

## 1A Fast Recovery Rectifiers

*Qualified per MIL-PRF-19500/359*

### DESCRIPTION:

This voidless hermetically sealed 1A fast recovery rectifier diode series is military qualified per MIL-PRF-19500/359 and is targeted for space, commercial and military aircraft, military vehicles, shipboard markets and all high reliability applications.

### ✓ FEATURES / BENEFITS

- ✓ Hermetic, non-cavity glass package
- ✓ Category I Metallurgically bonded
- ✓ All devices are 100% hot solder dipped
- ✓ JAN/ JANTX/JANTXV available per MIL-PRF-19500/429
- ✓ “JANS Plus” removes atypical/out of family  $V_F$
- ✓ For JANS and US (MELF) version, see /429 (5615 Series).

### MAXIMUM RATINGS

- ✓ Operating and Storage Temperature: -65°C to +175°C
- ✓ Solder temperature: 260 °C for 10s (max)
- ✓ Thermal Resistance: 38 °C (junction to lead)
- ✓ Forward surge current: 15A @ 8.3 ms half-sine

### ELECTRICAL CHARACTERISTICS

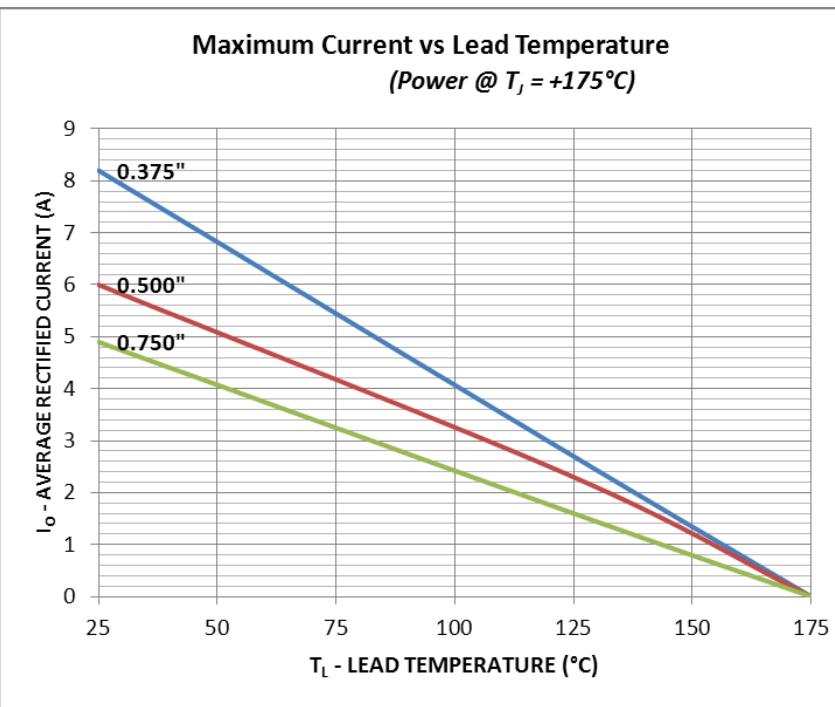
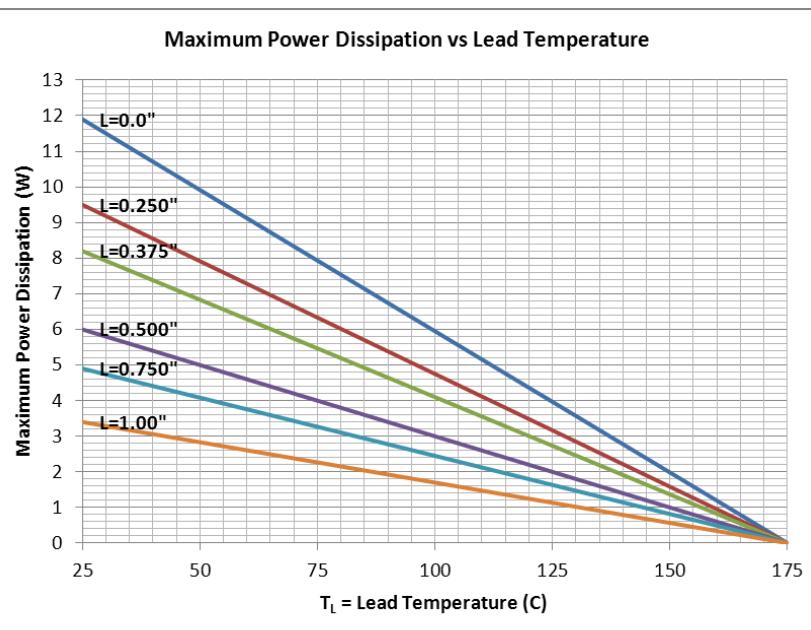
TYPE NUMBER	PEAK INVERSE VOLTAGE	AVG. RECTIFIED CURRENT	MAXIMUM REVERSE CURRENT @ PIV	MAX. FORWARD VOLTAGE	MAX SURGE CURRENT <sup>1</sup>	MAXIMUM REVERSE RECOVERY TIME Trr	THERM RES R <sub>0JL</sub>	d=.375
	Volts	55°C 100°C	25°C 150°C	V	A	Amps	nsec	°C/W
1N4942	200						150	
1N4944	400						150	
1N4946	600	1.0 .75	1.0 200	1.3	1.0	15	250	38
1N4947	800						250	
1N4948	1000						500	

Note 1:  $T_A=100^\circ\text{C}$ , 8.3 surge

\*Sensitron **space equivalent diodes** are manufactured and screened to MIL-PRF-19500 flow and guidelines starting from wafer fabrication through assembly and testing using our internal specification.

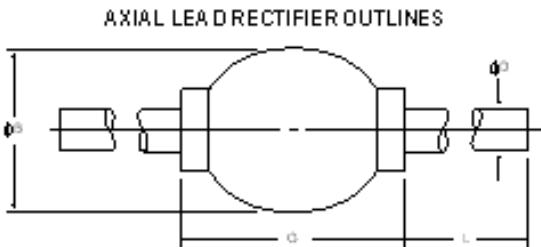
**TECHNICAL DATA**  
**DATA SHEET 5109, REV. A**

**GRAPHS**



**TECHNICAL DATA**  
**DATA SHEET 5109, REV. A**

**PACKAGE DIMENSIONS (inches/mm)**



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

PACKAGE STYLE	DIMENSIONS - INCHES / MILLIMETERS			
	W	D	G	L
103	.065/.165 1.65/3.81	.027/.033 .69/.84	.140/.250 3.56/6.35	1.0/1.50 25.4/38.1

**Termination Finish:** Axial leads and Endcaps are copper with Tin/Lead finish.

**PART ORDERING INFORMATION**

The following part numbers can be purchased in either axial or surface mount devices and screened and tested to the military screening flow. The parts are marked in accordance with the testing performed, example:

Sensitron Screening Level	*Part Number-- Leaded Package (example for 1N4942)
1N	1N4942
JAN	JAN1N4942
SJ	SJ4942
JANTX	JANTX1N4942
SX	SX4942
JANTXV	JANTXV1N4942
SV	SV4942

\*Parts can also be ordered Tape & Reel

**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.