



FAST RECOVERY GLASS PASSIVATED RECTIFIER

1N4933G THRU 1N4937G

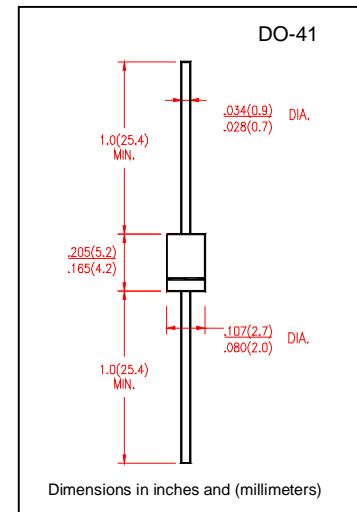
VOLTAGE RANGE 50 to 600 Volts
CURRENT 1.0 Ampere

FEATURES

- Fast switching for high efficiency
- Glass passivated chip junction
- High current surge capability
- Low leakage
- High temperature soldering guaranteed
260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs (2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012ounce, 0.33 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings 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 | UNIT |
|--|---------------------------|---------------|---------|---------|---------|---------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 700 | 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 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | Amp |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 30 | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0A | V_F | 1.3 | | | | | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage | $T_A = 25^\circ\text{C}$ | I_R | | | | | μA |
| | $T_A = 125^\circ\text{C}$ | 100 | | | | | |
| Maximum Reverse Recovery Time (NOTE 3) | t_{rr} | 200 | | | | | nS |
| Typical Junction Capacitance (NOTE 1) | C_J | 15 | | | | | pF |
| Typical Thermal Resistance (NOTE 2) | $R_{\theta JA}$ | 50 | | | | | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Range | T_J | (-55 to +150) | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | (-55 to +150) | | | | | $^\circ\text{C}$ |

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C board mounted.
3. Test conditions: $I_F=1.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$, and $I_{RR}=10\% I_{RM}$ for measurement of t_{rr} .



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RATING AND CHARACTERISTIC CURVES 1N4933G THRU 1N4937G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

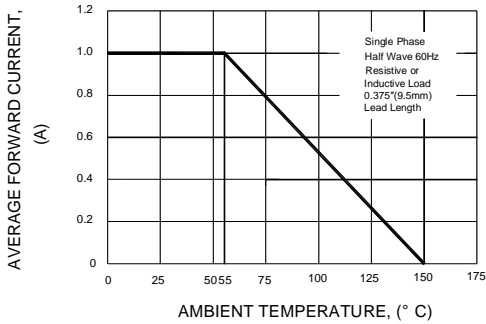


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

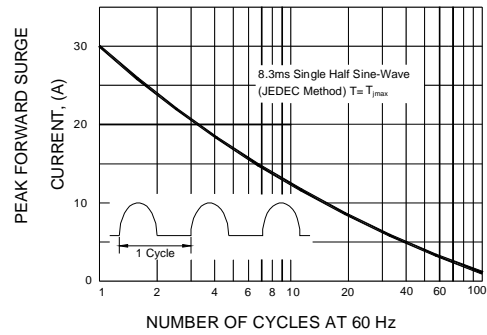


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

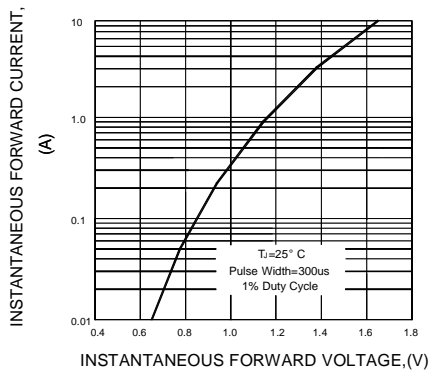


FIG.4-TYPICAL REVERSE CHARACTERISTICS

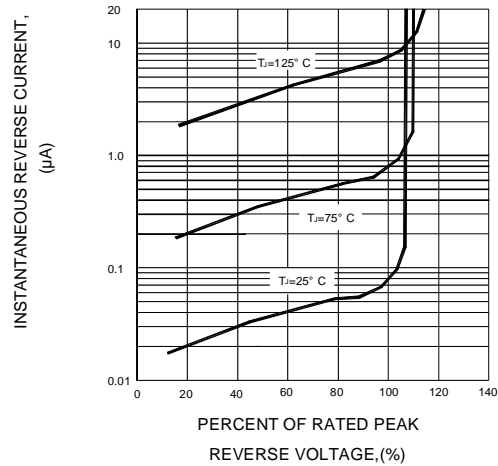


FIG.5-TYPICAL JUNCTION CAPACITANCE

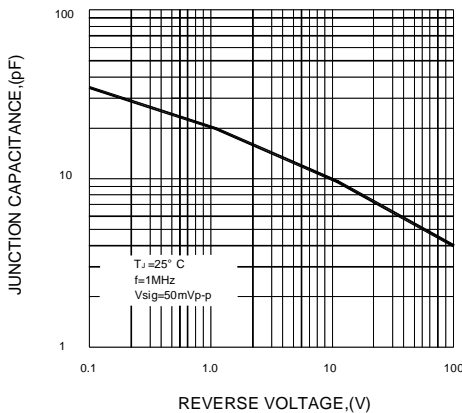
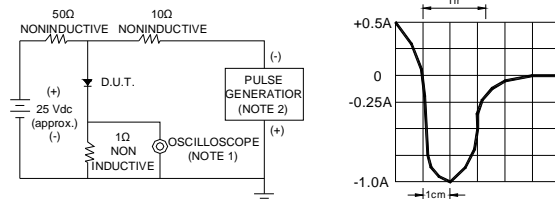


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES: 1. Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
2. Rise time=10ns max. Source Impedance= 50 ohms

SET TIME BASE FOR 50/100ns/cm