

# Silicon Diode

## **1N4946**

600V / 1A

# DATASHEET

OEM – Unitrode

Source: Unitrode Databook 1989-1990

# RECTIFIERS

Military Approved, 1 Amp,  
Fast Recovery

JAN, JANTX, & JANTXV 1N4942  
 JAN, JANTX, & JANTXV 1N4944  
 JAN, JANTX, & JANTXV 1N4946

**FEATURES**

- Qualified to MIL-S-19500/359
- Surge Rating: 15A
- PIV: to 600V
- Controlled Avalanche

**DESCRIPTION**

These fast recovery rectifiers are suitable for use as power devices for many applications. Devices are available as JAN, JANTX or JANTXV.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Reverse Voltage	Type
200V	JAN, JANTX, & JANTXV 1N4942
400V	JAN, JANTX, & JANTXV 1N4944
600V	JAN, JANTX, & JANTXV 1N4946

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

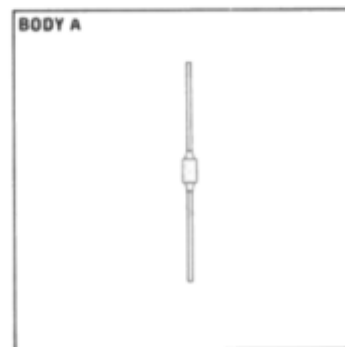
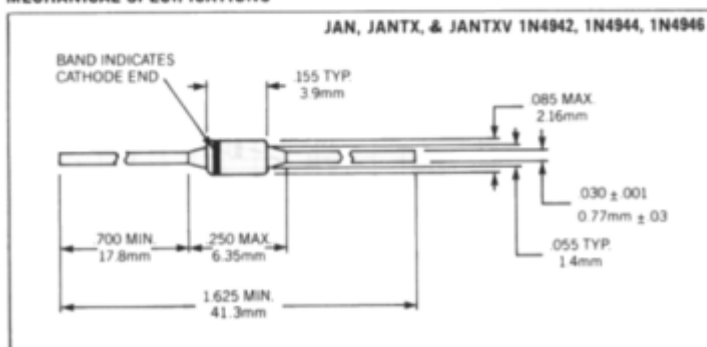
Surge Current (8.3ms) ..... 15A

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

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

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

**MECHANICAL SPECIFICATIONS**



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

JAN, JANTX, & JANTXV 1N4942, 1N4944, 1N4946

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

Type	Peak Inverse Voltage	Minimum Reverse Breakdown Voltage @ 50 $\mu$ A	Forward Voltage		Maximum Reverse Current		Maximum Reverse Recovery Time*	Capacitance @ V <sub>r</sub> = 12V f = 1MHz
			Min.	Max.	25°C	150°C		
J, JTX, JTXV 1N4942	200V	220V	0.6V	1.3Vdc	1.0 $\mu$ A	200 $\mu$ A	150ns	45pf
J, JTX, JTXV 1N4944	400V	440V	@ 1 Adc				150ns	35pf
J, JTX, JTXV 1N4946	600V	660V					250ns	25pf

\*Measured in circuit I<sub>f</sub> = 1/2A, I<sub>r</sub> = 1.0A, I<sub>RRC</sub> = 1/4A

