



JAN AND JANTX 1N4942 THRU 1N4948

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

VOLTAGE - 200 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

- ◆ Qualified to MIL-S-19500/359B High temperature metallurgically bonded
- ◆ Glass passivated cavity-free junction
- ◆ 1.0 Ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway
- ◆ Hermetically sealed package
- ◆ Typical temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

MECHANICAL DATA

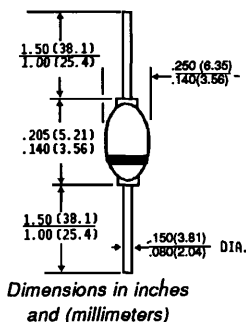
Case: One piece glass, hermetically sealed

Terminals: Plated Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denoted cathode

Mounting Position: Any

Weight: .02 ounce, .56 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
For capacitive load, derate current by 20%.

	SYMBOLS	JAN 1N4942	JAN 1N4944	JAN 1N4946	JAN 1N4947	JAN 1N4948	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	Volts
Minimum Reverse Breakdown Voltage at $100\mu\text{A}$	V_{BR}	220	440	660	880	1100	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$	I_{AV}	1.0					Amps
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A = 100^\circ\text{C}$	I_{FSM}	15.0					Amps
Maximum Instantaneous Forward Voltage at 1.0A $T_A = 25^\circ\text{C}$ $T_A = -65^\circ\text{C}$	V_F	1.3 1.5					Volts
Maximum DC Reverse Current $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 150^\circ\text{C}$	I_R	1.0 200					μA
Maximum Reverse Recovery Time (Note 1) $T_J = 25^\circ\text{C}$	T_{RR}	150		250		500	ns
Maximum Junction Capacitance (Note 2)	C_J	45	35	25	20	15	pf
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50.0					$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

NOTES:

1. Reverse Recovery Test Conditions : $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 25\text{A}$
2. Measured at 1 MHz and applied reverse voltage of 12 volts.
3. Thermal resistance from Junction to Ambient at .375"(9.5mm) lead lengths P.C.Board mounted.

MAXIMUM RATINGS AND CHARACTERISTIC CURVES JAN AND JANTX 1N4942 THRU 1N4948

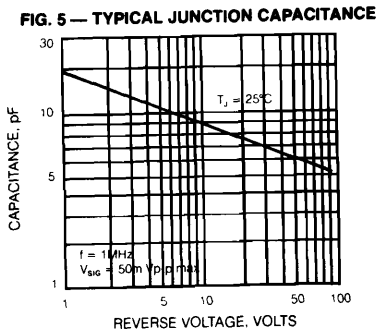
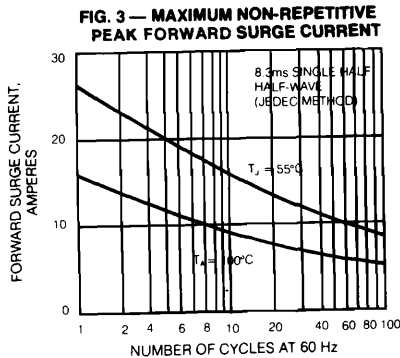
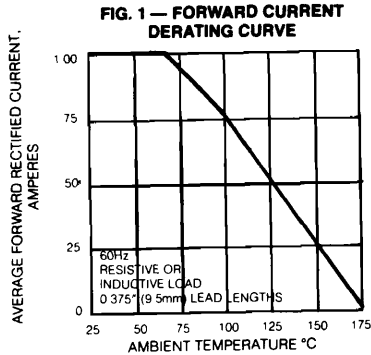


FIG. 6 — REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

