

# 1N4933 - 1N4937

1.0 AMP. Fast Recovery Rectifiers

**DO-41**

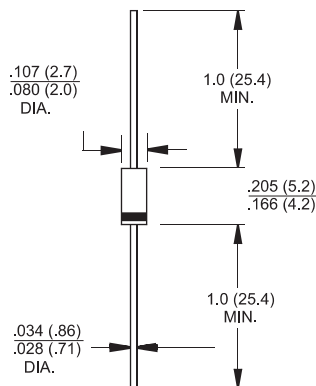


## Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss.

## Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, Lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.34gram



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Type Number	Symbol	1N 4933	1N 4934	1N 4935	1N 4936	1N 4937	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 50^\circ\text{C}$	$I_{(AV)}$	1.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	30					A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.2					V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	5.0 150					uA uA
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	200					nS
Typical Junction Capacitance ( Note 2 )	$C_j$	10					pF
Typical Thermal Resistance	$R_{\theta JA}$	65					°C/W
Operating Temperature Range	$T_J$	-65 to +150					°C
Storage Temperature Range	$T_{STG}$	-65 to +150					°C

Notes: 1. Reverse Recovery Test Conditions:  $I_F=1.0A$ ,  $V_R=30V$ ,  $di/dt=50A/uS$ ,  $I_{rr}=10\%$  IRM for Measurement of  $t_{rr}$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (1N4933 THRU 1N4937)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

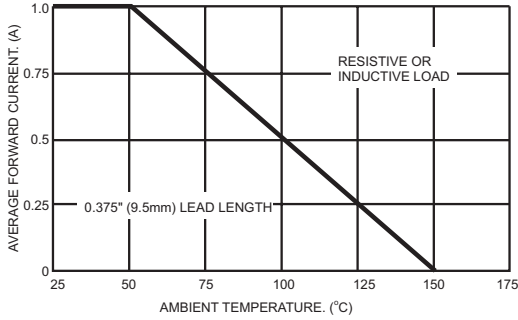


FIG.2- TYPICAL REVERSE CHARACTERISTICS

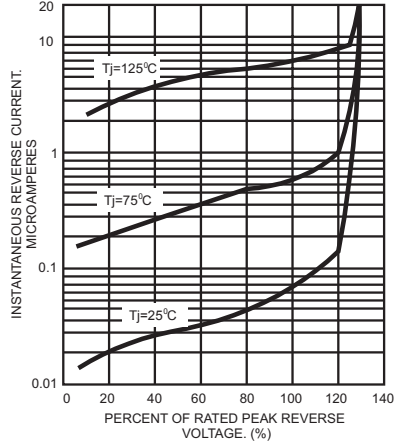


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

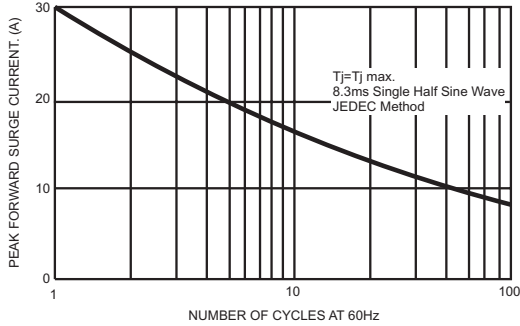


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

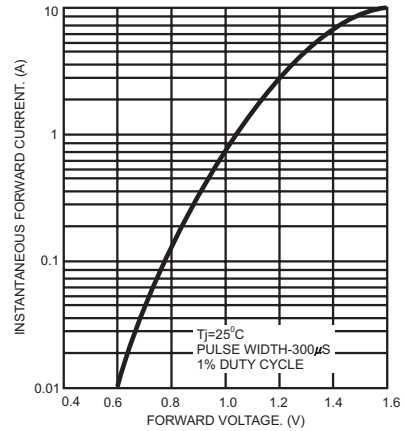


FIG.4- TYPICAL JUNCTION CAPACITANCE

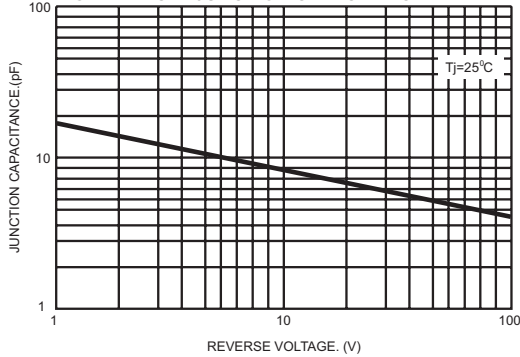
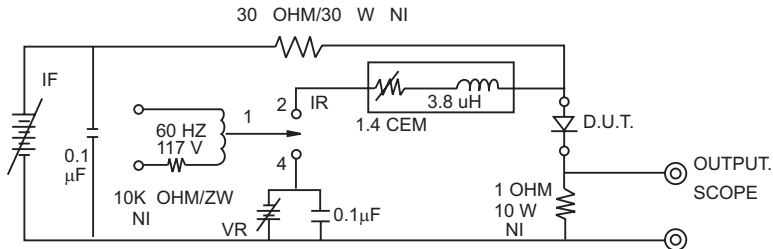


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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