



1N4933 THRU 1N4937

1.0 AMP. Fast Recovery Rectifiers



Voltage Range
50 to 600 Volts
Current
1.0 Ampere

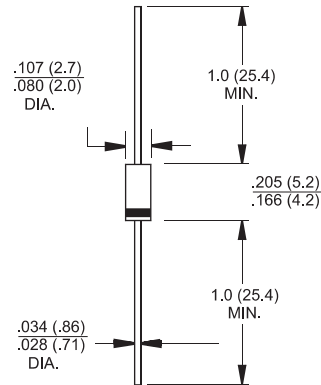
Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Axial leads, 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

DO-41



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 @ $T_A=100^\circ\text{C}$	I_R	5.0 100					μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	200					nS
Typical Junction Capacitance (Note 2)	C_j	10					pF
Typical Thermal Resistance (Note 3)	$R\theta_{JA}$	65					$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to +150					$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150					$^\circ\text{C}$

Notes: 1. Reverse Recovery Test Conditions: $I_F=1.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{S}$, $I_{rr}=10\%$ 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- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

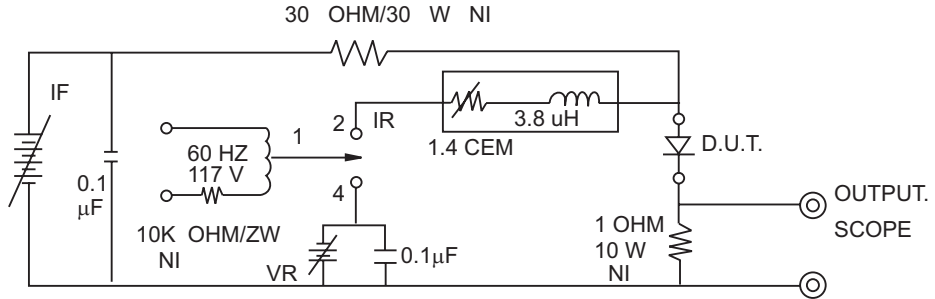


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

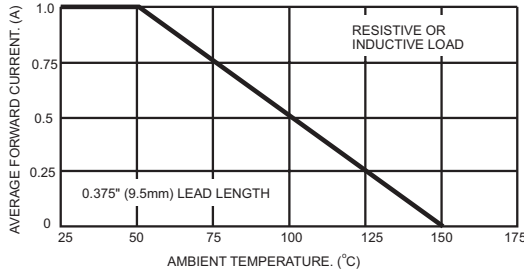


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

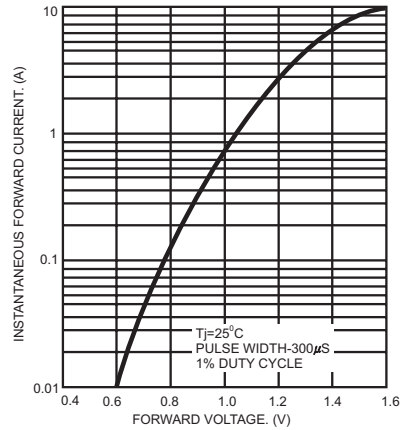


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

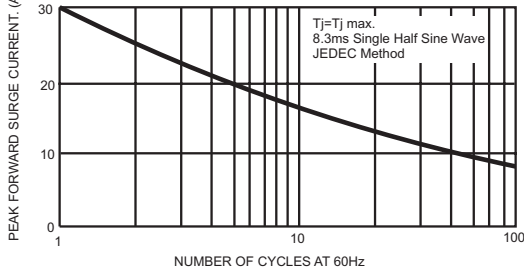


FIG. 6- TYPICAL REVERSE CHARACTERISTICS

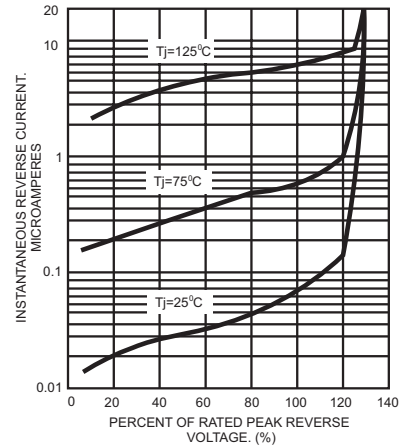


FIG. 4- TYPICAL JUNCTION CAPACITANCE

