

# 1N4933G THRU 1N4937G

#### **GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER**

DO-41

C

Reverse Voltage - 50 to 600 Volts

Forward Current - 1.0 Ampere

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Capable of meeting environmental standards of MIL-S-19500
- For use in high frequency rectifier circuits
- Fast switching for high efficiency
- Glass passivated cavity-free junction
- 1.0 ampere operation at T<sub>₄</sub>=75°C with no thermal runaway
- Typical I<sub>ρ</sub> less than 0.1 µ A
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension.

# **Mechanical Data**

- Case: DO-41 molded plastic over glass body
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012 ounce, 0.335 gram

#### DIMENSIONS inches mm DIM Note Max. Min Max Min А 0.165 0.205 4.2 5.2 в 0.079 0.106 2.0 2.7 ф С 0.028 0.034 0.71 0.86 ф D 1.000 25.40

# **Maximum Ratings and Electrical Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified.	

	Symbols	1N 4933G	1N 4934G	1N 4935G	1N 4936G	1N 4937G	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $\rm T_{A}{=}75^{\circ}\rm C$	I <sub>(AV)</sub>	1.0				Amp	
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I <sub>FSM</sub>	30.0					Amps
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.20				Volts	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	I <sub>R</sub>	5.0 100.0				μA	
Maximum reverse recovery time (Note 1)	T <sub>rr</sub>	200.0				nS	
Typical junction capacitance (Note 2)	C	15.0				ρF	
Typical thermal resistance (Note 3)	R <sub>(i)JA</sub>	55.0				°C/W	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>stg</sub>	-65 to +175				°C	

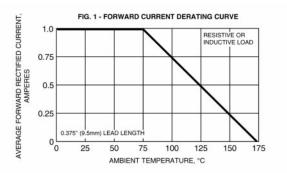
Notes:

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

<sup>(1)</sup> Reverse recovery test conditions:  $I_F = 1.0A$ ,  $V_R = 30$  volts





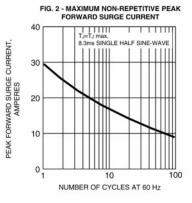
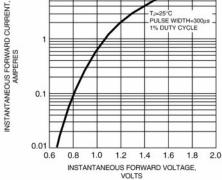


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS 10 T.I=25 PULSE WIDTH=300us 1% DUTY CYCLE



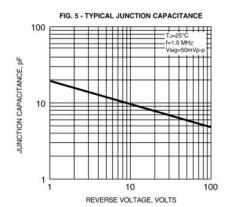


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

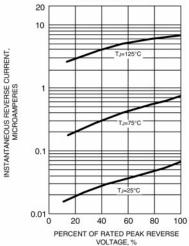


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

