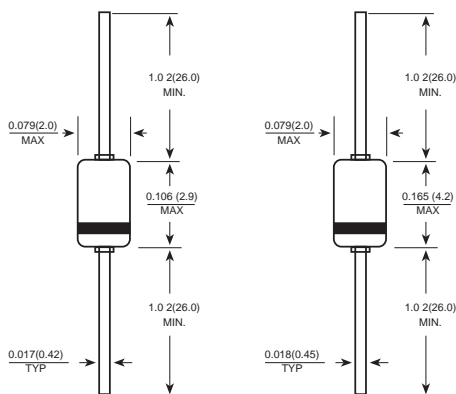


# 1N4148

## SMALL SIGNAL SWITCHING DIODE

### DO-34(GLASS)

### 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-34\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:** 0.003 ounce, 0.09 grams (DO-34)  
0.005 ounce, 0.14 grams (DO-35)

### 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 0.375" (9.5mm) lead length at $T_A=25^\circ\text{C}$	$I_{(AV)}$	150	mAmps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	500	mAmps
Maximum instantaneous forward voltage at 10mA	$V_F$	1.0	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ $V_R=75\text{V}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ $V_R=20\text{V}$	$I_R$	5.0 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

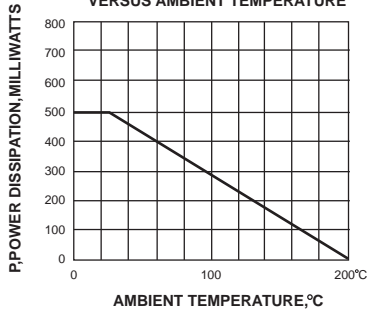


FIG. 2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE (TYPICAL VALUES)

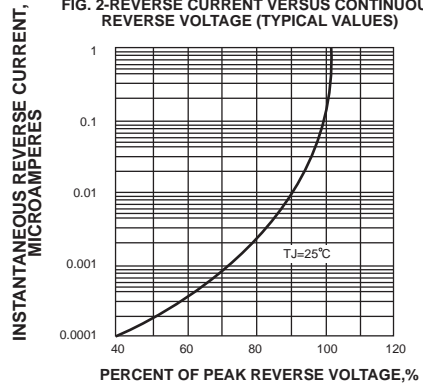


FIG. 3-FORWARD CHARACTERISTICS

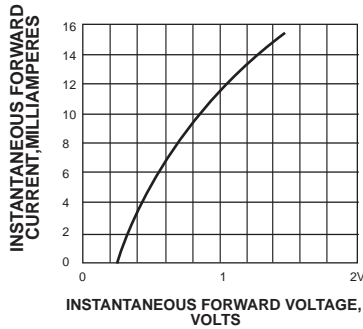


FIG. 4-RELATIVE CAPACTANCE VERSUS REVERSE VOLTAGE

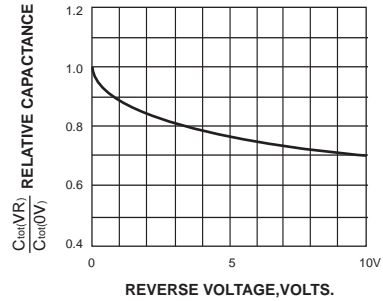
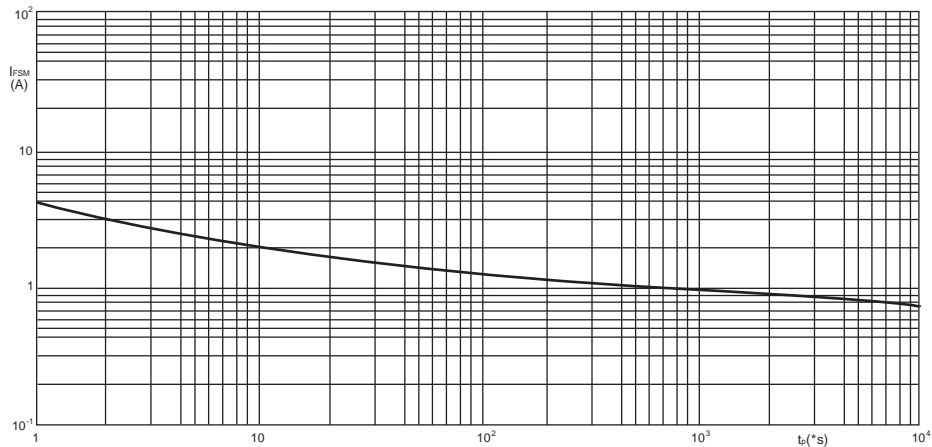


FIG. 5-MAXIMUM PERMISSIBLE NON-REPETITIVE PEAK FORWARD CURRENT AS A FUNCTION OF PULSE DURATION



Based on square wave currents. T<sub>J</sub>=25° prior to surge.

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