VII. Switching Diode

(c). SMD Type (SOD-323)

1N4148WS (Package: SOD-323)

FEATURES

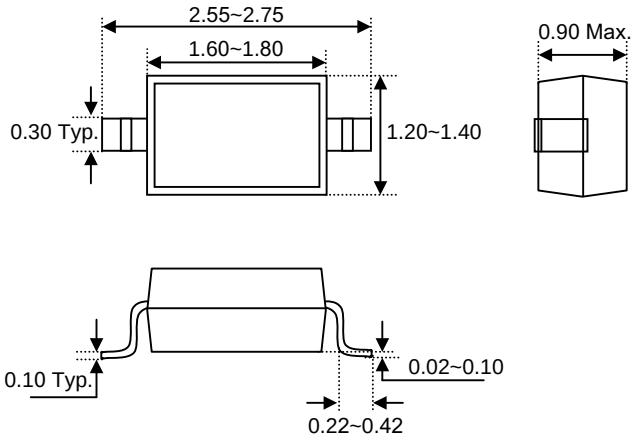
- Fast switching speed.
- Ideally suited for automated assembly processes.
- For general purpose switching application.
- High conductance.

MECHANICAL DATA

- Case : Molded plastic, SOD-323
- Mounting position : Any
- Polarity : Color band denotes cathode end

DEVICE MARKING CODE

- 1N4148WS : T4



Case: SOD-323
Dimensions in millimeters

Ratings & Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic		Symbol	Limits	Unit
Non-Repetitive peak reverse voltage		V_{RM}	100	Volts
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage		V_{RRM} V_{RWM} V_R	75	Volts
Minimum reverse breakdown voltage (@ I_R=1.0μA)		$V_{(BR)R}$	75	Volts
RMS reverse voltage		$V_{R(RMS)}$	53	Volts
Forward voltage (Max)	I_F=1mA I_F=10mA I_F=50mA I_F=150mA	V_F	0.715 0.855 1.000 1.250	Volts
Non-repetitive peak forward surge current	(@ t=1.0μs) (@ t=1.0s)	I_{FSM}	2.0 1.0	Amps
Average rectified output current		I_O	150	mA
Maximum reverse leakage current	V_R=75V V_R=20V	I_R	1.0 25	μA nA
Power dissipation		P_D	200	mW
Thermal resistance, junction to ambient air		Rth-JA	625	℃/W
Junction capacitance (Max) V_R=0V, f=1.0MHz		Cj	2	PF
Reverse recovery time (Max) I_F=I_R=10mA, I_{RR}=0.1*I_R, R_L=100Ω		Trr	4	ns
Operating junction and storage temperature range		Tj, Tstg	-65 to +150	℃

Ratings and Characteristic Curves of 1N4148WS

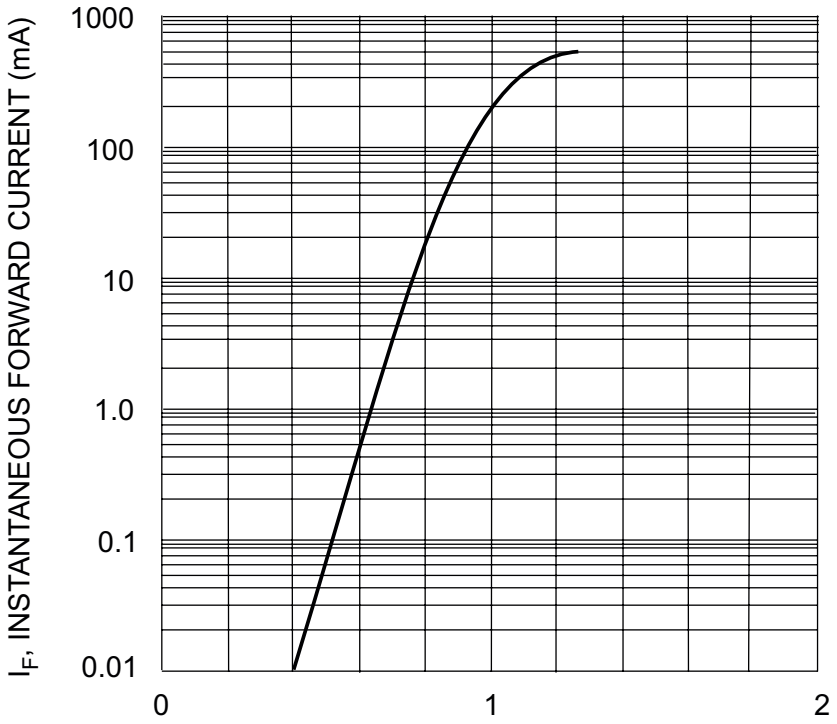


Fig. 1 Forward Characteristics

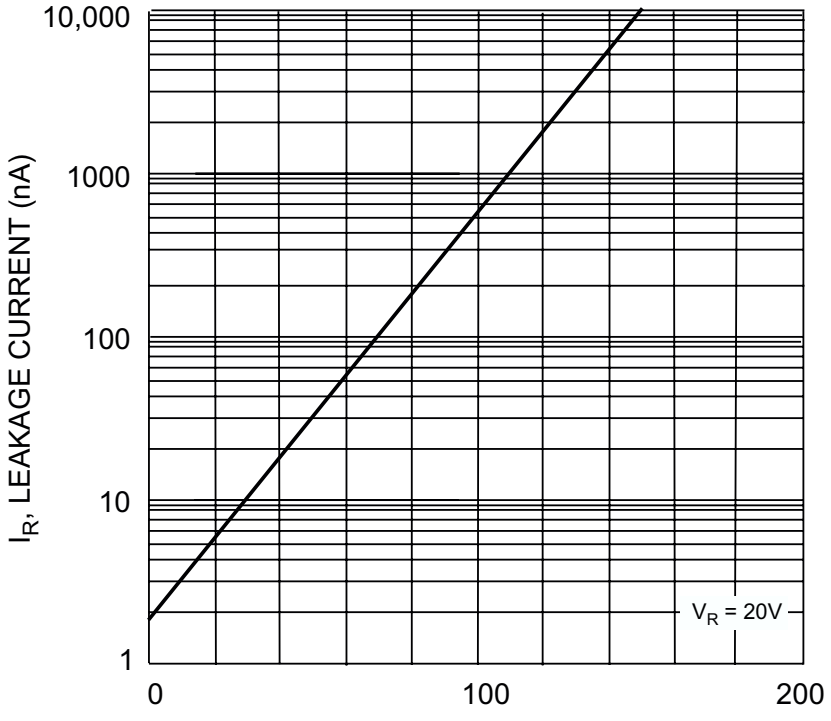


Fig. 2 Leakage Current vs Junction Temperature