SOD-123 Plastic-Encapsulate Switching Diode

SOD-123

FEATURES

- For surface mounted applications
- Fast reverse recovery time
- Ideal for automated placement

MECHANICAL DATA

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0. 00056oz

Absolute Maximum Ratings at 25 °C

Parameter	Symbols	1N4448W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	75	V
Average Rectified Forward Current	$I_{F(AV)}$	250	mA
Non-reptitive Peak Forward Surge Current at 8.3 ms	I_{FSM}	2.0	A
Total Power Dissipation	P_{tot}	500	mW
Typical Thermal Resistance (1)	$R_{\theta JA}$	250	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) P.C.B. mounted with 5*5mm copper pad areas.

Characteristics at T_a = 25 °C

Parameter		Symbols	1N4448W	Units
Reverse BreakdownVoltage at I_R=10 μA		$V_{(BR)R}$	75	V
Maximum Forward Voltage	at 1 m A at 10 m A at 100 m A at 150 m A	V_F	0.715 0.855 1.00 1.25	V
Peak Reverse Current	at V_R=20V T_j=25°C at V_R=75V T_j=25°C at V_R=25V T_j=150°C at V_R=75V T_j=150°C	I_R	0.025 1 30 50	μA
Typical Junction Capacitance	f=1MHz,V_R=0V	C_j	2	pF
Maximum Reverse Recovery Time (2)		t_{rr}	4	ns

(2) Measured with I_F=I_R=10mA, Irr=0. 1xI_R,R_L=100Ω

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Typical Characteristics

Fig.1 Power Derating Curve

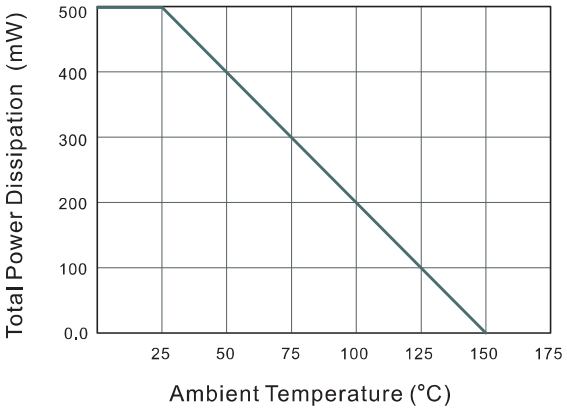


Fig.2 Typical Reverse Characteristics

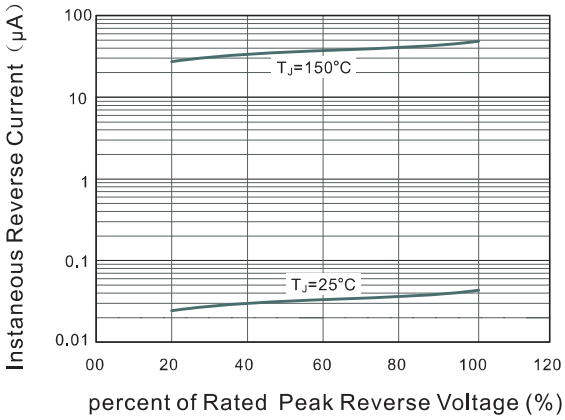


Fig.3 Typical Instaneous Forward Characteristics

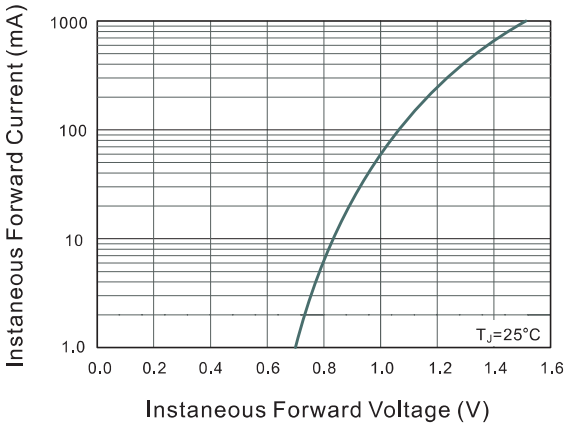
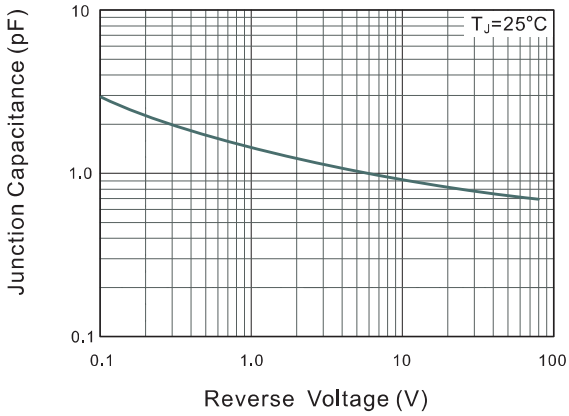
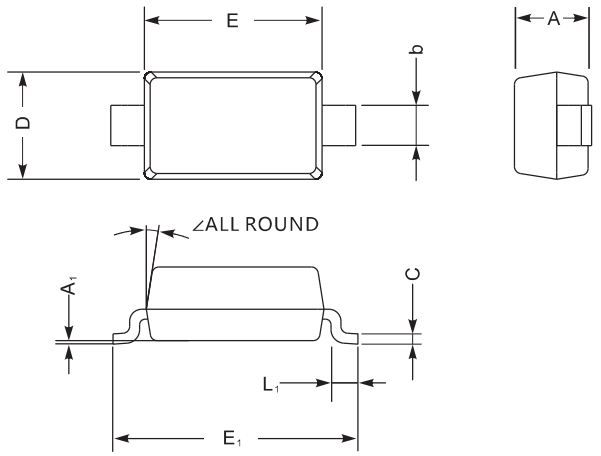


Fig.4 Typical Junction Capacitance

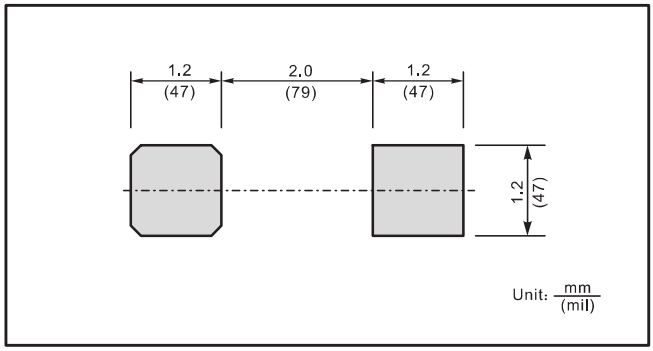


PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Marking

Type number	Marking code
1N4448W	T5

SOD-123 mechanical data

UNIT		A	C	D	E	E_1	L_1	b	A_1	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	