TAIWAN SEMICONDUCTOR

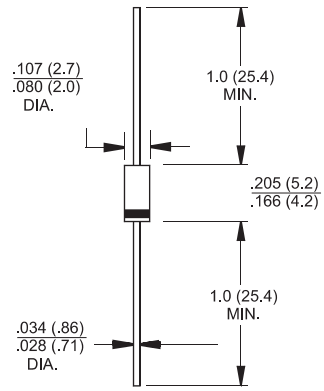
RoHS COMPLIANCE

1N4933 - 1N4937

1.0 AMP. Fast Recovery Rectifiers

DO-41





Dimensions in inches and (millimeters)

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

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 °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 °C at Rated DC Blocking Voltage @ T_A=125 °C	I_R	5.0 150					uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	200					nS
Typical Junction Capacitance (Note 2)	Cj	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: IF=1.0A, VR=30V, di/dt=50A/uS, Irr=10% IRM for Measurement of trr .
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

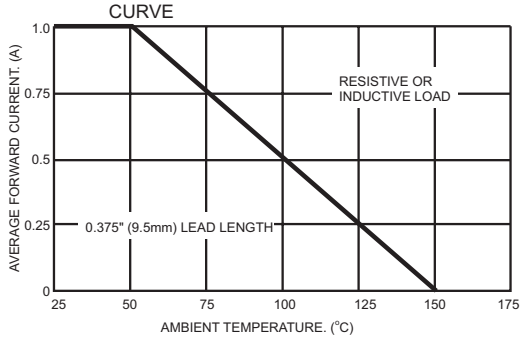


FIG.2- TYPICAL REVERSE CHARACTERISTICS

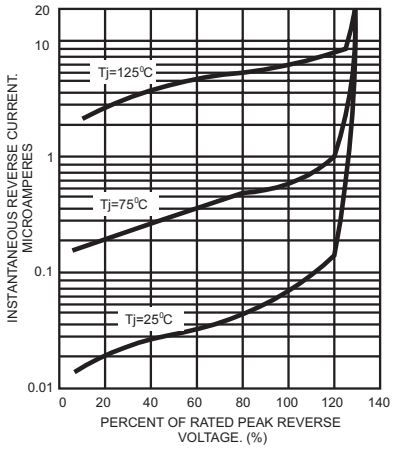


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

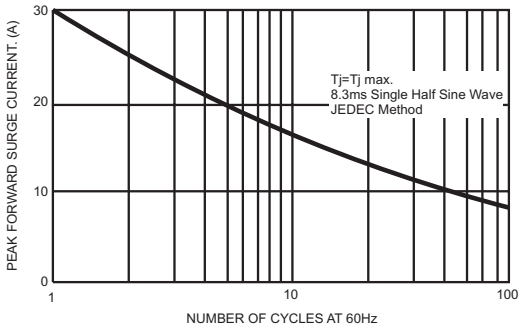


FIG.4- TYPICAL JUNCTION CAPACITANCE

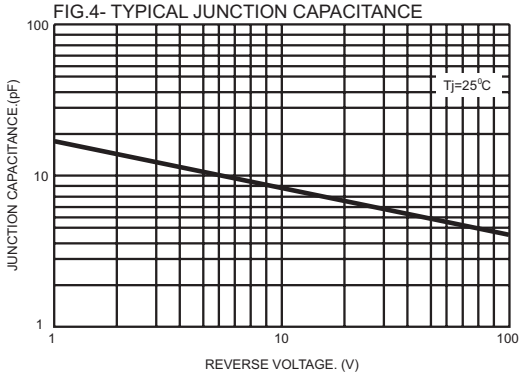


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

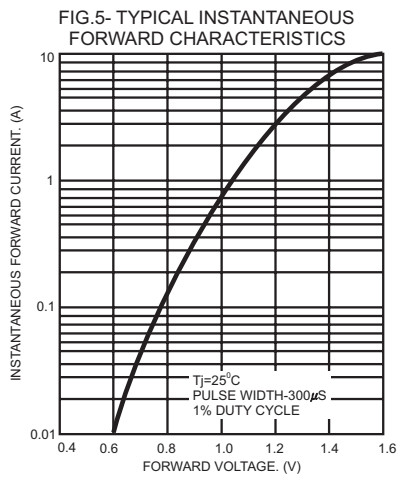


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

