



# 1N4933 THRU 1N4937

## FAST RECOVERY RECTIFIER

**REVERSE VOLTAGE:** 50 to 600 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- High surge current capability
- Void-free Plastic in a DO-41 package.
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.
- Suffix "H" indicates Halogen-free parts, ex. 1N4933H

### MECHANICAL DATA

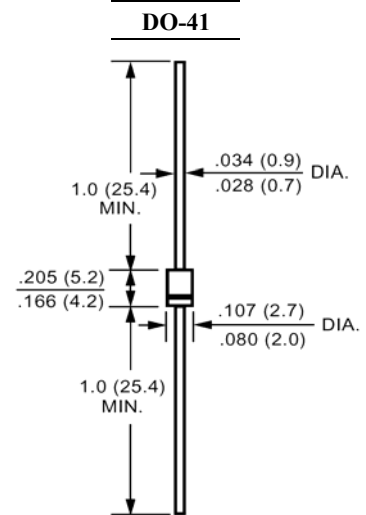
Case : Molded plastic, DO-41

Epoxy : UL 94V-O rate flame retardant

Lead : Axial leads, solderable per MIL-STD-202,  
method 208 guaranteed

Polarity : Color band denotes cathode end

Mounting position : Any



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	1N4933	1N4934	1N4935	1N4936	1N4937	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length	$I_{(AV)}$	1.0					Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30.0					Amp
Maximum Forward Voltage at 1.0A DC and 25 °C	$V_F$	1.2					Volts
Maximum Reverse Current at $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=100^\circ C$	$I_R$	5.0 50					$\mu$ Amp
Typical Junction Capacitance (Note 1)	$C_J$	12					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50.0					°C/W
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	200					nS
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150					°C

#### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions :  $I_F=1.0A, V_R=30V$



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### RATINGS AND CHARACTERISTIC CURVES

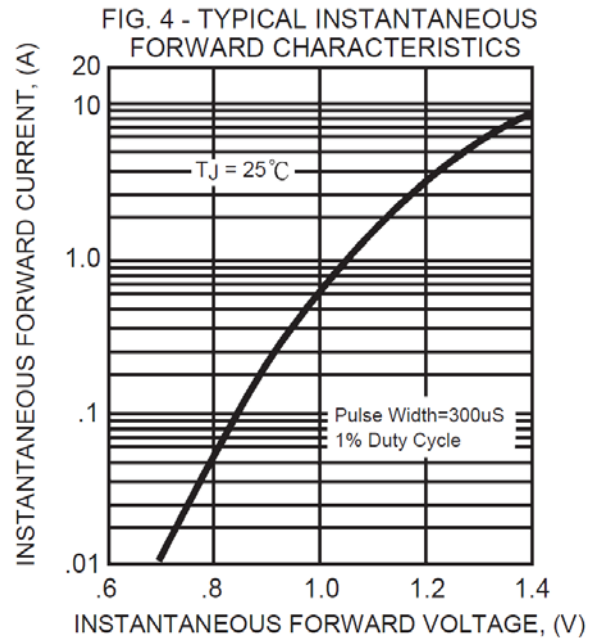
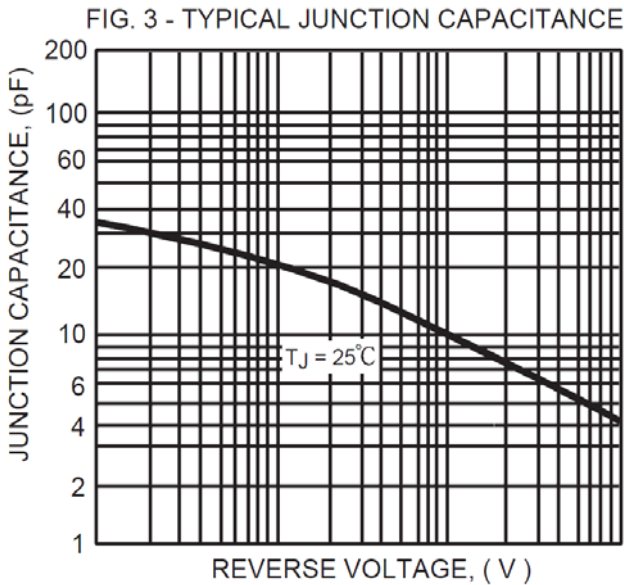
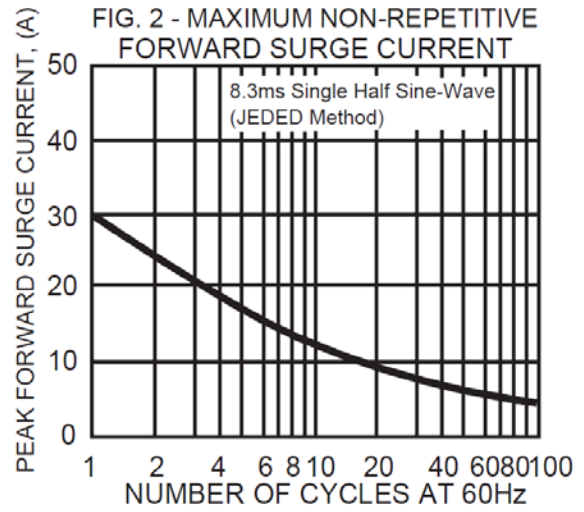
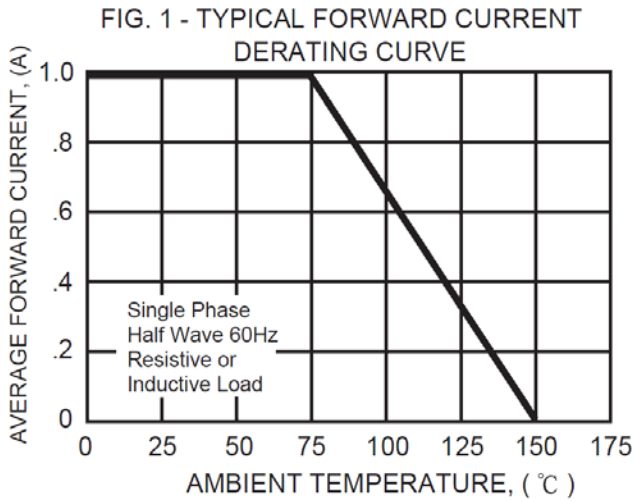
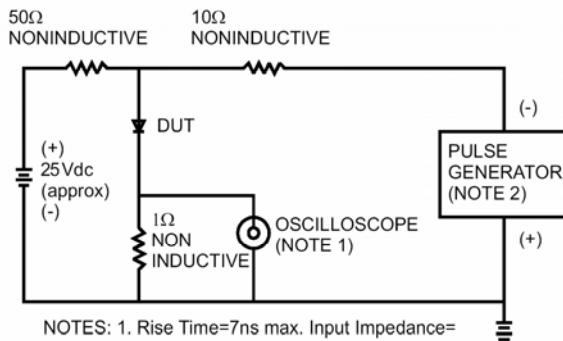


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance=50 ohms

