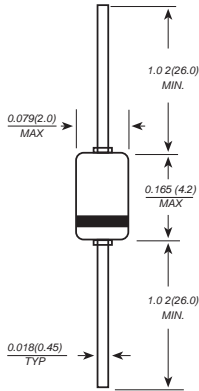


# 1N4148

## SMALL SIGNAL SWITCHING DIODE

### DO-35(GLASS)



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Silicon epitaxial planar diode
- ◆ Switching diodes
- ◆ 500mw power dissipation
- ◆ High temperature soldering guaranteed
- 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** DO-35 glass sealed envelope.

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.005 ounce, 0.14 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        | 1N4148      | UNITS            |
|---|----------------|-------------|------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$      | 100         | VOLTS            |
| Maximum RMS voltage   | $V_{RMS}$      | 75          | VOLTS            |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length at $T_A=25^\circ\text{C}$   | $I_{(AV)}$     | 150         | mAmps            |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)                                      | $I_{FSM}$      | 500         | mAmps            |
| Maximum instantaneous forward voltage at 10mA   | $V_F$          | 1.0         | Volts            |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ $V_R=75\text{V}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ $V_R=20\text{V}$ | $I_R$          | 5.0<br>50   | $\mu\text{A}$    |
| Maximum reverse recovery time (NOTE 1)  | $t_{rr}$       | 4.0         | ns               |
| Typical junction capacitance (NOTE 2)   | $C_J$          | 4.0         | pF               |
| Operating junction and storage temperature range  | $T_J, T_{STG}$ | -65 to +200 | $^\circ\text{C}$ |

NOTES:

1. Test condition:  $I_F=10\text{mA}$ ,  $I_R=10\text{mA}$ ,  $I_{rr}=1\text{mA}$ ,  $V_R=6\text{V}$ ,  $R_L=100\Omega$ .

2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

# RATINGS AND CHARACTERISTIC CURVES 1N4148

FIG. 1-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

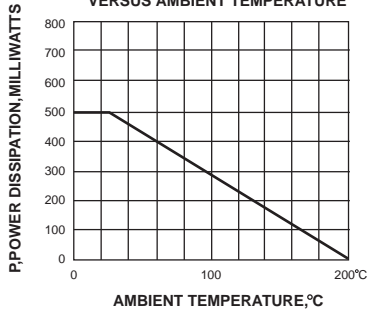


FIG. 2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE (TYPICAL VALUES)

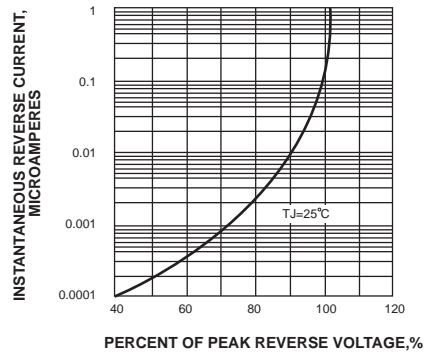


FIG. 3-FORWARD CHARACTERISTICS

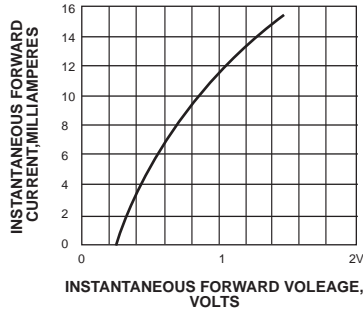


FIG. 4-RELATIVE CAPACTANCE VERSUS REVERSE VOLTAGE

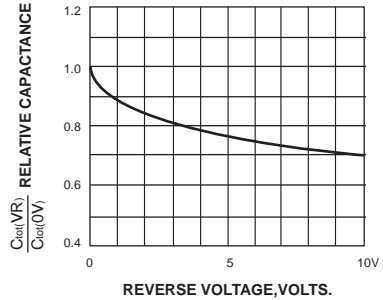


FIG. 5-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

