

# 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

@  $T_A = 25^\circ\text{C}$  ..... 3.0A

@  $T_A = 150^\circ\text{C}$  ..... 0.7A

Non-Repetitive Sinusoidal

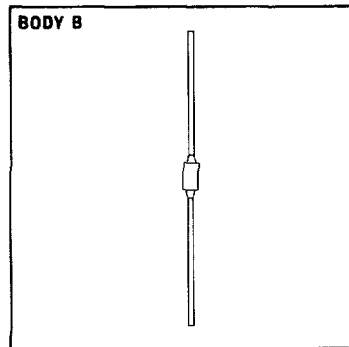
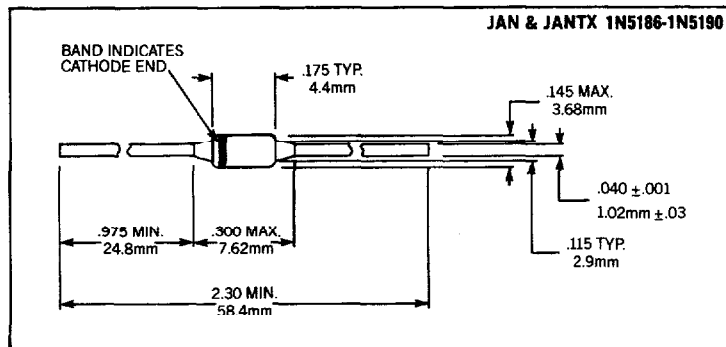
Surge Current (8.3ms) ..... 80A

Operating Temperature Range .....  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$

Storage Temperature Range .....  $-65^\circ\text{C}$  to  $+200^\circ\text{C}$

Thermal Resistance ..... See Lead Temperature Derating Curve

## MECHANICAL SPECIFICATIONS



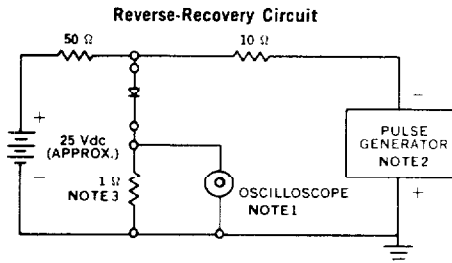
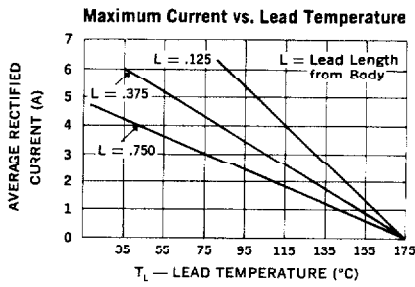
THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10

**ELECTRICAL SPECIFICATIONS (at 25°C unless noted)**

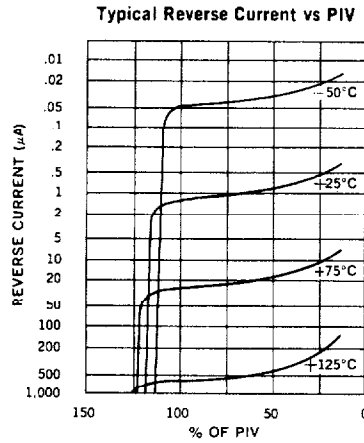
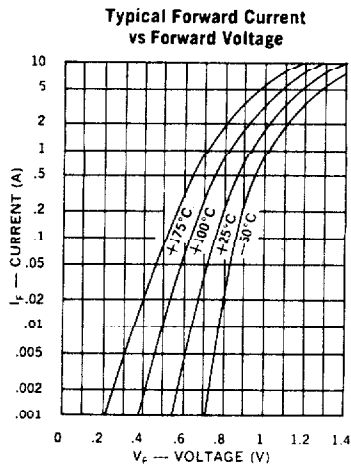
Type	Peak Inverse Voltage	Minimum Reverse Breakdown Voltage @ 100µA	Peak Forward Voltage		Maximum Reverse D.C. Current @ PIV	
			Min.	Max.	25°C	100°C
J, JTX 1N5186	100V	120V	0.9V @ 9A(pk) (8.3ms)	1.5V	2µA	100µA
J, JTX 1N5187	200V	240V				
J, JTX 1N5188	400V	480V				
J, JTX 1N5190	600V	660V				

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  $I_R = 1.0A$ ,  $I_{REC} = 0.25A$



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





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