

## Ultrafast Recovery Rectifiers

*Qualified per MIL-PRF-19500/477*

### DESCRIPTION:

This voidless hermetically sealed ultrafast recovery rectifier diode series is military qualified per MIL-PRF-19500/477 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-19500/477

### MAXIMUM RATINGS

- ✓ Operating and Storage Temperature: -65°C to +175°C
- ✓ Thermal Resistance: 36°C (junction to lead)
- ✓ Thermal Resistance: 13°C (junction to endcap)
- ✓ Forward surge current: 35A @ 8.3 ms half-sine

### ELECTRICAL CHARACTERISTICS

TYPE NUMBER	WORKING PEAK REVERSE VOLTAGE	AVG RECTIFIED CURRENT <sup>1</sup>	MAXIMUM REVERSE CURRENT @ PIV		MAX. PEAK FORWARD VOLTAGE (PULSED) V <sub>F</sub> @ 1A	MAXIMUM SURGE CURRENT <sup>2</sup> I <sub>FSM</sub>	MAXIMUM REVERSE RECOVERY TIME <sup>3</sup> T <sub>rr</sub>
		Amps	μAmps	25°C			
	Volts	55°C			V	Amps	nsec
1N5802/US	50	2.5	1	175	.875	35	25
1N5804/US	100						
1N5806/US	150						

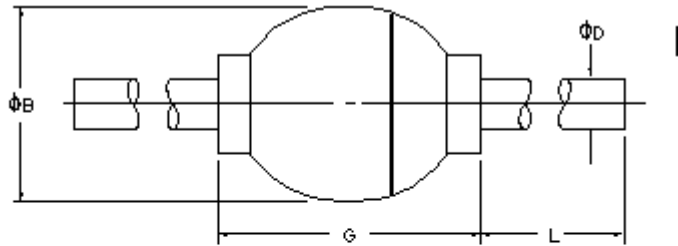
Note 1: T<sub>EC</sub> = T<sub>L</sub> at L=0 or T<sub>end tab</sub> for US suffix devices. Derate at 25mA/°C for T<sub>L</sub> above 75°C.

Note 2: I<sub>o</sub> = 1A, 8ms surge

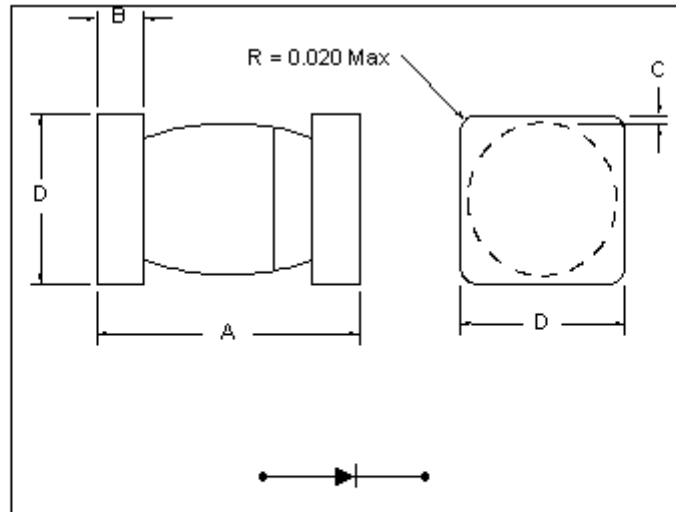
Note 3: I<sub>F</sub>=0.5A, I<sub>rm</sub>=1A, I<sub>r(REC)</sub> = .25A

**TECHNICAL DATA**  
**DATA SHEET 158, REV. F.4**

**PACKAGE DIMENSIONS (inches/mm)**



PACKAGE	DIMENSIONS - INCHES / MILLIMETERS			
STYLE	$\phi B$	$\phi D$	G	L
<b>106</b>	.065/.085 1.65/2.16	.027/.032 .69/.81	.125/.250 3.18/6.35	.700/1.30 17.78/33.02

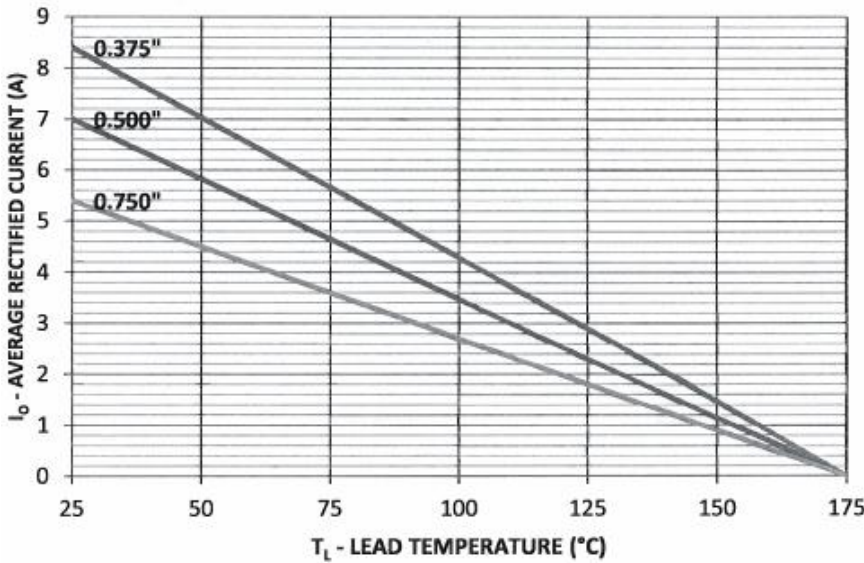
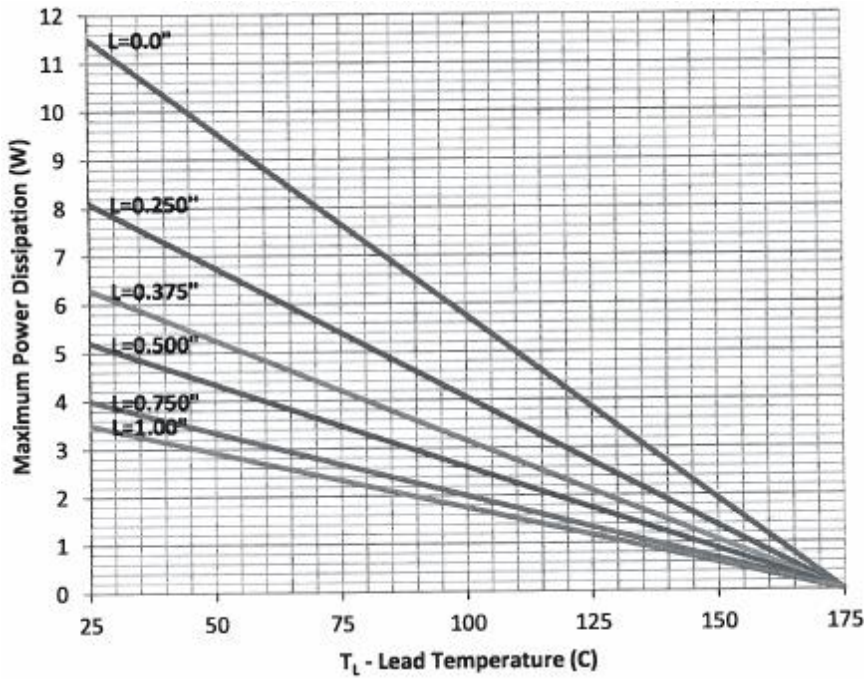


PACKAGE	DIMENSIONS - INCHES / MILLIMETERS			
STYLE	A	B	C	D
<b>MELF-A</b>	.168/.200 4.27/5.08	0.019/.028 .48/.71	.003 Min .08 Min	.091/.103 2.31/2.62

**Note:** The cathode side is marked with a dark colored band on one side of the diode body.

**TECHNICAL DATA  
DATA SHEET 158, REV. F.4**

**GRAPHS:**



# **SENSITRON** **SEMICONDUCTOR**

1N5802/US thru 1N5806/US

**ULTRAFAST RECOVERY  
RECTIFIERS**

**TECHNICAL DATA  
DATA SHEET 158, REV. F.4**

## **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:

<b>Sensitron Screening Level</b>	<b>*Part Number-- Leaded Package (example for 1N5802)</b>	<b>*Part Number-- Surface Mount Package (example for 1N5802US)</b>
<b>1N</b>	1N5802	1N5802US
<b>JAN</b>	JAN1N5802	JAN1N5802US
<b>JANTX</b>	JANTX1N5802	JANTX1N5802US
<b>JANTXV</b>	JANTXV1N5802	JANTXV1N5802US
<b>JANS</b>	JANS1N5802	JANS1N5802US

*\*Parts can also be ordered Tape & Reel*

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