



1N4942G thru 1N4948G

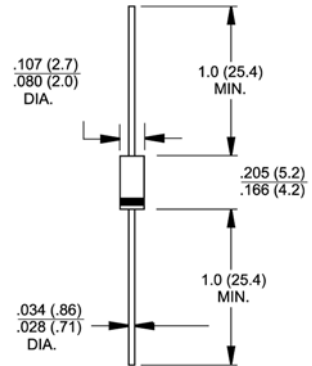
Glass Passivated Fast Recovery Rectifiers
Reverse Voltage 200 to 1000 Volts Forward Current 1.0 Ampere

Features

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ For use in high frequency rectifier circuits
- ◆ Fast switching for high efficiency
- ◆ Cavity-free glass passivated junction
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ 1.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- ◆ High temperature soldering guaranteed:
350°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension



DO-204AL (DO-41)



Dimensions in inches and (millimeters)

Mechanical Data

- ◆ Case: JEDEC DO-204AL (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

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbols | 1N4942G | 1N4944G | 1N4946G | 1N4947G | 1N4948G | Units |
|---|-----------------|-------------|---------|---------|---------|---------|---------------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 25.0 | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.3 | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=150^\circ\text{C}$ | I_R | 1.0 200 | | | | | μA |
| Maximum reverse recovery time at $I_L=0.5\text{A}$, $I_F=1.0\text{A}$, $I_R=0.25\text{A}$ | t_{rr} | 150 | | 250 | | 500 | nS |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 15 | | | | | pF |
| Typical thermal resistance (Note 1) | $R_{\theta JA}$ | 55 | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -55 to +150 | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | $^\circ\text{C}$ |

Notes: 1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

