

Silicon Diode

1N5619

600V / 1A

DATASHEET

OEM – Unitrode

Source: Unitrode Databook 1989-1990

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

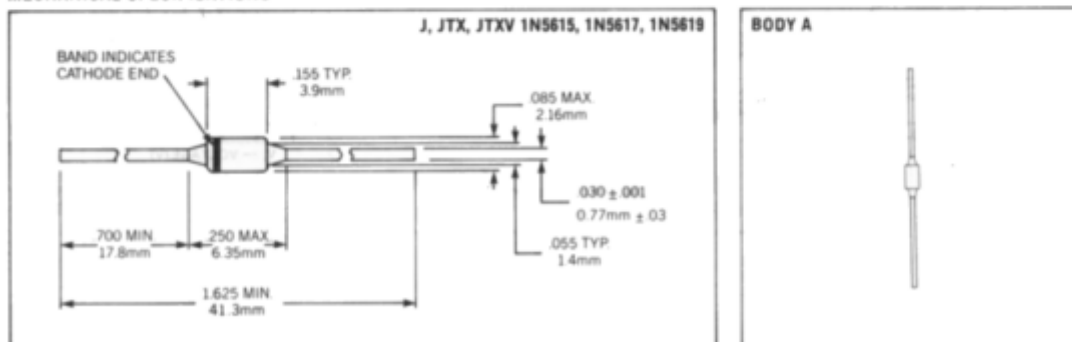
This series of military approved rectifiers is useful in many military applications where fast recovery and medium power are required. The 100% screening requirements in the "TX" version combined with the unique Unitrode construction assures the highest degree of reliability.

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°C to $+175^\circ\text{C}$
 Storage Temperature Range -65°C to $+200^\circ\text{C}$
 Thermal Resistance θ_{JA} 38°C/W
 See Lead Temperature Derating Curve

MECHANICAL SPECIFICATIONS



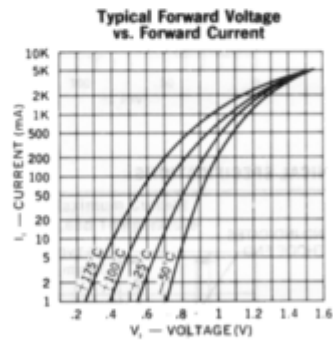
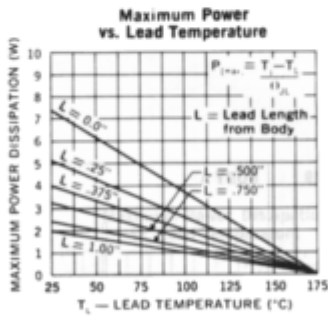
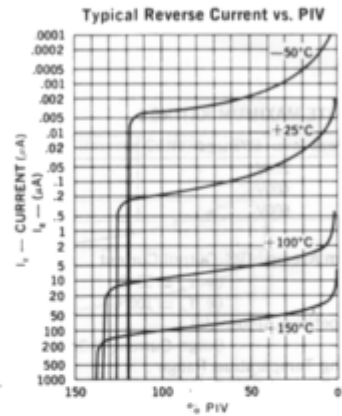
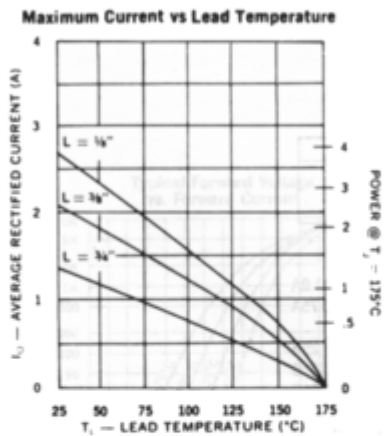
THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 11.

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

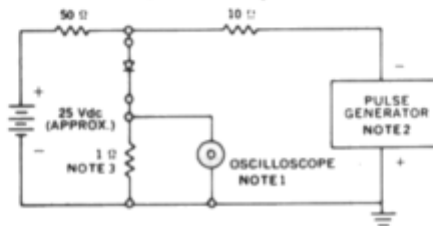
ELECTRICAL SPECIFICATIONS (at 25°C unless noted)

Type	PIV	Minimum Reverse Breakdown Voltage @ 50µA	Forward Voltage		Maximum Reverse Current		Maximum Reverse Recovery Time*	Capacitance @ $V_r = 12V$ $f = 1MHz$
			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				150ns	35pf
J, JTX, JTXV 1N5619	600V	660V					250ns	25pf

*Measured in Circuit $I_F = 1/2A$, $I_R = 1A$, $t_{RR} = 1/4A$



Reverse-Recovery Circuit



- NOTES:**
- Oscilloscope: Rise time < 3ns; input impedance = 50Ω.
 - Pulse Generator: Rise time < 8ns; source impedance 100Ω.
 - Current viewing resistor, non-inductive, coaxial recommended.