

TECHNICAL DATA
DATA SHEET 158, REV. F.3

AVAILABLE AS
1N, JAN, JANTX, JANTXV
JANS
JAN EQUIVALENT*
SJ*, SX*, SV*, SS*

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
- ✓ "JANS Plus" removes atypical/out of family V_F

MAXIMUM RATINGS

- ✓ Operating and Storage Temperature: -65°C to $+175^{\circ}\text{C}$
- ✓ 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 ¹	MAXIMUM REVERSE CURRENT @ PIV		MAX. PEAK FORWARD VOLTAGE (PULSED) V_F @ 1A	MAXIMUM SURGE CURRENT ² I_{FSM}	MAXIMUM REVERSE RECOVERY TIME ³ T_{rr}
		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: $T_{EC} = T_L$ at $L=0$ or $T_{end\ tab}$ f or US suffix devices. Derate at $25\text{mA}/^{\circ}\text{C}$ for T_L above 75°C .

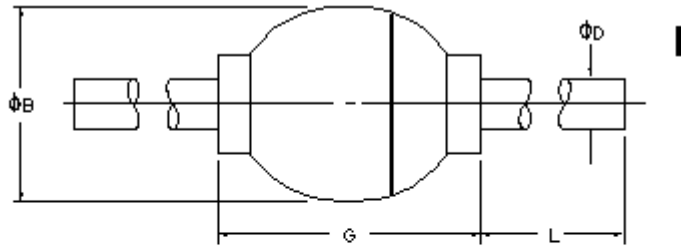
Note 2: $I_o = 1\text{A}$, 8ms surge

Note 3: $I_F=0.5\text{A}$, $I_{rm}=1\text{A}$, $I_{r(REC)}=.25\text{A}$

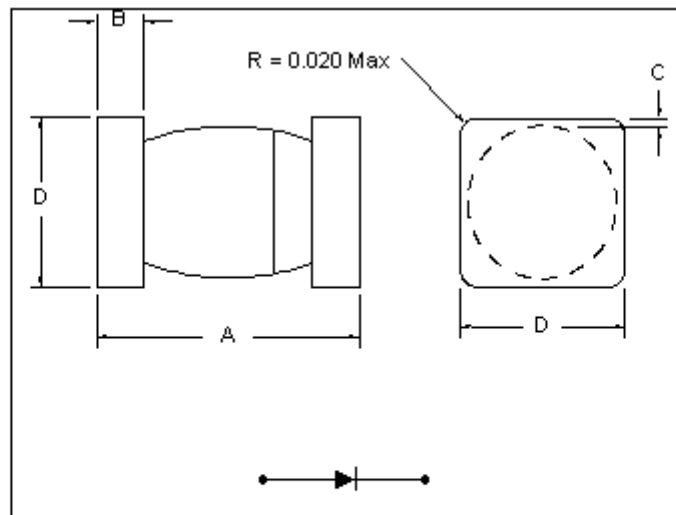
*Sensitron **space equivalent diodes** are manufactured and screened to MIL-PRF-19500 flow and guidelines starting from wafer fabrication through assembly and testing using our internal specification.

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PACKAGE DIMENSIONS (inches/mm)



PACKAGE	DIMENSIONS - INCHES / MILLIMETERS			
STYLE	ϕB	ϕD	G	L
106	.065/.085 1.65/2.16	.027/.032 .69/.81	.125/.250 3.18/6.35	.700/1.30 17.78/33.02

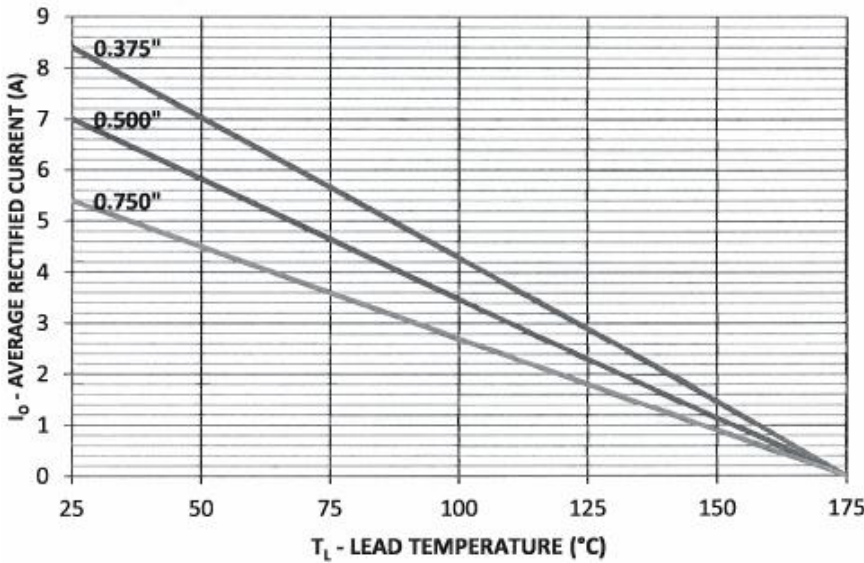
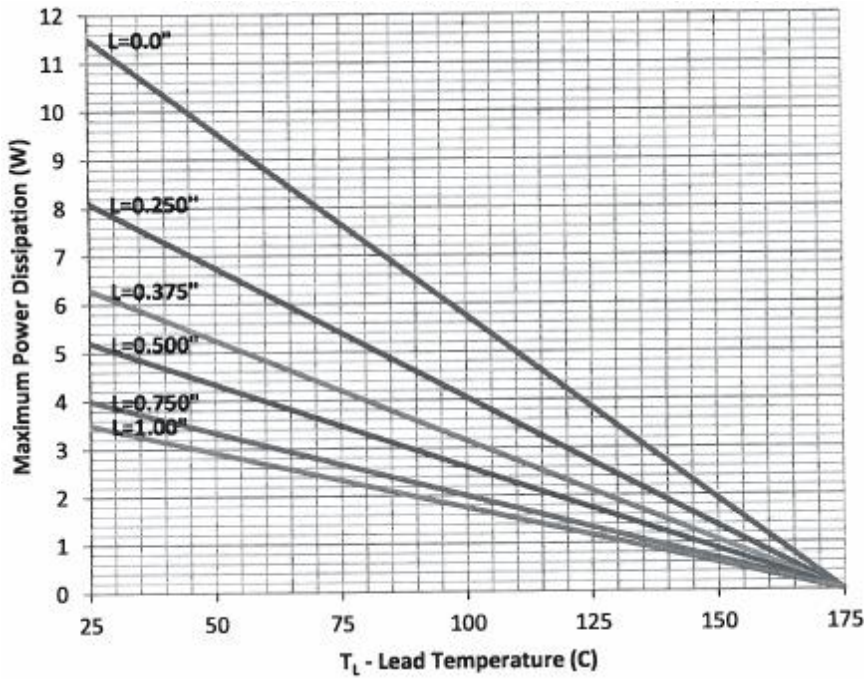


PACKAGE	DIMENSIONS - INCHES / MILLIMETERS			
STYLE	A	B	C	D
MELF-A	.168/.200 4.27/5.08	0.019/.028 .48/.71	.003 Min .08 Min	.091/.103 2.31/2.62

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

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GRAPHS:



SENSITRON **SEMICONDUCTOR**

1N5802/US thru 1N5806/US

**ULTRAFAST RECOVERY
RECTIFIERS**

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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 1N5802)	*Part Number-- Surface Mount Package (example for 1N5802US)
1N	1N5802	1N5802US
JAN	JAN1N5802	JAN1N5802US
SJ	SJ5802	SJ5802US
JANTX	JANTX1N5802	JANTX1N5802US
SX	SX5802	SX5802US
JANTXV	JANTXV1N5802	JANTXV1N5802US
SV	SV5802	SV5802US
JANS	JANS1N5802	JANS1N5802US
SS	SS5802	SS5802US

*Parts can also be ordered Tape & Reel

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