



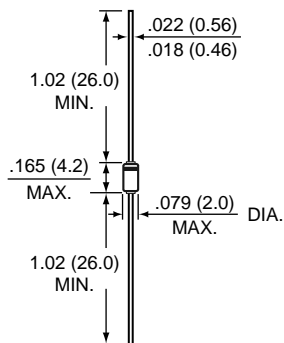
# 1N4148

## SMALL-SIGNAL DIODE

Reverse Voltage 100 Volts

Peak Forward Current - 150mA

DO-35



\*Dimensions in inches and (millimeters)



### FEATURES

- \* Silicon Epitaxial Planar Diode
- \* Fast switching diode.

### MECHANICAL DATA

**Case :** DO-35 Glass Case  
**Weight :** approx. 0.13 gram

### MAXIMUM RATINGS THERMAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted )

PARAMETER	SYMBOLS	VALUE	UNITS
Continuous Reverse Voltage	$V_R$	75	Vdc
Peak Reverse Voltage	$V_{RM}$	100	Vdc
Average Rectified Current Half Wave Rectification with Resistive Load at $T_{amb} = 25^{\circ}\text{C}$	$I_{F(AV)}$	150	mAdc
Surge Forward Current at $t < 1\text{s}$ and $T_j = 25^{\circ}\text{C}$	$I_{FSM}$	500	mAdc
Power Dissipation at $T_{amb} = 25^{\circ}\text{C}^{(1)}$	$P_{tot}$	500	mW
Thermal Resistance Junction to Ambient Air <sup>(1)</sup>	$R_{\theta JA}$	350	$^{\circ}\text{C} / \text{W}$
Junction Temperature	$T_J$	175	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-65 to +175	$^{\circ}\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted )

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNITS
Reverse Voltage Leakage Current	( $V_R=20\text{Vdc}$ )	$I_R$	-	-	25	nAdc
	( $V_R=75\text{Vdc}$ )		-	-	5	uAdc
	( $V_R=20\text{Vdc}, T_J=150^{\circ}\text{C}$ )		-	-	50	uAdc
Reverse Breakdown Voltage	( $I_R=100\text{uAdc}$ )	$V_{(BR)}$	100	-	-	Vdc
Forward Voltage	( $I_F=10\text{mAdc}$ )	$V_F$	-	-	1.0	Vdc
Junction Capacitance	( $V_R=0, f=1.0\text{MHz}$ )	$C_J$	-	-	4	pF
Voltage Rise when Switching ON ( tested with 50 mA Pulses )	( $t_p=0.1\text{us}$ , Rise time $< 30\text{ns}$ $f_p=5$ to 100 kHz )	$V_{FR}$	-	-	2.5	V
Reverse Recovery Time	( $I_F=10\text{mA}, I_R=1\text{mA}, V_R=6\text{V}, R_L=100\Omega$ )	$t_{rr}$	-	-	4	nS

# RATINGS AND CHARACTERISTIC CURVES OF 1N4148

FIG.1 - FORWARD VOLTAGE VS. JUNCTION TEMPERATURE

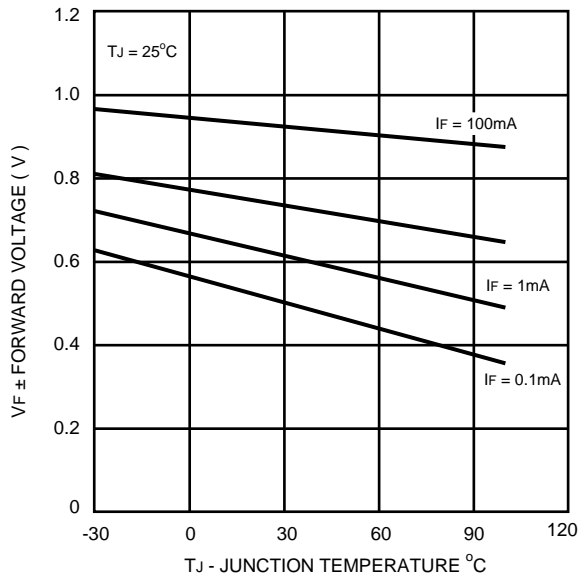


FIG.2 - FORWARD CURRENT VS. FORWARD VOLTAGE

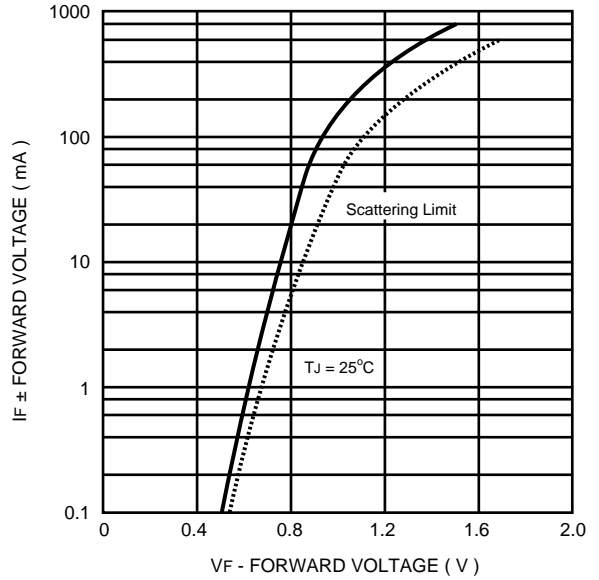


FIG.3 - REVERSE CURRENT VS. REVERSE VOLTAGE

