SENSITRON SEMICONDUCTOR

1N5615/US thru 1N5623/US

FAST RECOVERY RECTIFIERS

TECHNICAL DATA
DATA SHEET 5081, REV. A.3

AVAILABLE AS
1N
JAN
JANTX
JANTXV
JANS
JAN EQUIVALENT *
SJ56XX*
SX56XX*
SV56XX*
SS56XX

Fast Recovery Rectifiers

Qualified per MIL-PRF-19500/429

DESCRIPTION:

This voidless hermetically sealed fast recovery rectifier diode series is military qualified per MIL-PRF-19500/429 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
- ✓ JAN/ JANTX/JANTXV available per MIL-PRF-19500/429

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)
- ✓ Thermal Resistance: 13 °C (junction to endcap)
- ✓ Forward surge current: 25A @ 8.3 ms half-sine

ELECTRICAL CHARACTERISTICS

TYPE NUMBER	PEAK INVERSE VOLTAGE	AVG. RECTIFIED CURRENT [1]		MAXIMUM REVERSE CURRENT @ PIV		MAX. PEAK FORWARD VOLTAGE (PULSED)		PEAK 1 CYCLE SURGE CURRENT[2]	MAXIMUM REVERSE RECOVERY TIME Trr I_F=0.5A I_{RM}=1A $I_{R(REC(}$=0.25A	THERM RES $R_{\theta JL}$ d=.375
		Amps		μAmps						
	Volts	50°C	100°C	25°C	100°C	V	A	Amps	nsec	°C/W
1N5615	200								150	
1N5617	400								150	
1N5619	600	1.0	.75	0.5	25	1.6	3.0	25	250	38
1N5621	800								300	
1N5623	1000								500	

Note 1: I_o = 1A, T_A=55°C
Note 2: T_A=100°C, I_O=750mA, f =60Hz, 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.*

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TECHNICAL DATA
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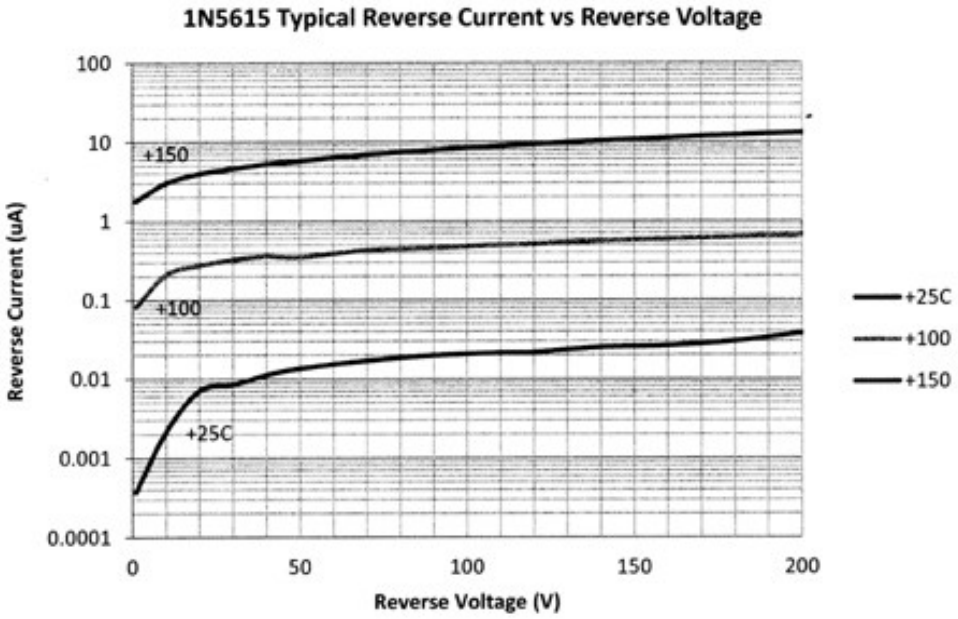
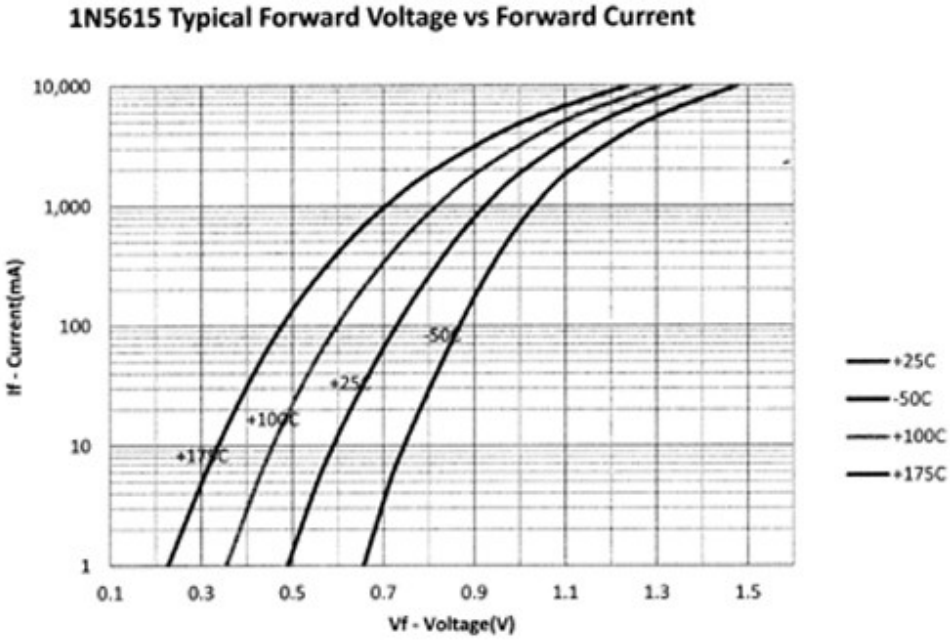
GRAPHS





TECHNICAL DATA
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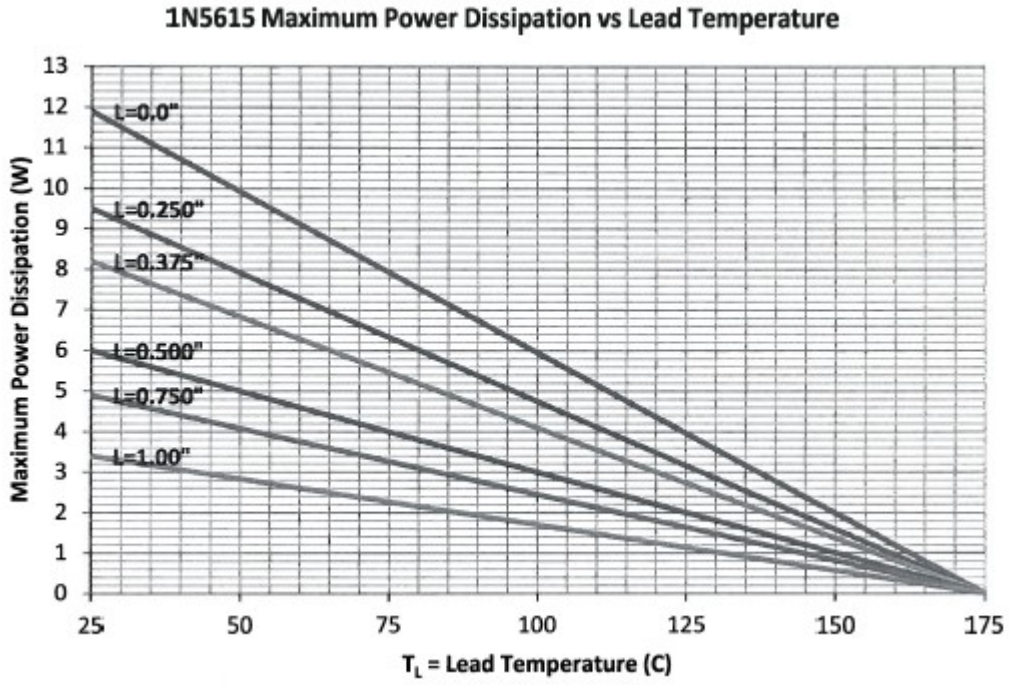

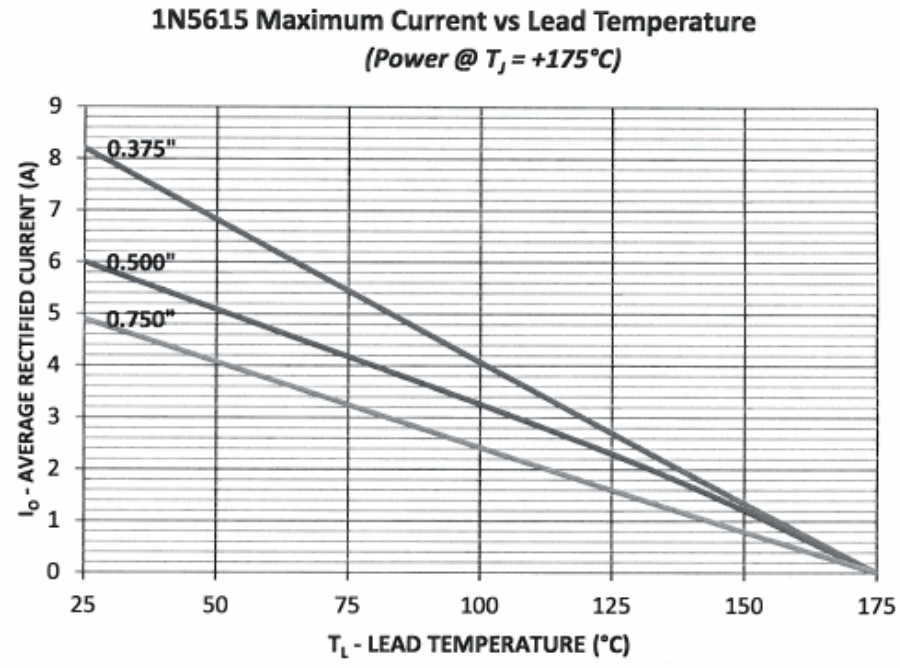

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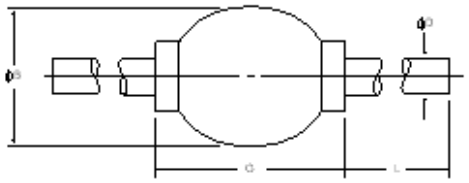
PACKAGE DIMENSIONS (inches/mm)

AXIAL LEAD RECTIFIER OUTLINES

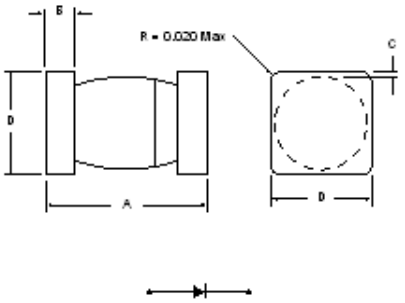


Note: Cathode side of device is indicated by a dark band marked on body.

PACKAGE STYLE	DIMENSIONS - INCHES / MILLIMETERS			
	⌀B	⌀D	G	L
102	.065/.110 1.65/2.79	.026/.033 .66/.84	.130/.225 3.30/5.72	1.00/1.30 25.4/33.0

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

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-1	.168/.200 4.27/5.08	.019/.028 0.48/0.71	.003 0.08	.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 1N5615)	*Part Number-- Surface Mount Package (example for 1N5615US)
1N	1N5615	1N5615US
JAN	JAN1N5615	JAN1N5615US
SJ	SJ5615	SJ5615US
JANTX	JANTX1N5615	JANTX1N5615US
SX	SX5615	SX5615US
JANTXV	JANTXV1N5615	JANTXV1N5615US
SV	SV5615	SV5615US
JANS	JANS1N5615	JANS1N5615US
SS	SS5615	SS5615US

**Parts can also be ordered Tape & Reel*