Standard Recovery Rectifier Dual Die Fault Tolerant Design

DESCRIPTION:

This voidless hermetically sealed standard recovery rectifier diode is manufactured on a MIL-PRF-19500 JANS qualified production line and is targeted for space, commercial aircraft, military aircraft, down hole, shipboard and other high reliability or extreme environment applications.

FEATURES / BENEFITS

- ✓ Dual die design for fault tolerance
- ✓ Hermetic, non-cavity glass package
- ✓ Category I Metallurgically bonded

ELECTRICAL CHARACTERISTICS

- ✓ Hot solder dipped finish
- ✓ SJ/SX/SV/SS screening available per
 - equivalent flow of JAN/JX/JXV/JANS

MAXIMUM RATINGS

- ✓ Operating and Storage Temperature: -65°C to +175°C
- ✓ Solder temperature: 260 °C for 10s (max)
- ✓ Thermal Resistance: 20 °C (junction to endcap)
- ✓ Forward surge current: 15A @ 8.3 ms half-sine

VBR @100uA	PEAK INVERSE VOLTAGE	AVC RECTII CURR @T Amj	G. FIED ENT A	AVG. RECTIFIED CURRENT T _{EC} Amps	MA RE CU @	XIMUM VERSE RRENT PIV	MAX. PEAK FORWARD VOLTAGE (PULSED)	F 1 (S CUI	PEAK CYCLE URGE RRENT ¹	$\begin{array}{c} \text{MAXIMUM} \\ \text{REVERSE} \\ \text{RECOVERY} \\ \text{TIME} \\ \text{trr} \\ I_{\text{F}} = 0.5\text{A} \\ I_{\text{RM}} = 1\text{A} \\ I_{\text{R(REC)}} = 0.25\text{A} \end{array}$	Cp V _R =12V 1MHz	THERM RES R _θ JC d=0
V	V	55°C	100°	C 55°C	25°C	125°C	V	А	Amps	µsec	pF	°C/W
>440	400	0.5	0.4	2.4	0.5	25	>1.2 <2.2	1	15	2	30	20
							>1.6 <2.6	3				
							<3.0 (-55°C)	1				

Note 1: T_A =55°C, superposed on I_0 =0.5A, f=60Hz, 8.3ms surge

STANDARD RECOVERY RECTIFIER

TECHNICAL DATA DATASHEET 5456, PRELIMINARY DATA, REV. E

PACKAGE DIMENSIONS (inches/mm)



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

Package Style	le Dimensions – Inch /Millimeters					
	A	В	С	D		
MELF-1	0.185/0.215	0.019/0.028	0.003 min	0.091/0.103		
	4.70/5.46	0.48/0.71	0.08 min	2.31/2.62		

Termination Finish: Endcap Material: Copper with Tin/Lead Hot Solder Dipped finish.

Derating Curves:



©2017 Sensitron Semiconductor • 221 West Industry Court 🗏 Deer Park, NY 11729-4681 Phone (631) 586 7600 Fax (631) 242 9798 • www.sensitron.com • sales@sensitron.com



STANDARD RECOVERY RECTIFIER

TECHNICAL DATA DATASHEET 5456, PRELIMINARY DATA, REV. E

PART ORDERING INFORMATION

The following part numbers can be purchased in 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 Surface Mount Package	Screening In according with Sensitron Specification
1N	1N5614DUS	Unscreened
SJ	SJ5614DUS	7700-4093
SX	SX5614DUS	7700-4093
SV	SV5614DUS	7700-4093
SS	SS5614DUS	7700-4091

*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.