

1N4148

Switching Diode

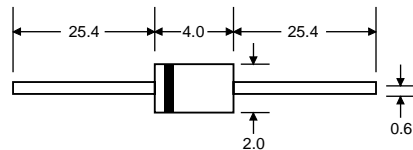
DO-35

Features

- ◇ Fast switching speed
- ◇ General purpose rectification
- ◇ Silicon epitaxial planar construction

Mechanical Data

- ◇ Case: DO-35
- ◇ Leads: Solderable per MIL-STD-202, Method 208
- ◇ Polarity: Cathode band
- ◇ Marking: Type number
- ◇ Weight: 0.13 grams (approx.)



Dimensions in Millimeters

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	1N4148	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_R(RMS)$	53	V
Average Rectifier Output Current	I_o	150	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0s	I_{FSM}	500	mA
Power Dissipation (Note 1) at $T_{amb} = 25^\circ C$	P_d	500	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	350	K/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175	°C

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Forward Voltage @ $I_F=10mA$	V_F	-	1.0	V
Peak Reverse Current $V_R=75V$ $V_R=70V, T_J=150^\circ C$ $V_R=20V, T_J=150^\circ C$ $V_R=20V$	I_R	-	5.0 50 30 25	μA μA μA nA
Capacitance $V_R=0, f=1.0MHz$	C_j	-	4.0	pF
Reverse Recovery Time (Note 1)	t_{rr}	-	4.0	nS

Note: 1. Reverse Recovery Test Conditions: $I_F=10mA$ to $I_R=1.0mA$ $V_R=6.0V$, $R_L=100\Omega$

RATINGS AND CHARACTERISTIC CURVES (1N4148)

FIG.1- FORWARD CHARACTERISTICS CURVE

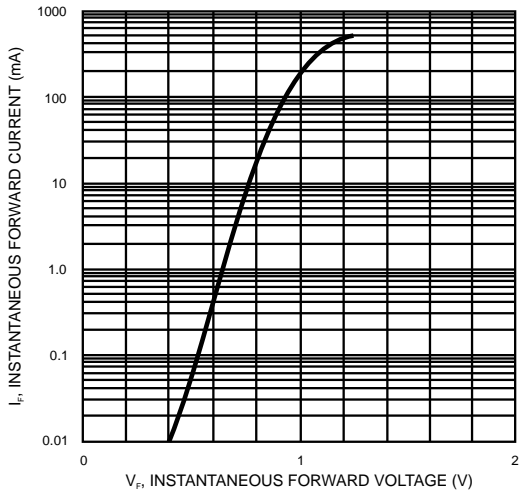


FIG.2- LEAKAGE CURRENT VS JUNCTION TEMPERATURE

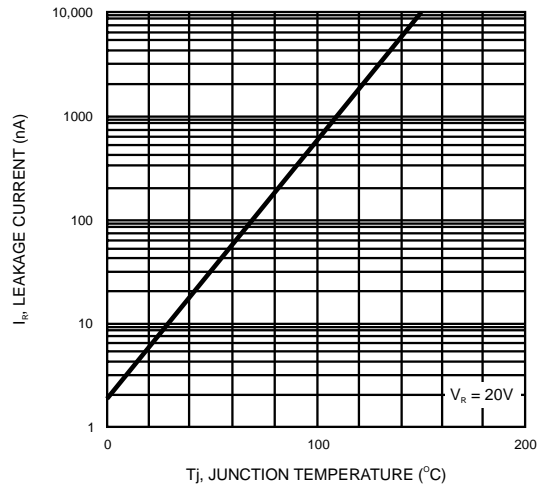


FIG.3- ADMISSIBLE POWER DISSIPATION VS AMBIENT TEMPERATURE

