

# RECTIFIERS

Military Approved, Fast Recovery, 1 Amp

1N5615, 1N5617, 1N5619  
JAN, JANTX & JANTXV

## FEATURES

- Qualified to MIL-S-19500/429
- PIV: to 600V
- Controlled Avalanche

## DESCRIPTION

This series of military approved rectifiers is useful in many military applications where fast recovery and medium power are required. The 100% screening requirements in the "TX" version combined with the unique Microsemi construction assures the highest degree of reliability.

## ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	Type
200V	JAN, JANTX, JANTXV 1N5615
400V	JAN, JANTX, JANTXV 1N5617
600V	JAN, JANTX, JANTXV 1N5619

Maximum Average D.C. Output Current

@  $T_A = 55^\circ\text{C}$  ..... 1.0A  
 @  $T_A = 100^\circ\text{C}$  ..... 0.75A

Non-Repetitive Sinusoidal

Surge Current (8.3ms) ..... 25A

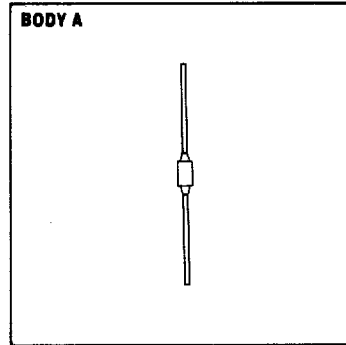
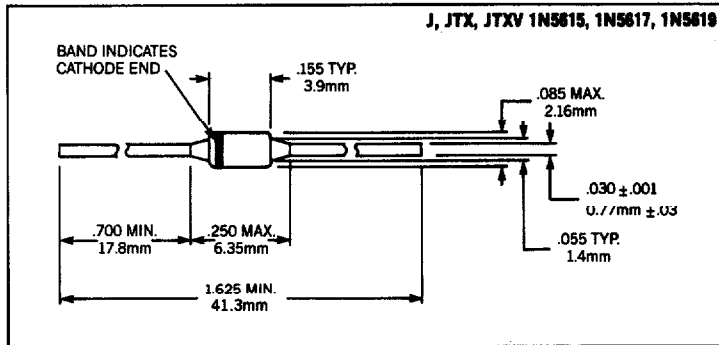
Operating Temperature Range .....  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$

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

Thermal Resistance  $\theta_{JL}$  .....  $38^\circ\text{C/W}$

See Lead Temperature Derating Curve

## MECHANICAL SPECIFICATIONS



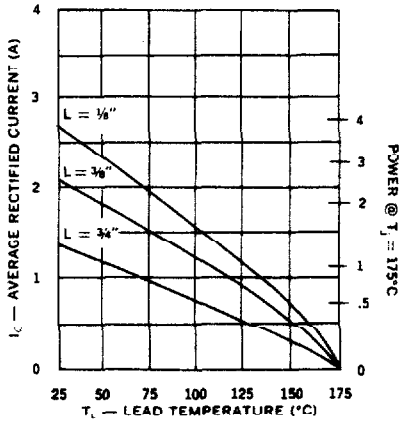
THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10

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

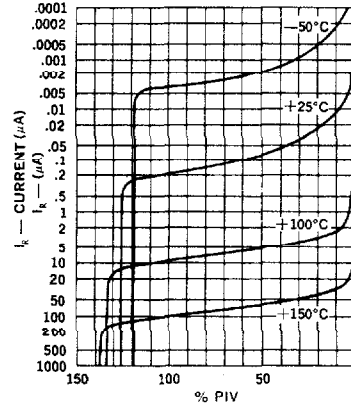
Type	PIV	Minimum Reverse Breakdown Voltage @ 50µA	Forward Voltage		Maximum Reverse Current		Maximum Reverse Recovery Time*	Capacitance @ V <sub>r</sub> = 12V f = 1MHz
			Min.	Max.	25°C	100°C		
J, JTX, JTXV 1N5615	200V	220V	0.8V	1.6V (pk)	0.5µA	25µA	150ns	45pf
J, JTX, JTXV 1N5617	400V	440V	@ 3.0 Adc tp = 300µs		0.5µA	25µA	150ns	35pf
J, JTX, JTXV 1N5619	600V	660V					250ns	25pf

\*Measured in Circuit I<sub>F</sub> = 1/2A, I<sub>R</sub> = 1A, I<sub>REC</sub> = 1/4A

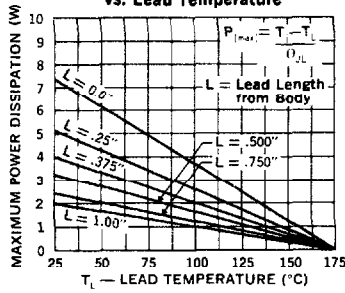
**Maximum Current vs Lead Temperature**



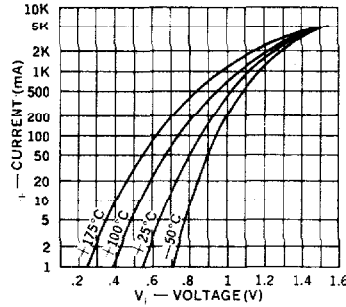
**Typical Reverse Current vs. PIV**



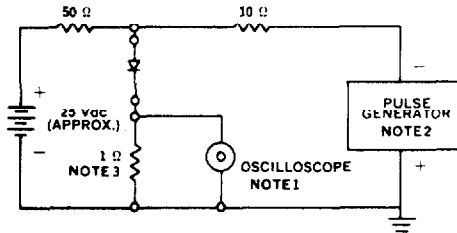
**Maximum Power vs. Lead Temperature**



**Typical Forward Voltage vs. Forward Current**



**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.