

1N4148

SMALL SIGNAL SWITCHING DIODES

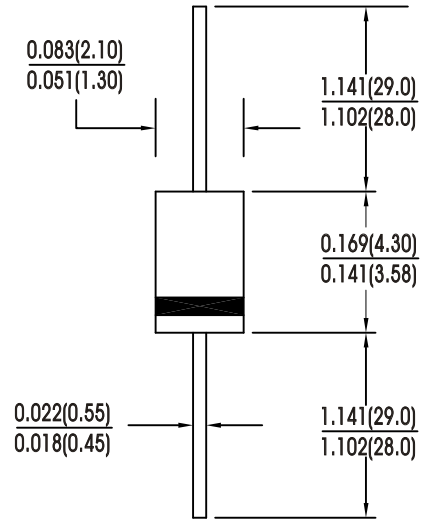
DO-35(GLASS)

FEATURES:

- Fast switching diodes
- 0.5W power dissipation

MECHANICAL DATA

Case: DO-35 case
Polarity : Color band denotes cathode end
Weight : Approx 0.13 gram



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temp. unless otherwise specified.
Single phase, half sine wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20 %.

Characteristic	Symbol	1N4148	Units
Maximum peak reverse voltage	V_{RM}	100	Volts
Reverse voltage	V_R	75	Volts
Maximum average forward rectified current half Wave rectification with resistive load at $T_{amb}=25^{\circ}C$ and $f \geq 50Hz$	$I_{O(AV)}$	150 ¹⁾	mA
Peak forward surge current < 1S and $T_j=25^{\circ}C$	I_{FSM}	500 ¹⁾	mA
Power dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	500	mW
Maximum forward voltage $I_F=10mA$	V_F	1.0	Volts
Maximum leakage current At $V_R=20V / 25^{\circ}C$ $V_R=75V / 25^{\circ}C$ $V_R=20V / 150^{\circ}C$	I_R	0.025 5 50	μA μA μA
Minimun reverse breakdown voltage tested with 100 μS pulses	$V_{(BR)R}$	100	Volts
Capacitance at $V_F=V_R=0$ (Note 1)	C_{TOT}	4	Pf
Voltage rise when switching on tested with 50mA forward pluses $T_p=0.1\mu s$. Rise time < 30nS. $F_p=5 \sim 100KHz$	V_{FR}	2.5	Volts
Reverse recovery time from $I_F=-I_R=10mA$ to $I_{RR}=-1mA$, $V_R=6V$ $R_L=100\Omega$	T_{RR}	4	ns
Maximun thermal resistance from junction to ambient	R_{th-JA}	350 ¹⁾	K/mW
Minimun Rectification efficiency at $f=100MHz$, $v_{rf}=2V$	η_v	0.45	
Junction temperature	T_J	200	$^{\circ}C$
Storage temperature range	T_{Stg}	-65to + 200	$^{\circ}C$

1):Valid provided that leads at a distance of 8mm from case are kept at ambient temperature (DO-35)

RATINGS AND CHARACTERISTIC CURVES 1N4148

