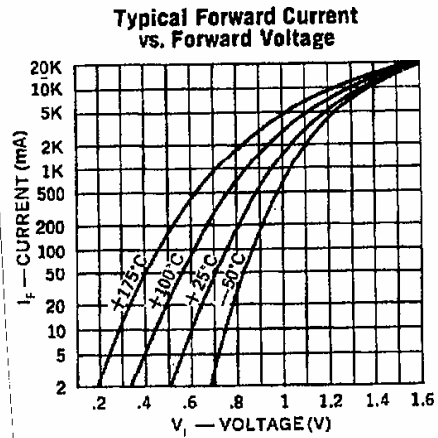
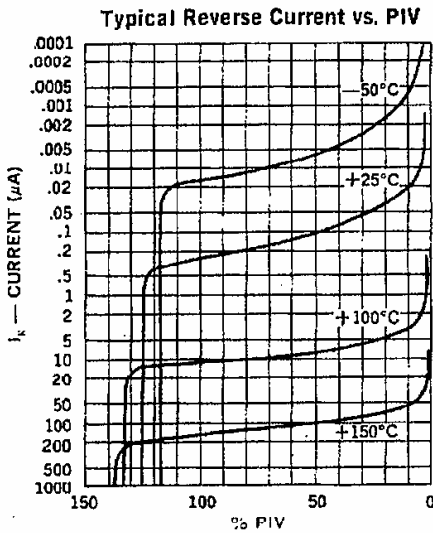
RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	-	-	-	400	Vdc
Average DC Output Current ( $I_o$ )	$T_A = +55^\circ\text{C}$	-	-	3.0	Amps
Peak Single Cycle Surge Current ( $I_{fsm}$ )	$t_p = 8.3$ ms Single Half Cycle Sine Wave, Superimposed On Rated Load	-	-	80	Amps(pk)
Operating and Storage Temp. ( $T_{op}$ & $T_{stg}$ )	-	-65	-	+175	$^\circ\text{C}$
Maximum Forward Voltage ( $V_f$ )	$I_f = 9.0\text{A}$ (300 $\mu\text{sec}$ pulse, duty cycle < 2%)	-	-	1.5	Volts
Maximum Instantaneous Reverse Current At Rated (PIV)	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	-	-	1.0 20	$\mu\text{Amps}$
Reverse Recovery Time ( $t_{rr}$ )	$I_f = 0.5\text{A}$ , $I_r = 1.0\text{A}$ , $I_{rr} = 0.25\text{A}$	-	-	150	nsec
Thermal Resistance ( $\theta_{JL}$ )	$d = 0.375''$	-	-	20	$^\circ\text{C/W}$

### MECHANICAL DIMENSIONS In Inches / (mm), min./max.



**Note:** The cathode side is marked with a dark colored band on one side of the diode body.

**SENSITRON SEMICONDUCTOR**  
**TECHNICAL DATA**  
**DATA SHEET 4972, REV B**



**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.