



SEMICONDUCTOR

GPRC

# 1N4933G THRU 1N4937G

## FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 600 Volts

Forward Current: 1.0Ampere

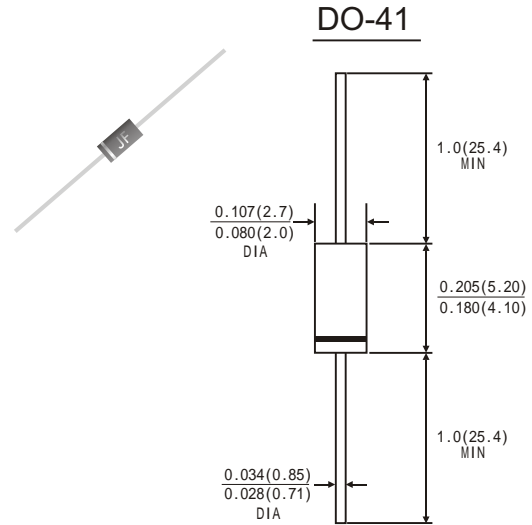
FAST RECOVERY RECTIFIER

### FEATURES

- GPRC( Glass Passivated Rectifier Chip) inside
- Glass passivated cavity-free junction
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching speed
- Construction utilizes void-free molded plastic technique
- 1.0A operation at  $T_A=75^\circ\text{C}$  with to terminal runaway
- High temperature soldering guaranteed:250 C/10 seconds, 0.375"(9.5mm) lead length,5 lbs.(2.3kg)tension.

### MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012ounce, 0.34 gram



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load,derate current by 20%.)

	Symbols	1N4933G	1N4934G	1N4935G	1N4936G	1N4937G	Units
Maximum Recurrent 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 T <sub>A</sub> =75°C	I <sub>(AV)</sub>	1.0					Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at T <sub>A</sub> =75°C	I <sub>FSM</sub>	30.0					Amps
Maximum Instantaneous Forward Voltage at 1.0 A	V <sub>F</sub>	1.3					Volts
Maximum DC Reverse Current at rated DC blocking voltage	I <sub>R</sub>	5.0					μA
Maximum full load reverse current full cycle average. 0.375"(9.5mm)lead length at T <sub>L</sub> =55°C		100					
Maximum reverse recovery time(Note1)	T <sub>rr</sub>	200					ns
Typical junction capacitance(Note2)	C <sub>J</sub>	15.0					pF
Operating junction and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-65 to +150					°C

Note: 1.Test conditions: I<sub>F</sub>=1.0A,V<sub>R</sub>=30V , di/dt=50A/μs and I<sub>rr</sub>=10%I<sub>RM</sub>

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

# RATINGS AND CHARACTERISTIC CURVES 1N4933G THRU 1N4937G

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

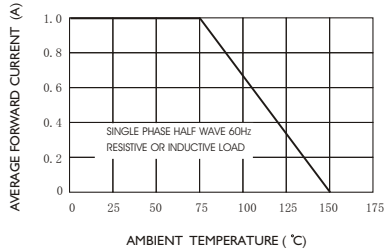


FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

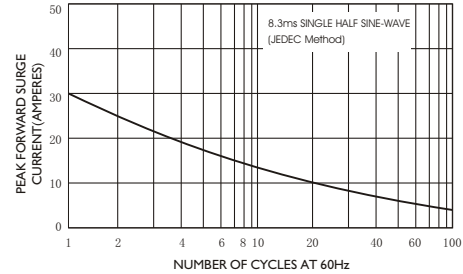


FIG. 3-TYPICAL JUNCTION CAPACITANCE

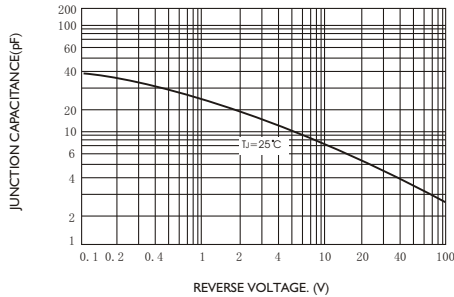


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

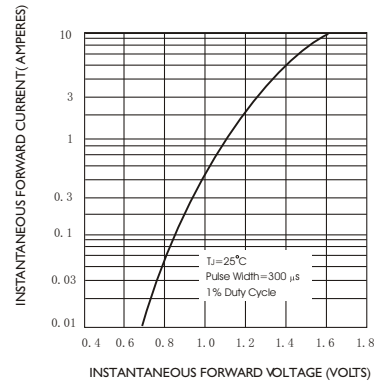
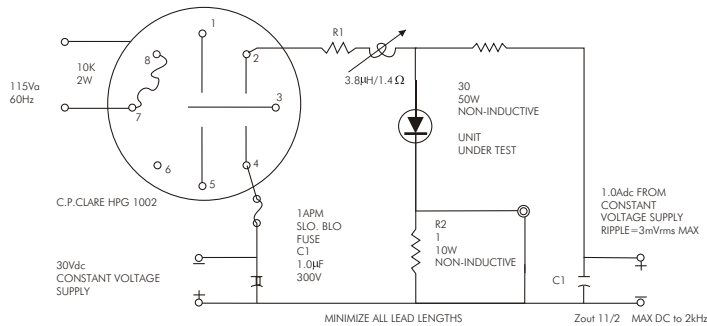


FIG. 5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



A. TEKTRONIX 545A-K PLUG IN PRE AMP P6000 PROBE OR EQUIVALENT R1-ADJUSTED FOR 1.4 BETWEEN POINT 2 OF RELAY AND RECTIFIER INDUCTIVE=3.8μH  
R2-TEN-1W 10 % CARBON CORE IN PARALLEL T<sub>A</sub>=25 +10°C FOR RECTIFIER

