

1N4148

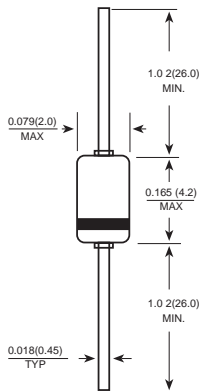
RoHS
COMPLIANT



HIGH SPEED SWITCHING DIODE

Reverse Voltage - 100 Volts Forward Current - 0.15 Ampere

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 (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	μA
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

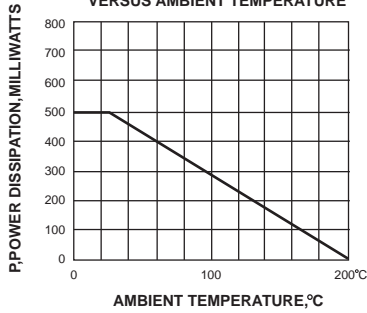


FIG. 2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE (TYPICAL VALUES)

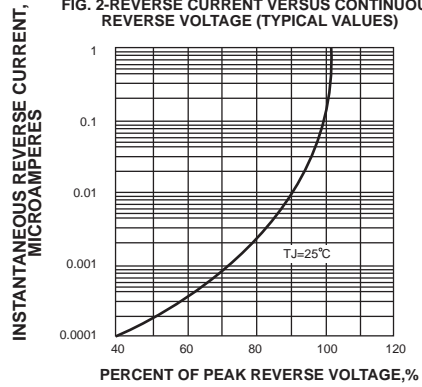


FIG. 3-FORWARD CHARACTERISTICS

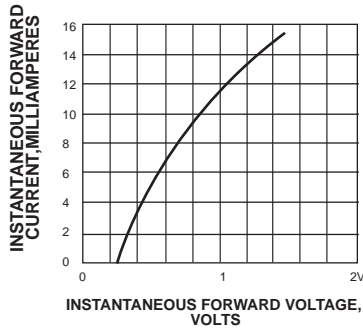


FIG. 4-RELATIVE CAPACTANCE VERSUS REVERSE VOLTAGE

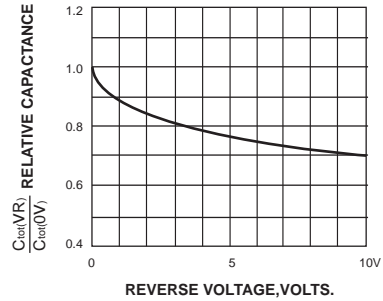
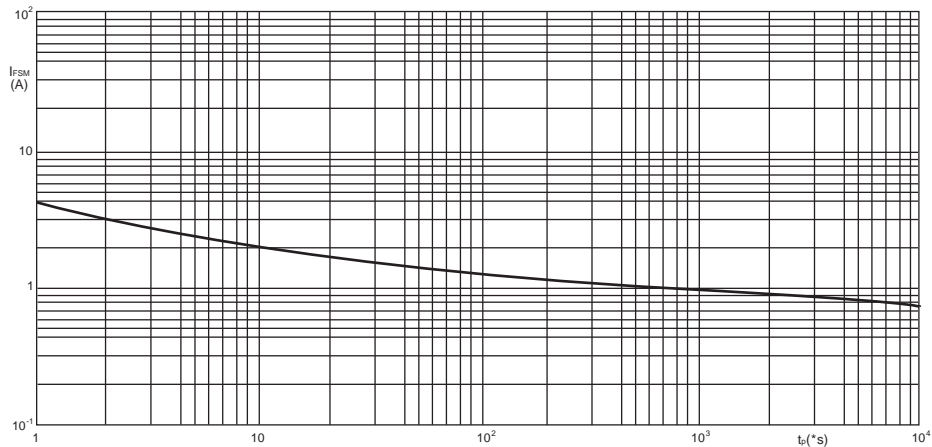


FIG. 5-MAXIMUM PERMISSIBLE NON-REPETITIVE PEAK FORWARD CURRENT AS A FUNCTION OF PULSE DURATION



Based on square wave currents. T_J=25° prior to surge.