

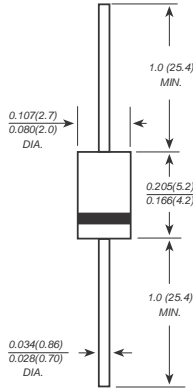


1N4942G THRU 1N4948G

FAST RECOVERY GLASS PASSIVATED RECTIFIERS

Reverse Voltage - 200 to 1000 Volts Forward Current - 1.0 Ampere

DO-41



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ 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: 0.012 ounce, 0.33 grams

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 current derate by 20%.

| | SYMBOLS | 1N 4942G | 1N 4944G | 1N 4946G | 1N 4947G | 1N 4948G | 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 TA=75 C | I _(AV) | 1.0 | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 30.0 | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V _F | 1.3 | | | | | Volts |
| Maximum DC reverse current TA=25 C at rated DC blocking voltage TA=100 C | I _R | 5.0 50.0 | | | | | μA |
| Maximum reverse recovery time (NOTE 1) | t _{rr} | 150 | | 250 | | 500 | ns |
| Typical junction capacitance (NOTE 2) | C _J | 15.0 | | | | | pF |
| Typical thermal resistance (NOTE 3) | R JA | 50.0 | | | | | C/W |
| Operating junction and storage temperature range | TJ,TSTG | -65 to +150 | | | | | C |

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $t_{rr}=0.25\mu\text{s}$

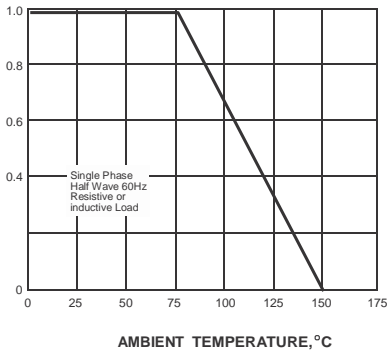
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

RATINGS AND CHARACTERISTIC CURVES 1N4942G THRU 1N4948G

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

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

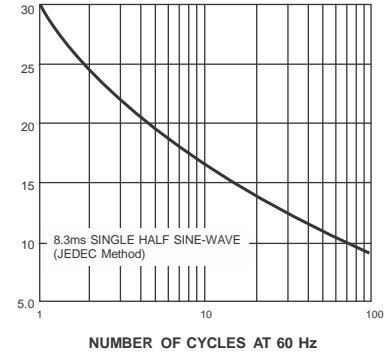
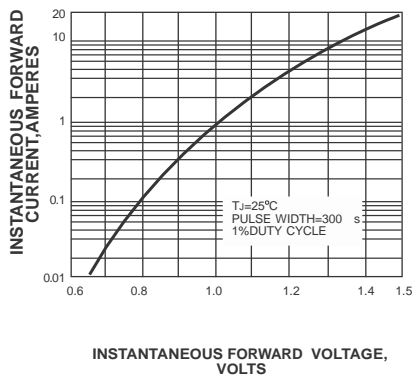


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

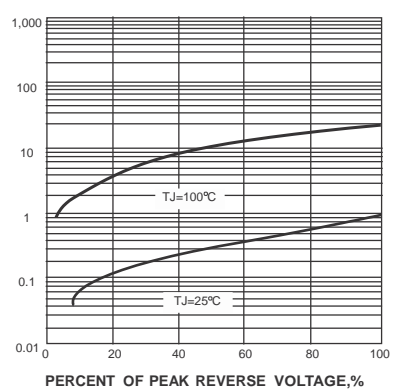
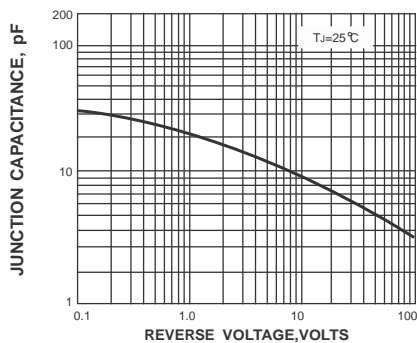


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

