

RECTIFIERS

Military Approved
High Efficiency, 20 Amp

1N5812, 1N5814, 1N5816
JAN, JANTX & JANTXV

FEATURES

- Qualified to MIL-S-19500/478
- Exceptional Efficiency
- Mechanically Rugged
- Low Thermal Resistance
- JAN, JANTX and JANTXV Available

DESCRIPTION

This series is suited for use as a power rectifier in switching regulator and high frequency inverter/converter and other appropriate equipment circuits where low voltage drop and fast recovery times are important.

ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	Type
50V	JAN, JANTX, JANTXV 1N5812
100V	JAN, JANTX, JANTXV, 1N5814
150V	JAN, JANTX, JANTXV 1N5816

Maximum Average D.C. Output Current

@ $T_c = 100^\circ\text{C}$ 20A

@ $T_A = 55^\circ\text{C}$ 5A

Non-Repetitive Sinusoidal

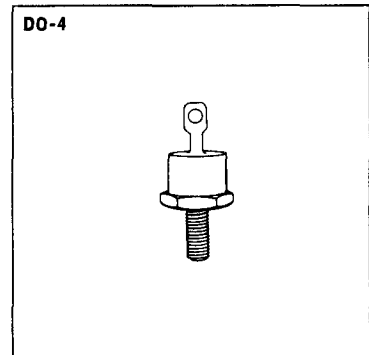
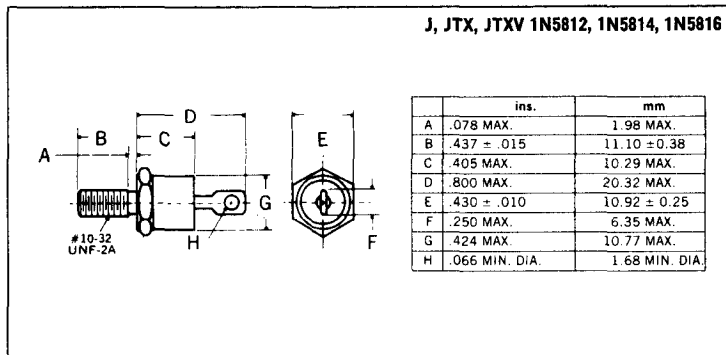
Surge Current @ 8.3mSec 400A

Thermal Resistance, Junction to Case 1.5°C/W

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

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

MECHANICAL SPECIFICATIONS



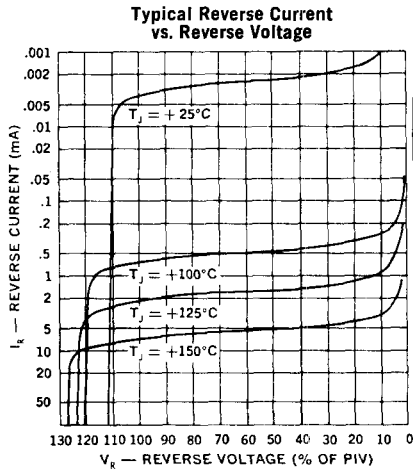
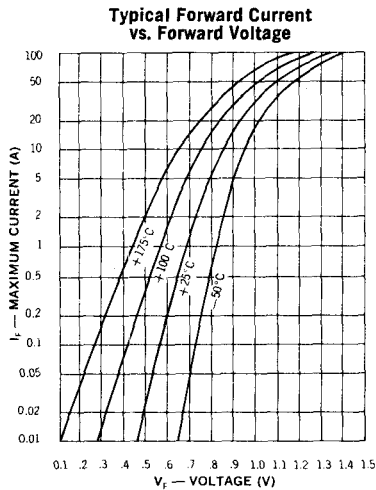
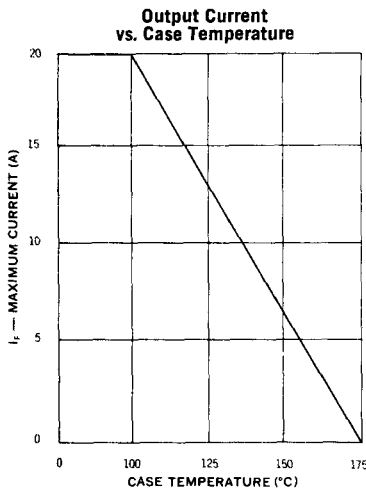
Notes:

1. Polarity is cathode-to-stud.
2. All metal surfaces tin plated.
3. Maximum unlubricated stud torque: 15 inch pounds.
4. Angular orientation of terminal is undefined.

ELECTRICAL SPECIFICATIONS (at 25°C unless noted)

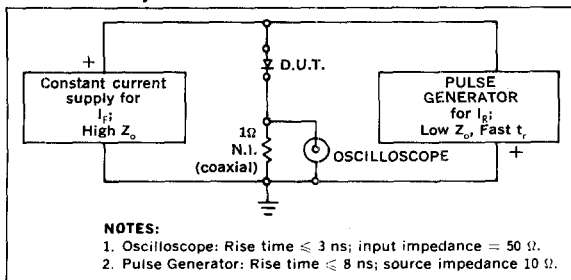
Type	Peak Inverse Voltage	Minimum Reverse Breakdown Voltage @ 100 μ A	Peak Forward Voltage		Maximum Leakage Current @ PIV	
			@ 10Apk	@ 20Apk	25°C	100°C
J, JTX, JTXV 1N5812	50V	60V				
J, JTX, JTXV 1N5814	100V	110V	.86V MAX.	.95V MAX.	10 μ A	750 μ A
J, JTX, JTXV 1N5816	150V	160V				

Maximum Reverse Recovery Time @ I_F, I_R, I_{REC}	Maximum Forward Recovery Time @ 1A Recovery to 1V	Maximum Forward Recovery Voltage @ 1A $t_r = 8$ nsec	Maximum Junction Capacitance @ -10V
35nsec 1.0A -1.0A -0.1A	15nsec	2.2V	300pf



VI

Reverse-Recovery Time Test Circuit



Characteristic Waveform

