

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

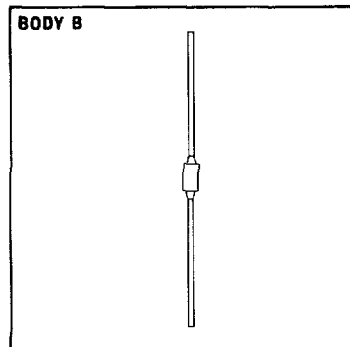
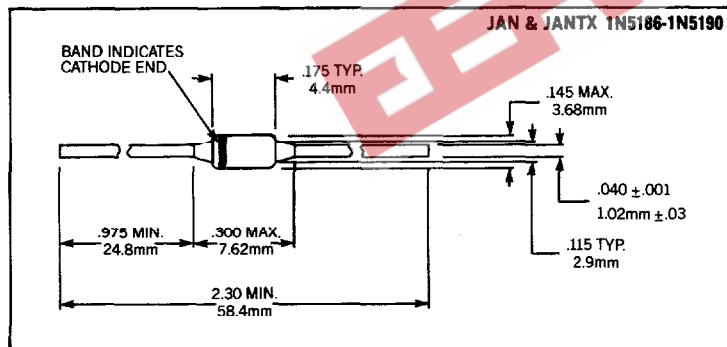
Surge Current (8.3ms) 80A

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

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

Thermal Resistance See Lead Temperature Derating Curve

MECHANICAL SPECIFICATIONS



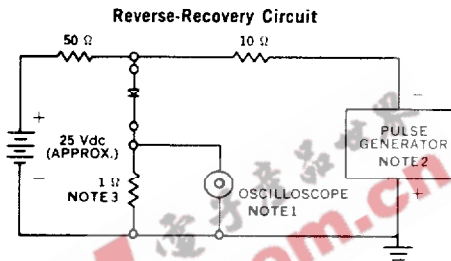
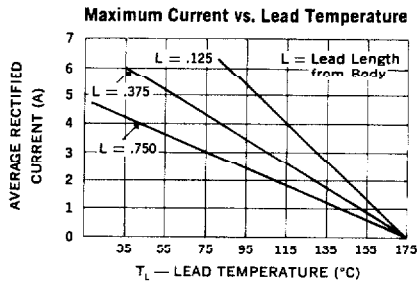
THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10

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.

