Prisemi®

P1N4148HE

Switching Diode

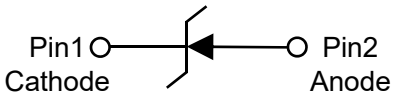
Feature

- For surface mounted applications
- Ideal for automated placement
- Low junction capacitance
- Low leakage current
- For general purpose switching applications

SOD-123HE

Mechanical Characteristics

- Case: SOD-123HE
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 14mg / 0.0005oz



Circuit Diagram

Absolute maximum rating@25℃

Parameter		Symbol	Value	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Maximum RMS Voltage		V_{RMS}	75	V
Average Rectified Forward Current		$I_{F(AV)}$	150	mA
Non-reptitive Peak Forward Surge Current	at 1s	I_{FSM}	0.5	A
	at 1ms		1.0	
	at 1μs		4.0	
Total Power Dissipation		P_{tot}	400	mW
Operating and Storage Temperature Range		T_j, T_{stg}	-55~+150	℃

Electrical characteristics per line@25℃

Parameter		Symbol	Value	Units
Reverse BreakdownVoltage at I_R=1μA		V_{BR}	75	V
Maximum Forward Voltage	at 1 mA	V_F	0.715	V
	at 10 mA		0.855	
	at 50 mA		1.0	
	at 150 mA		1.25	
Peak Reverse Current	V_R=20V,T_j=25℃	I_R	0.025	μA
	V_R=75V,T_j=25℃		1.0	
	V_R=25V,T_j=150℃		30	
	V_R=75V,T_j=150℃		50	
Typical Junction Capacitance at V_R=0V, f=1MHz		C_j	2.0	pF
Maximum Reverse Recovery Time [1]		t_{rr}	4.0	ns

Notes:

1) Measured with I_F=I_R=10mA,I_{rr}=0.1xI_R,R_L=100Ω

Typical Characteristics

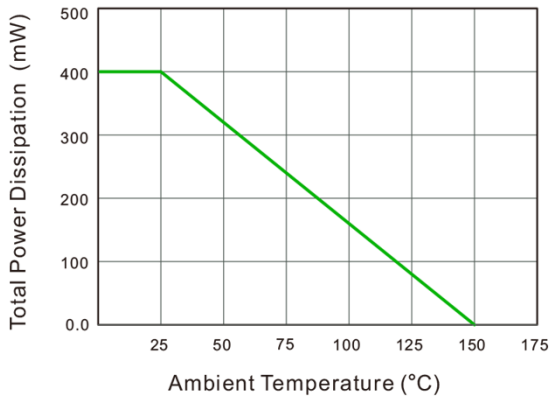


Fig.1 Power Derating Curve

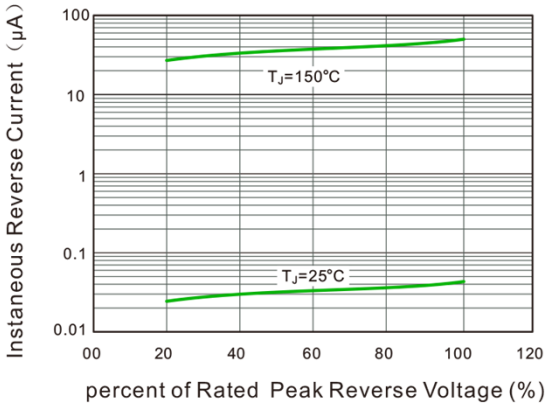


Fig.2 Typical Reverse Characteristics

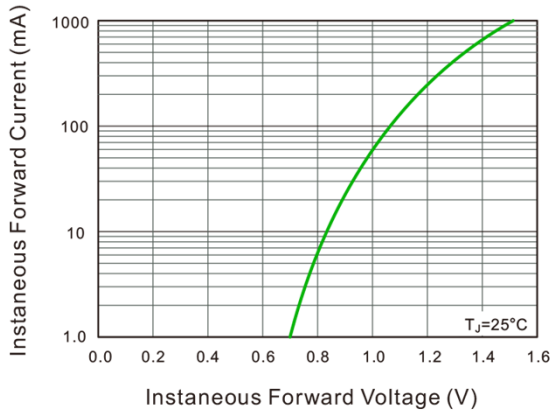


Fig.3 Typical Instaneous Forward Characteristics

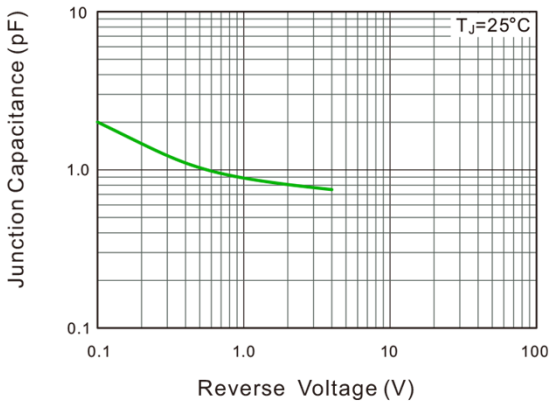
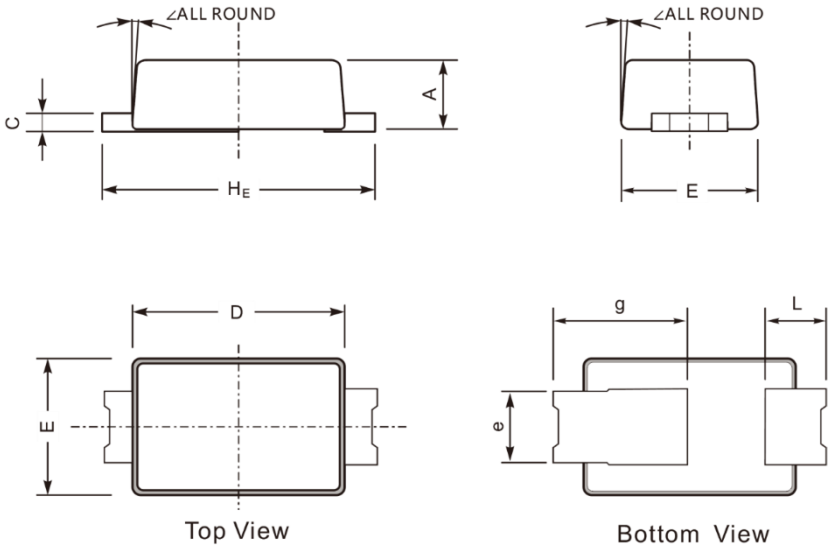
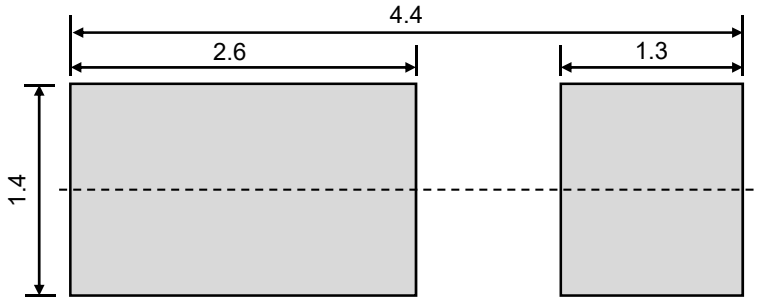


Fig.4 Typical Junction Capacitance

Product dimension (SOD-123HE)



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.00	0.031	0.039
C	0.20	0.30	0.008	0.012
D	2.70	2.90	0.106	0.114
E	1.70	1.90	0.067	0.075
e	0.80	1.15	0.031	0.045
g	1.50	2.00	0.059	0.079
L	0.70	1.10	0.028	0.043
H_E	3.50	3.80	0.138	0.150
∠	12°			



Suggested PCB Layout

Unit:mm

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