

## Standard Recovery Rectifiers

*Qualified per MIL-PRF-19500/427*

### DESCRIPTION:

This voidless hermetically sealed standard recovery rectifier diode series is military qualified per MIL-PRF-19500/427 and is targeted for commercial and military aircraft, space, military vehicles, shipboard markets and all high reliability applications.

### FEATURES / BENEFITS

- ✓ Hermetic, non-cavity glass package
- ✓ Category I Metallurgically bonded
- ✓ All parts are 100% hot solder dipped
- ✓ JAN/ JANTX/JANTXV available per MIL-PRF-19500/427
- ✓ "JANS Plus" removes atypical/out of family  $V_F$

### MAXIMUM RATINGS

- ✓ Operating and Storage Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- ✓ Solder temperature:  $260^{\circ}\text{C}$  for 10s (max)
- ✓ Thermal Resistance:  $36^{\circ}\text{C}$  (junction to lead)
- ✓ Thermal Resistance:  $13^{\circ}\text{C}$  (junction to endcap)
- ✓ Forward surge current: 30A @ 8.3 ms half-sine

### ELECTRICAL CHARACTERISTICS

TYPE NUMBER	PEAK INVERSE VOLTAGE	MIN BREAKDOWN VOLTAGE	AVG RECTIFIED CURRENT		MAXIMUM REVERSE CURRENT @ PIV		MAX. PEAK FORWARD VOLTAGE (PULSED) $V_F$ @ 3A	MAX. SURGE CURRENT <sup>1</sup> IFSM	MAXIMUM REVERSE RECOVERY TIME <sup>2</sup> $T_{rr}$
			Amps		$\mu\text{Amps}$				
	Volts	Volts	55°C	100°C	25°C	100°C	V	Amps	nsec
1N5614/US	200	220							
1N5616/US	400	440							
1N5618/US	600	660	1.0	.750	.5	25	1.3	30	2000
1N5620/US	800	880							
1N5622/US	1000	1100							

Note 1:  $I_o = 1\text{A}$ , 8ms surge

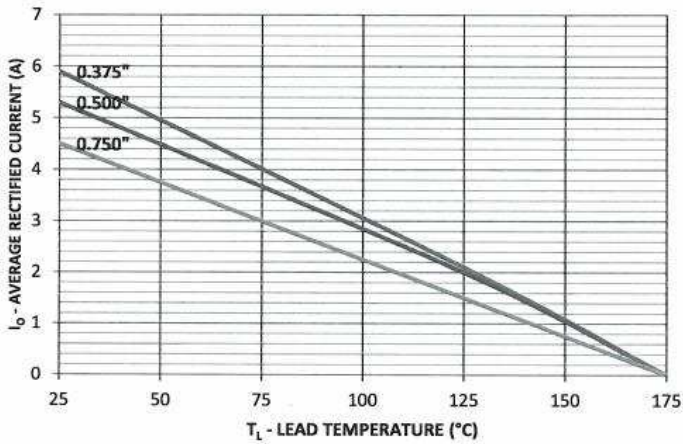
Note 2:  $I_F=0.5\text{A}$ ,  $I_{RM}=1\text{A}$ ,  $I_{r(REC)} = .25\text{A}$

*\*Sensitron 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.*

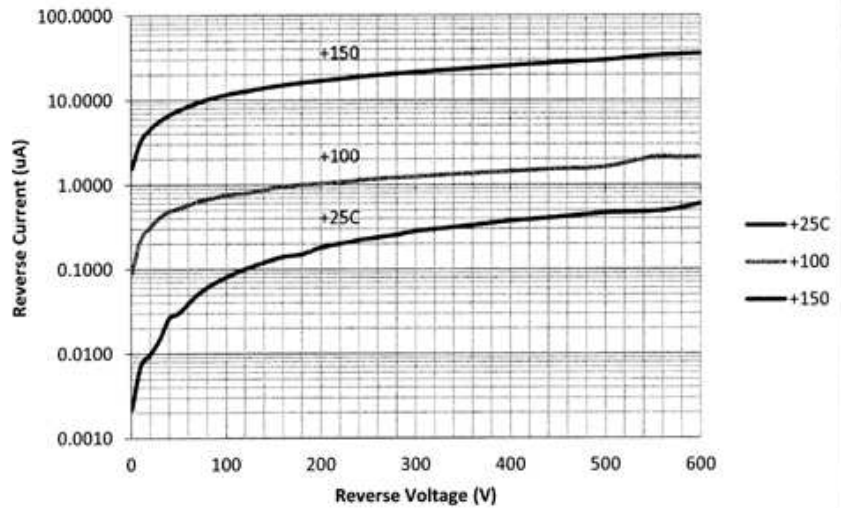
**TECHNICAL DATA  
DATA SHEET 874, REV. C.3**

**GRAPHS:**

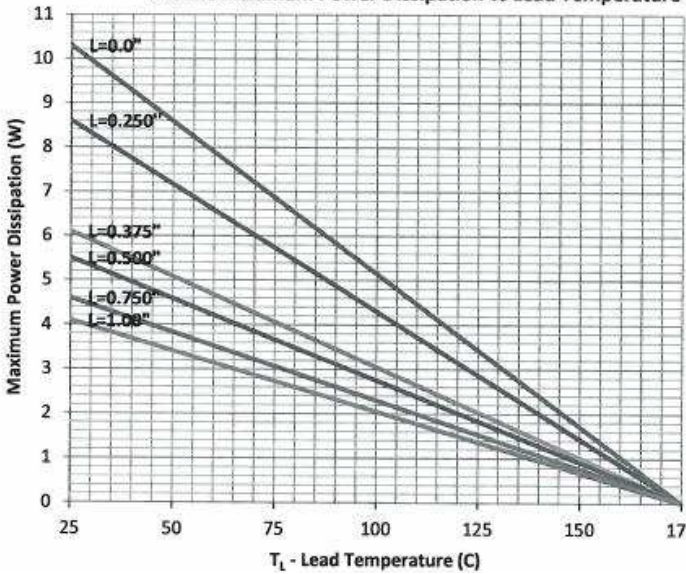
**1N5616 Maximum Current vs Lead Temperature**  
(Power @  $T_j = +175^\circ\text{C}$ )



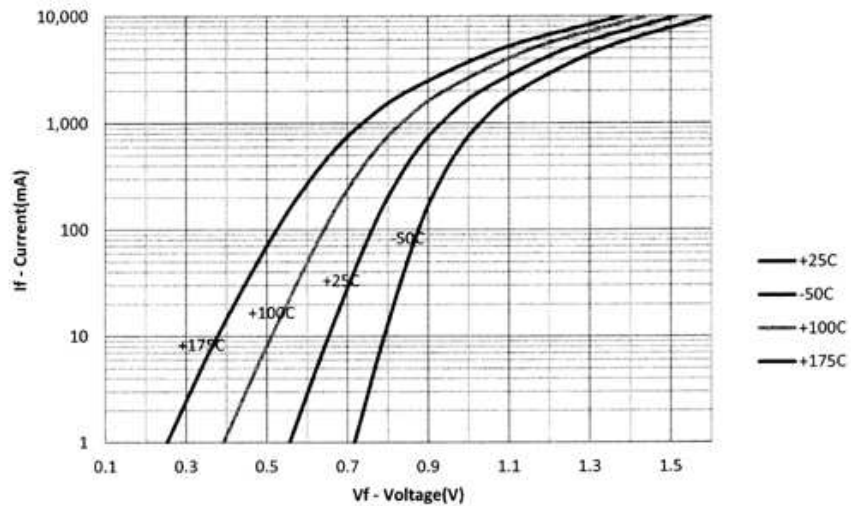
**1N5618 Typical Reverse Current vs Reverse Voltage**



**1N5616 Maximum Power Dissipation vs Lead Temperature**



**1N5618 Typical Forward Voltage vs Forward Current**



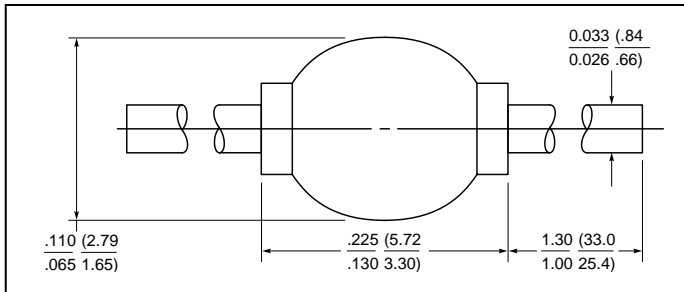
# **SENSITRON** **SEMICONDUCTOR**

1N5614/US thru 1N5622/US

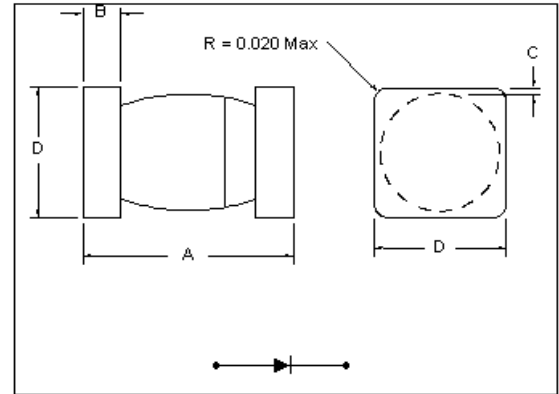
**STANDARD RECOVERY  
RECTIFIERS**

## TECHNICAL DATA DATA SHEET 874, REV. C.3

### PACKAGE DIMENSIONS (inches/mm)



PKG.102



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

PACKAGE STYLE	DIMENSIONS - INCHES / MILLIMETERS			
	A	B	C	D
<b>MELF-A</b>	.168/.200 4.27/5.08	0.019/.028 .48/.71	.003 Min .08 Min	.091/.103 2.31/2.62

### 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 1N5614)	*Part Number-- Surface Mount Package (example for 1N5614US)
<b>1N</b>	1N5614	1N5614US
<b>JAN</b>	JAN1N5614	JAN1N5614US
<b>SJ</b>	SJ5614	SJ5614US
<b>JANTX</b>	JANTX1N5614	JANTX1N5614US
<b>SX</b>	SX5614	SX5614US
<b>JANTXV</b>	JANTXV1N5614	JANTXV1N5614US
<b>SV</b>	SV5614	SV5614US
<b>JANS</b>	JANS1N5614	JANS1N5614US
<b>SS</b>	SS5614	SS5614US

\*Parts can also be ordered Tape & Reel

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