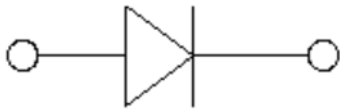


Small-Signal Fast Switching Diodes



Features

- Moisture sensitivity level 1
- Reverse voltage: 100V
- Average forward current : 150mA

Application

- High frequency rectifier
- Signal switching

Mechanical data

- **Package:** SOD-123
- **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
Repetitive peak forward current	I _{FRM}	mA	300
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=1us square wave			2
Non-repetitive surge peak forward current @ t=1s square wave			0.5
Power dissipation	P _D	mW	400
Junction temperature	T _J	°C	-55 to +150
Storage temperature	T _{STG}	°C	-55 to +150



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

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Breakdown voltage	V _R	V	I _R =10uA	100		
Forward voltage	V _{F1}	V	I _F =10mA			1.00
	V _{F2}	V	I _F =100mA			1.25
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	315
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	255

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 - T_a Curve

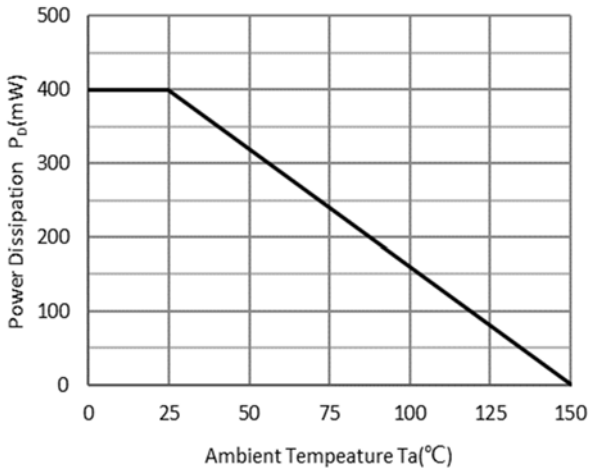


Fig 2: Capacitance Capability

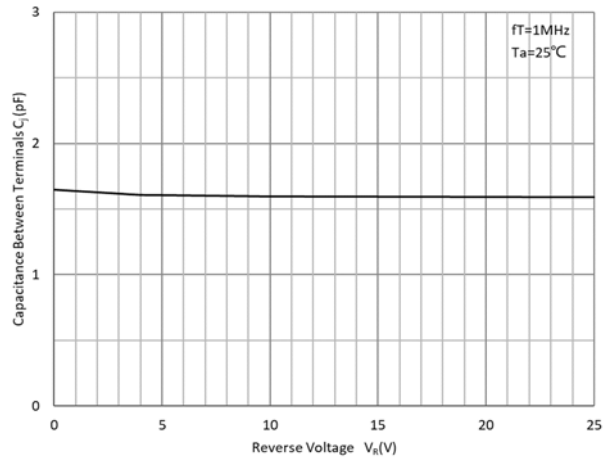


Fig 3: Typical Forward Characteristics

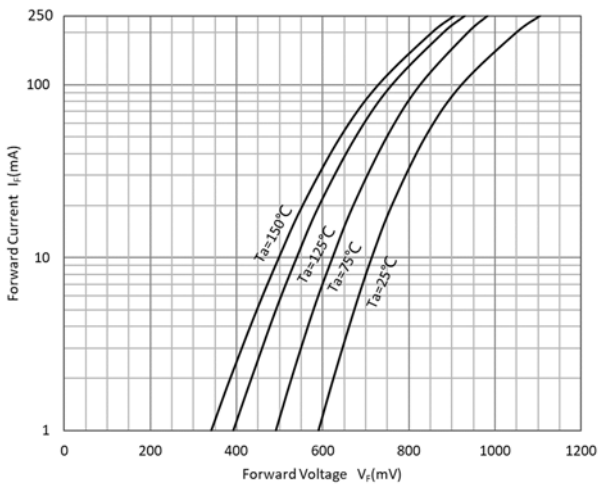
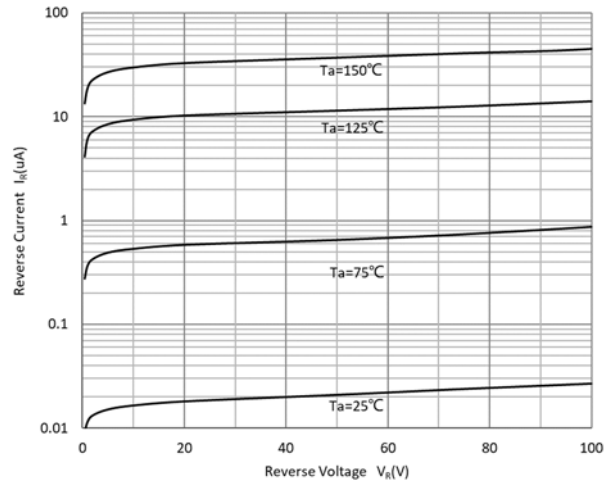


Fig 4: Typical Reverse Characteristics





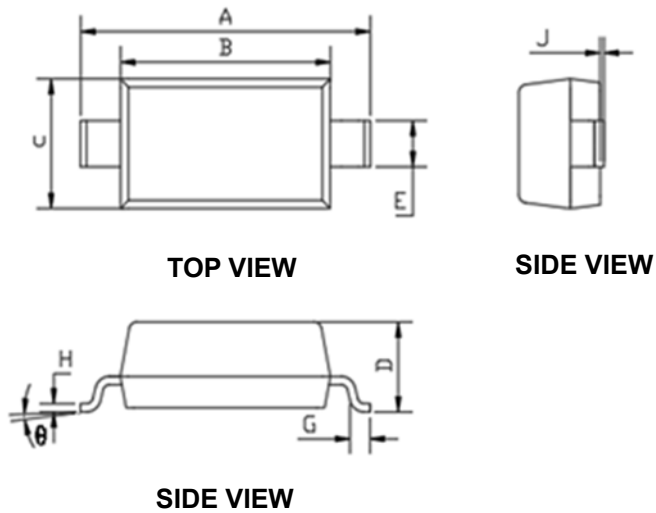
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■ Ordering Information

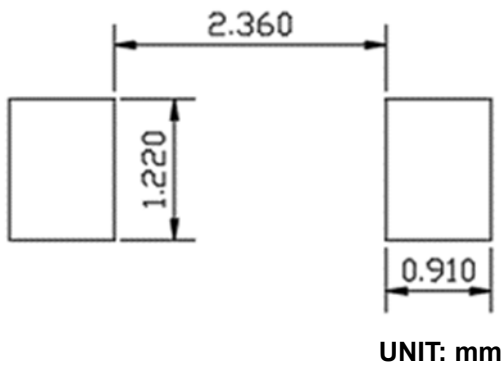
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
1N4148W	F2	Approximate 0.011	3000	30000	120000	7" reel
1N4148W	F3	Approximate 0.011	10000	/	210000	13" reel

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

■ Suggested Pad Layout





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