

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_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			T4
Repetitive peak reverse voltage	V _{RRM}	V	100
Forward current	I _F	mA	150
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I _{FSM}	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 _D	mW	200
Junction temperature	T _J	°C	-55 to +150
Storage temperature	T _{STG}	°C	-55 to +150

1N4148WS

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Breakdown voltage	V _R	V	I _R =1uA	75		
Forward voltage	V _F	V	I _F =10mA			1
Reverse leakage current	I _{R1}	nA	V _R =20V			25
	I _{R2}	uA	V _R =75V			1
Junction capacitance	C _j	pF	V _R = 0V, f =1MHZ			4
Reverse recovery time	T _{rr}	ns	I _F =10mA, V _R =6V, I _{rr} =1mA, R _L =100Ω			4

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	625
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°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_D -Ta Curve

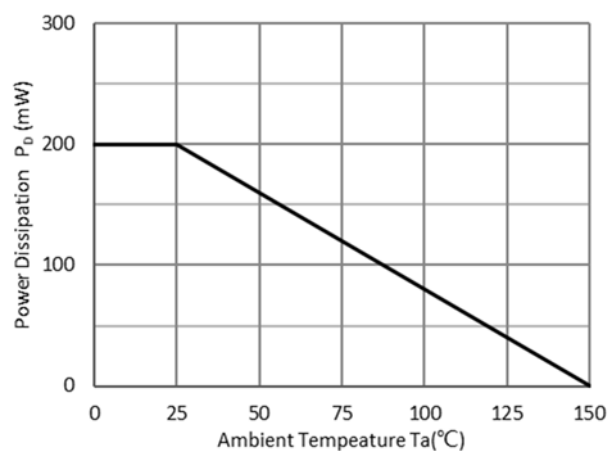


Fig 2: Capacitance Capability

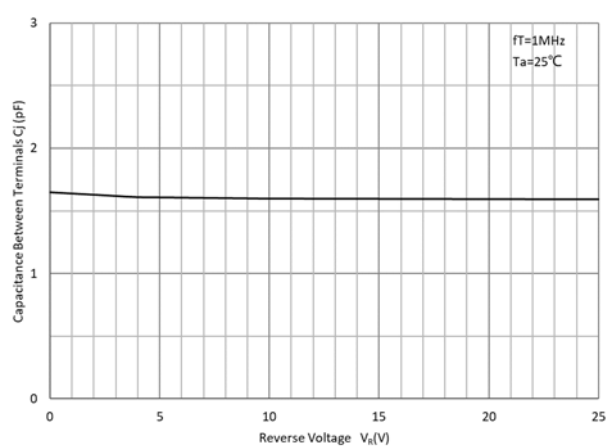


Fig 3: Typical Forward Characteristics

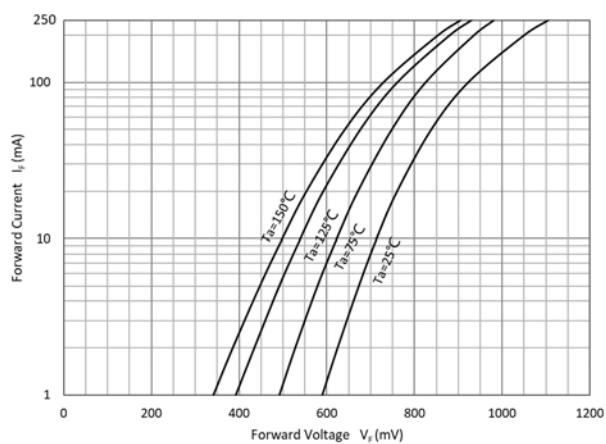
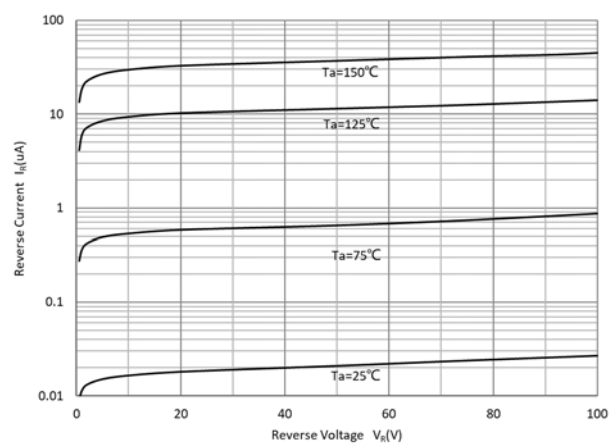


Fig 4: Typical Reverse Characteristics

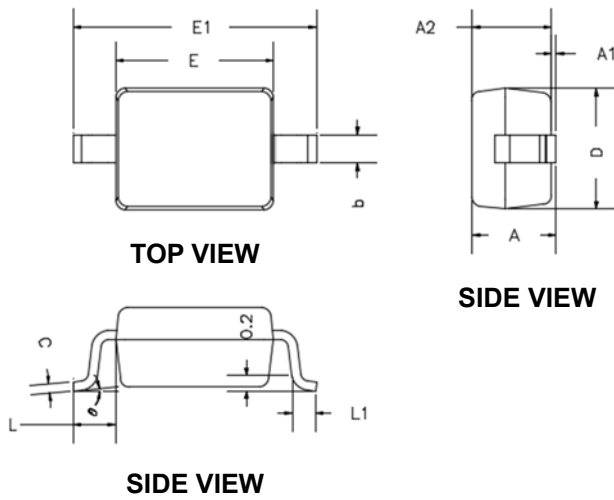


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■ Ordering Information

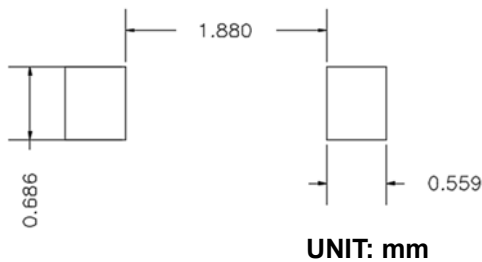
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
1N4148WS	F2	Approximate 0.0048	3000	30000	120000	7" reel
1N4148WS	F3	Approximate 0.0048	10000	/	210000	13" reel

■ 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



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