



1N4942G thru 1N4948G

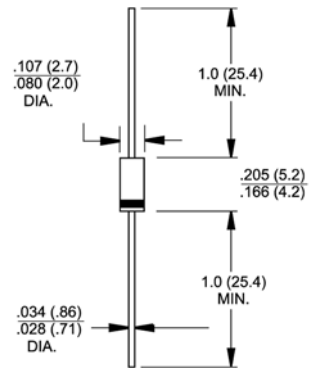
Glass Passivated Fast Recovery Rectifiers
Reverse Voltage 200 to 1000 Volts Forward Current 1.0 Ampere

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)

