RECTIFIERS

Military Approved, 3 Amp, Fast Recovery

1N5186-1N5190
JAN & JANTX

FEATURES
- Continuous Rating: 3A
- Qualified to MIL-S-19500/424
- PIV : to 600V
- Recovery Time: 150ns
- Miniature Size
- Controlled Avalanche

DESCRIPTION
These miniature fast recovery rectifiers permit operation at full power at frequencies as high as 100kHz sine wave. They are qualified to military specification and available as JAN, JANTX

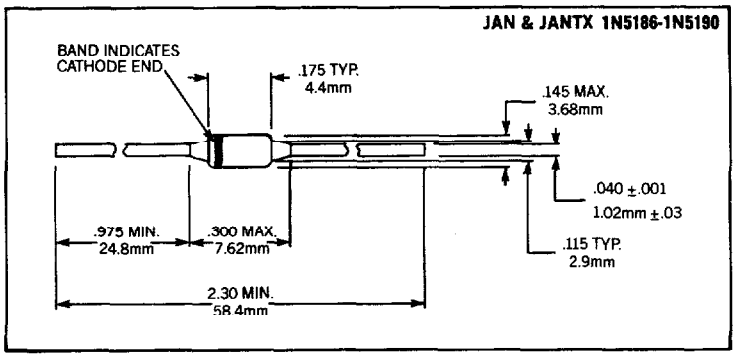
ABSOLUTE MAXIMUM RATINGS

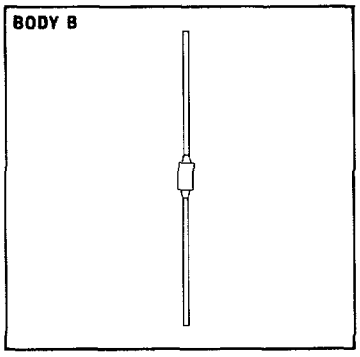
Peak Inverse Voltage	Type
100V	JAN & JANTX 1N5186
200V	JAN & JANTX 1N5187
400V	JAN & JANTX 1N5188
600V	JAN & JANTX 1N5190

Maximum Average D.C. Output Current

@ T_A = 25°C 3.0A
@ T_A = 150°C 0.7A
Non-Repetitive Sinusoidal
Surge Current (8.3ms) 80A
Operating Temperature Range ..... −65°C to +175°C
Storage Temperature Range ..... −65°C to +200°C
Thermal Resistance ..... *See Lead Temperature Derating Curve*

MECHANICAL SPECIFICATIONS





THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10

Microsemi Corp.
Watertown
The diode experts

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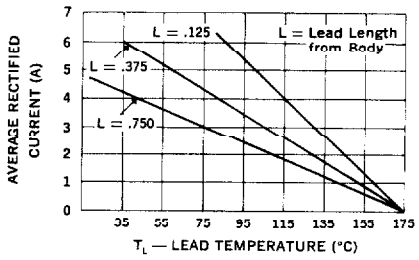
ELECTRICAL SPECIFICATIONS (at 25°C unless noted)

Type	Peak Inverse Voltage	Minimum Reverse Breakdown Voltage @ 100μA	Peak Forward Voltage		Maximum Reverse D.C. Current @ PIV	
			Min.	Max.	25°C	100°C
J, JTX 1N5186	100V	120V	0.9V	1.5V	2μA	100μA
J, JTX 1N5187	200V	240V	@ 9A(pk)			
J, JTX 1N5188	400V	480V	(8.3ms)			
J, JTX 1N5190	600V	660V				

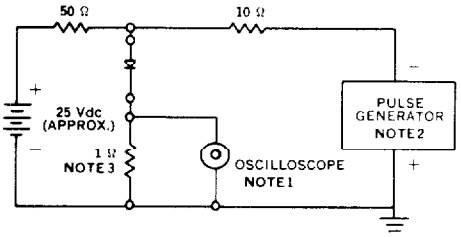
Type	Reverse Recovery Time*	Capacitance @ $V_R = 0V$ f = 1MHz	Capacitance @ $V_R = 4V$ f = 1MHz
J, JTX 1N5186	150ns	300pf	200pf
J, JTX 1N5187	200ns	300pf	170pf
J, JTX 1N5188	250ns	230pf	120pf
J, JTX 1N5190	400ns	180pf	90pf

*Recovery time measured from $I_F = 0.5A$ to $I_R = 1.0A$, $I_{REC} = 0.25A$

Maximum Current vs. Lead Temperature

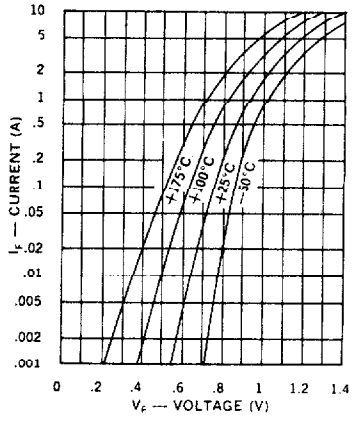


Reverse-Recovery Circuit

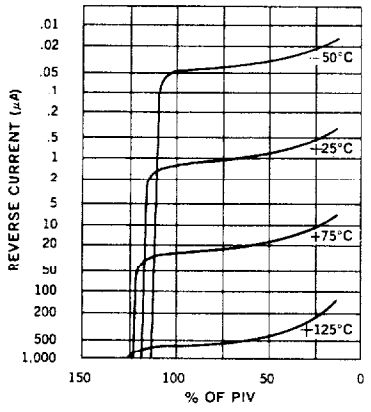


NOTES:
1. Oscilloscope: Rise time ≤ 3ns; input impedance = 50Ω.
2. Pulse Generator: Rise time ≤ 8ns; source impedance 10Ω.
3. Current viewing resistor, non-inductive, coaxial recommended.

Typical Forward Current vs Forward Voltage



Typical Reverse Current vs PIV



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