SENSITRON SEMICONDUCTOR

1N6626/U[1]/US thru 1N6631/U[1]US

ULTRAFAST RECTIFIERS

TECHNICAL DATA
DATA SHEET 5077, REV. B.4

AVAILABLE AS
1N, JAN, JANTX, JANTXV
JANS
JAN EQUIVALENT[2]
SJ[2], SX[2], SV[2]
SS

Ultrafast Recovery Rectifiers

Qualified per MIL-PRF-19500/590

DESCRIPTION:

This voidless hermetically sealed standard recovery rectifier diode series is military qualified per MIL-PRF-19500/590 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
- ✓ Parts are hot solder dipped
- ✓ JAN/ JANTX/ JANTXV/ JANS available per MIL-PRF-19500/590

MAXIMUM RATINGS

- ✓ Operating and Storage Temperature: -65°C to +150°C
- ✓ Junction Temperature: -65°C to +150°C

ELECTRICAL CHARACTERISTICS

Rating	Symbol	Condition	Max	Units
WORKING PEAK REVERSE VOLTAGE 1N6626, U, US 1N6627, U ,US 1N6628, U, US 1N6629, U, US 1N6630 ,U, US 1N6631, U, US	V_{RWM}		 200 400 600 800 900 1000	Volts
AVERAGE RECTIFIED FORWARD CURRENT 1N6626 thru 1N6628 1N6629 thru 1N6631	I_o	T_L= 75 °C	 2.3 1.8	Amps
AVERAGE RECTIFIED FORWARD CURRENT 1N6626U, US thru 1N6628U, US 1N6629U, US thru 1N6631U, US	I_o	T_{EC}= 110 °C	 2.3 1.8	Amps
PEAK FORWARD SURGE CURRENT 1N6626, U, US thru 1N6630,U, US 1N6631, U, US	I_{FSM}	t_p=8.3ms	 75 60	A(pk)
MAXIMUM REVERSE CURRENT 1N6626, U, US thru 1N6630,U, US 1N6631, U, US	I_R @ V_{RWM}	T_j = 25 °C	 2.0 4.0	µAmps
MAXIMUM REVERSE CURRENT 1N6626, U, US thru 1N6630,U, US 1N6631, U, US	I_R @ V_{RWM}	T_j = 150 °C	 500 600	µAmps

Note 1: The U version is inactive for new designs per MIL-PRF-19500/590. The US version is a direct replacement and is preferred for new designs.
Note 2: 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.

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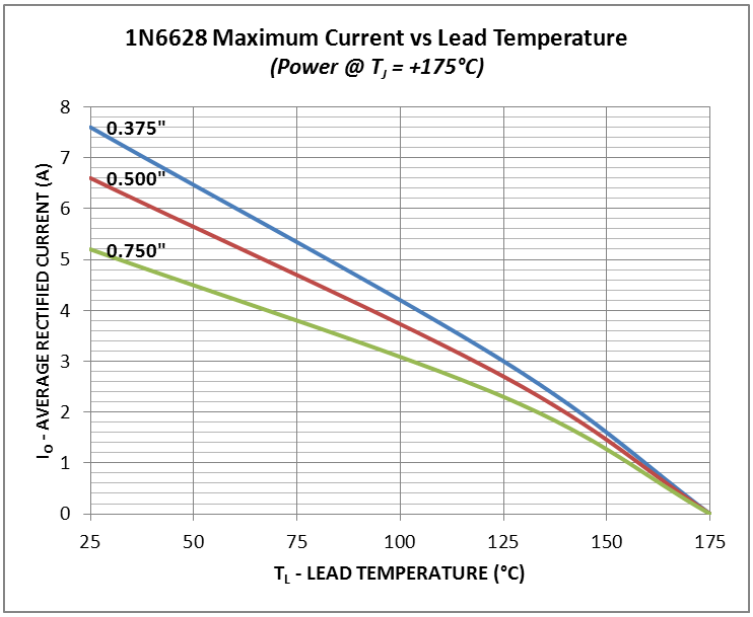
Rating	Symbol	Condition	Max	Units
MAX. PEAK FORWARD VOLTAGE (PULSED) 1N6626, U, US thru 1N6628,U, US 1N6629,U, US to 1N6630,U, US 1N6631, U, US	V_{FM1}	I_F=4A I_F=3A I_F=2A	1.50 1.70 1.95	Volts
MAX. PEAK FORWARD VOLTAGE (PULSED) 1N6626, U, US thru 1N6628,U, US 1N6629,U, US to 1N6631,U, US 1N6631, U, US	V_{FM2}	I_F=2A I_F=1.4A I_F=1.4A	1.35 1.40 1.60	Volts
PEAK RECOVERY CURRENT 1N6626, U, US thru 1N6628,U, US 1N6629,U, US to 1N6630,U, US 1N6631, U, US	I_{RM}	I_F=2A, di/dt=100Aμs	3.5 4.2 5.0	A(pk)
MAXIMUM REVERSE RECOVERY TIME 1N6626, U, US thru 1N6628,U, US 1N6629,U, US to 1N6630,U, US 1N6631, U, US	t_{rr}	I_F=0.5A I_{RM} =1.0A $I_{R(REC)}$ = 0.25A	30 50 60	ns
MAXIMUM REVERSE RECOVERY TIME 1N6626, U, US thru 1N6628,U, US 1N6629,U, US to 1N6630,U, US 1N6631, U, US	t_{rr2}	I_F=2A di/dt=100Aμs	45 60 80	ns
FORWARD RECOVERY VOLTAGE 1N6626, U, US thru 1N6628,U, US 1N6629,U, US to 1N6630,U, US 1N6631, U, US	V_{FRM}	I_F=1A t_r=12ns	8 12 20	Volts
THERMAL RESISTANCE (Axial) 1N6626 thru 1N6631	$R\theta_{JL}$	L=.375	22	°C/W
THERMAL RESISTANCE (MELF) 1N6626U, US thru 1N6631U, US	$R\theta_{JC}$	L=0	6.5	°C/W

GRAPHS



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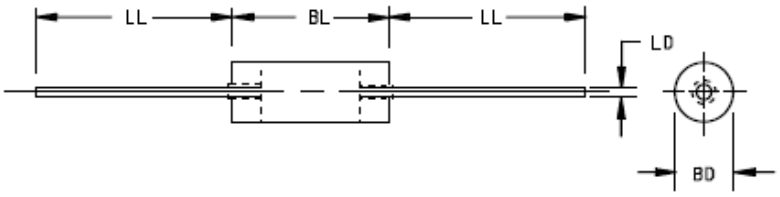
PACKAGE DIMENSIONS (inches/mm)

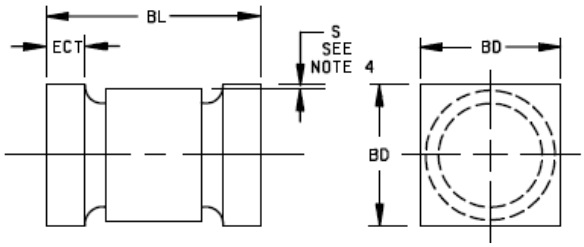
MECHANICAL DIMENSIONS In Inches / (mm)

AXIAL



Ltr	Dimensions				
	Inches		Millimeters		
	Min	Max	Min	Max	Notes
BD	.115	.137	2.92	3.48	4
BL	.130	.300	3.30	7.62	3
LD	.037	.042	0.94	1.07	3
LL	.900	1.300	22.86	33.02	

MELF



Ltr	Dimensions			
	1N6626U, US through 1N6631U, US			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	.200	.225	5.08	5.72
BD	.137	.148	3.48	3.76
ECT	.019	.028	0.48	0.71
S	.003		0.08	

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PART ORDERING INFORMATION

The following part numbers can be 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 1N6626)*
1N	1N6626
JAN	JAN1N6626
SJ	SJ6626
JANTX	JANTX1N6626
SX	SX6626
JANTXV	JANTXV1N6626
SV	SV6626
JANS	JANS1N6626
SS	SS6626

**Parts can also be ordered Tape & Reel*