

**TECHNICAL DATA**  
**DATA SHEET 4971, REV.B**

**HERMETIC AXIAL / MELF HIGH EFFICIENTCY RECTIFIER**

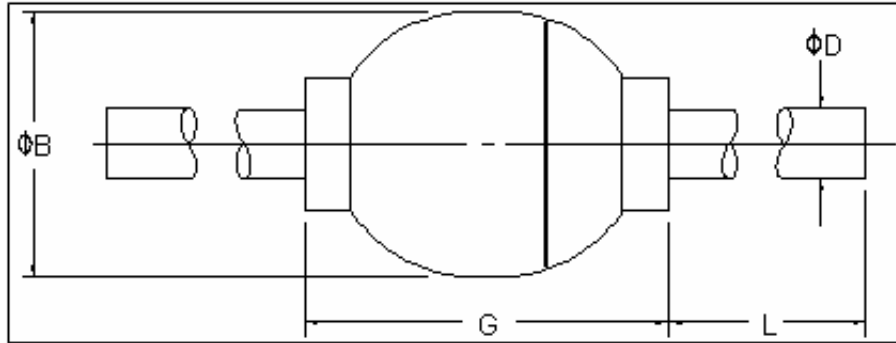
- Hermetic, non-cavity glass package
- Metallurgically bonded
- Manufacture & screen to JANS per MIL-PRF-19500/477 using Sensitron specification, 7700-409X
- Physical dimensions: Axial lead similar to E package and surface mount similar to D-5B
- Operating and Storage Temperature: -65°C to +175°

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

Rating	Symbol	Condition	Max	Units
WORKING PEAK REVERSE VOLTAGE 1N5807 / US 1N5809 / US 1N5811 / US	$V_{WM}$		50 100 150	Volts
AVERAGE RECTIFIED FORWARD CURRENT	$I_o$	$T_L = 75^\circ\text{C}$	3.0	Amps
PEAK FORWARD SURGE CURRENT	$I_{FSM}$	$T_p = 8.3\text{ms}$	125	A(pk)
MAXIMUM REVERSE CURRENT	$I_R @ V_{RWM}$	$T_j = 25^\circ\text{C}$	5.0	$\mu\text{Amps}$
MAXIMUM REVERSE CURRENT	$I_R @ V_{RWM}$	$T_j = 150^\circ\text{C}$	525	$\mu\text{Amps}$
MAX. PEAK FORWARD VOLTAGE (PULSED) 300 $\mu\text{sec}$ pulse, duty cycle < 2%	$V_{FM}$	$I_{FM} = 4.0\text{A}$ $I_{FM} = 6.0\text{A}$	0.875 0.925	Volts
MAXIMUM REVERSE RECOVERY TIME	$T_{rr}$	$I_F = I_{RM} = 0.5\text{A}$ $I_{REC} = 0.05\text{A}$	30	ns
FORWARD RECOVERY VOLTAGE	$V_{FRM}$	$I_F = 500\text{mA}$ $t_r = 8\text{ns}$	2.2	Volts
THERMAL RESISTANCE (Axial) 1N5807 thru 1N5811	$R_{\theta_{JL}}$	$L = .375$	22	$^\circ\text{C/W}$
THERMAL RESISTANCE (MELF) 1N5807US thru 1N5811US	$R_{\theta_{JC}}$	$L = 0$	6.5	$^\circ\text{C/W}$

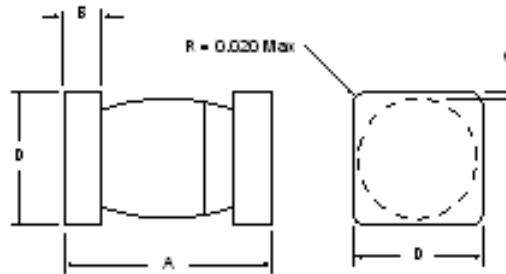
**TECHNICAL DATA**  
**DATA SHEET 4971, REV. B**

**MECHANICAL DIMENSIONS In Inches / (mm)**



PACKAGE STYLE	DIMENSIONS - INCHES ( MILLIMETERS)			
	$\phi B$	$\phi D$	G	L
304	.115/.142 2.92/3.61	.036/.042 .94/1.07	.130/.300 3.30/7.62	.90/1.30 22.9/33.0

**MELF PACKAGE OUTLINES**



Note: Cathode side of device is indicated by a dark band marked on body.

PACKAGE STYLE	DIMENSIONS - INCHES / MILLIMETERS			
	A	B	C	D
MELF-B	.200/.225 5.0/5.8	0.019/.028 .48/.72	.003 Min .076 Min	.137/.148 3.4/3.8

**SENSITRON**  
**SEMICONDUCTOR**

SS5807 / US thru SS5811 / US

---

**TECHNICAL DATA**  
**DATA SHEET 4971, 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.*