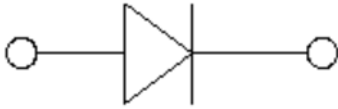


## High Speed Switching Diode



### Features

- Moisture sensitivity level 1
- Reverse voltage : 75V
- Average forward current : 150mA

### Application

- High frequency rectifier
- Signal switching

### Mechanical data

- **Package** : SOD-323
- **Terminals** : Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			T4
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	100
Forward current	I <sub>F</sub>	mA	150
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I <sub>FSM</sub>	A	1
Non-repetitive surge peak forward current @ t=1ms square wave			1.5
Non-repetitive surge peak forward current @ t=1μs square wave			2
Power dissipation	P <sub>D</sub>	mW	200
Junction temperature	T <sub>J</sub>	°C	-55 to +150
Storage temperature	T <sub>STG</sub>	°C	-55 to +150

**■ Electrical Characteristics** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Breakdown voltage	$V_R$	V	$I_R=1\mu\text{A}$	75		
Forward voltage	$V_F$	V	$I_F=10\text{mA}$			1
Reverse leakage current	$I_{R1}$	nA	$V_R=20\text{V}$			25
	$I_{R2}$	$\mu\text{A}$	$V_R=75\text{V}$			1
Junction capacitance	$C_j$	pF	$V_R=0\text{V}$ , $f=1\text{MHz}$			4
Reverse recovery time	$T_{rr}$	ns	$I_F=10\text{mA}$ , $V_R=6\text{V}$ , $I_{rr}=1\text{mA}$ , $R_L=100\Omega$			4

**■ Thermal Characteristics**

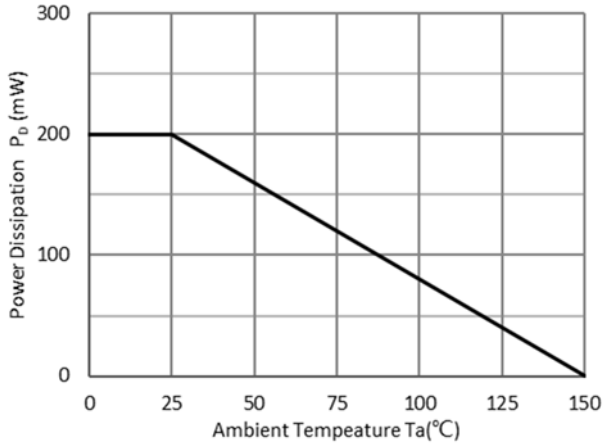
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	$^{\circ}\text{C/W}$	625
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	$^{\circ}\text{C/W}$	500

**Note:**

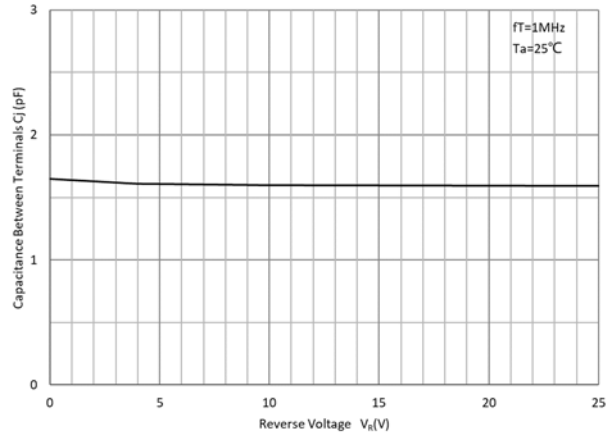
(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm\*9mm copper pad areas

■ Characteristics

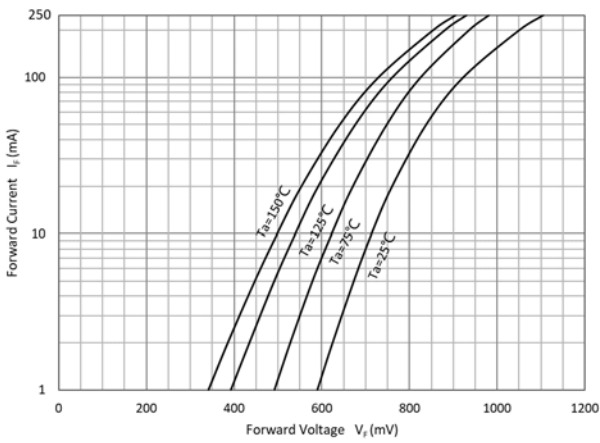
**Fig 1 : P<sub>D</sub>-T<sub>a</sub> Curve**



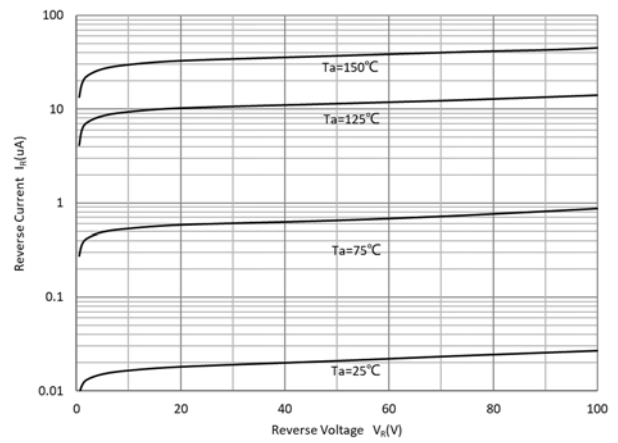
**Fig 2 : Capacitance Capability**



**Fig 3 : Typical Forward Characteristics**



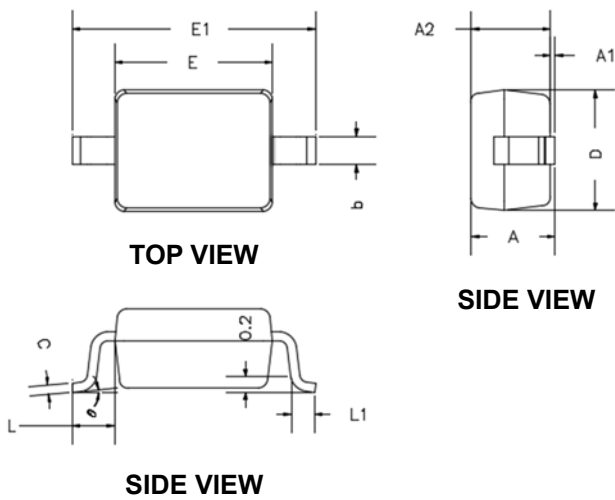
**Fig 4 : Typical Reverse Characteristics**



■ **Ordering Information**

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
1N4148WS	F2	Approximate 0.0048	3000	30000	120000	7" reel
1N4148WS	F3	Approximate 0.0048	10000	/	210000	13" reel

■ **Outline Dimensions**



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

■ **Suggested Pad Layout**

