

## 1N4933 THRU 1N4937

### TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts

CURRENT - 1.0 Ampere

#### FEATURES

- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability

#### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

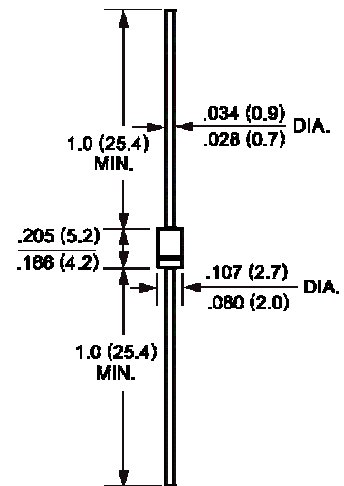
Ratings at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.



DO-41



Dimensions in inches and (millimeters)

	SYMBOL	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 at $T_A = 75^\circ C$	$I_o$	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30					Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	1.3					Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ C$	$I_R$	5.0					$\mu$ Amps
Maximum Full Load Reverse Current Full Cycle Average, .375*(9.5mm) lead length at $T_L = 55^\circ C$		100					$\mu$ Amps
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	150				250	nSec
Typical Junction Capacitance (Note 2)	$C_J$	15					pF
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 150					$^\circ C$

NOTES : 1. Test Conditions:  $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

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

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

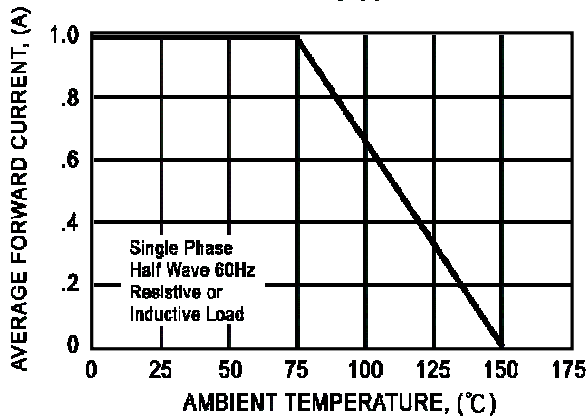


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

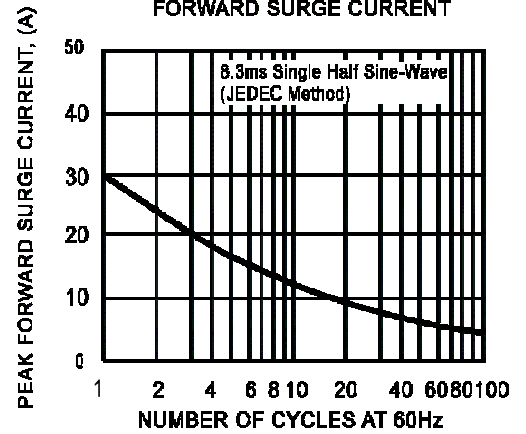


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

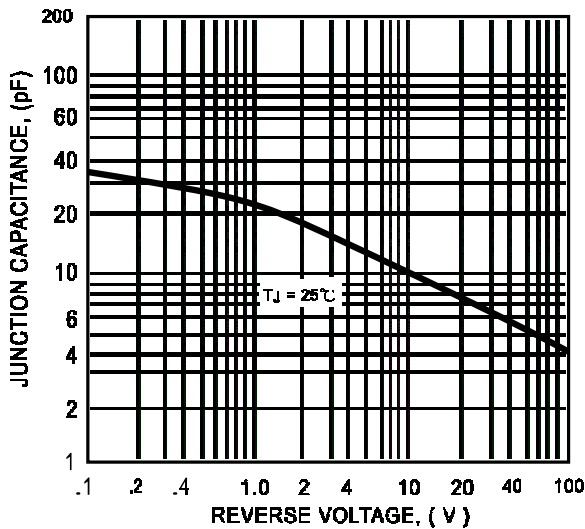


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

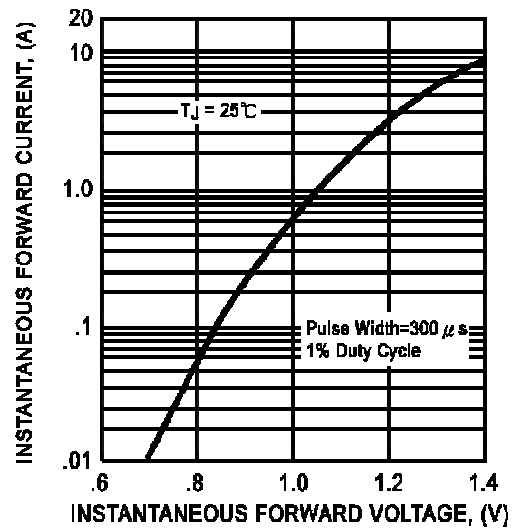
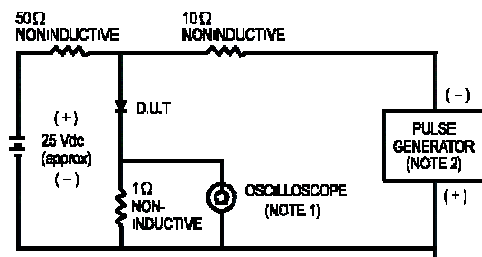


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

