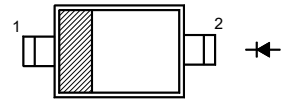
Silicon Epitaxial Planar Switching Diode

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123(Bend Lead) and symbol

Features

- AEC-Q101 Qualified
- Fast switching
- Halogen and Antimony Free(HAF), RoHS compliant

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Peak Reverse Voltage		V_{RM}	100	V
Reverse Voltage		V_R	100	V
Average Rectified Forward Current		$I_{F(AV)}$	200	mA
Peak Forward Current		I_{FM}	300	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 ms at t = 1 μs	I_{FSM}	0.5 1 4	A
Power Dissipation [1)]		P_D	400	mW
Operating Junction Temperature Range		T_j	- 55 to + 150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	312	℃/W

[1)] Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 10 μA	$V_{(BR)R}$	100	-	V
Forward Voltage at I_F = 1 mA at I_F = 10 mA at I_F = 50 mA at I_F = 150 mA	V_F	 - - - -	 0.715 0.855 1 1.25	 V
Peak Reverse Current at V_R = 100 V at V_R = 20 V at V_R = 100 V, T_J = 150℃ at V_R = 25 V, T_J = 150℃	I_R	 - - - -	 1 25 50 30	 μA nA μA μA
Total Capacitance at V_R = 0 V, f = 1 MHz	C_T	-	2	pF
Reverse Recovery Time at I_F = 10 mA, I_{rr} = 0.1 × I_R, V_R = 6 V, R_L = 100 Ω	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig. 1 Power Derating Curve

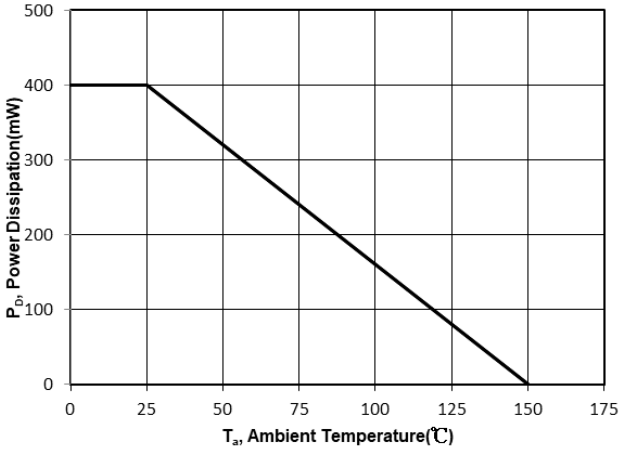


Fig. 2 Total Capacitance vs. Reverse Voltage

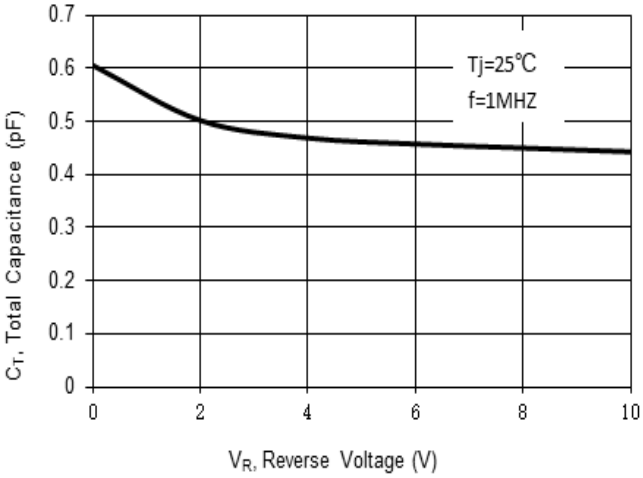


Fig. 3 Reverse Current vs. Reverse Voltage

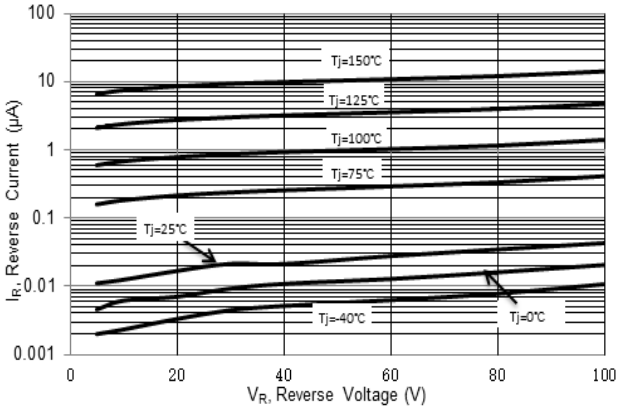
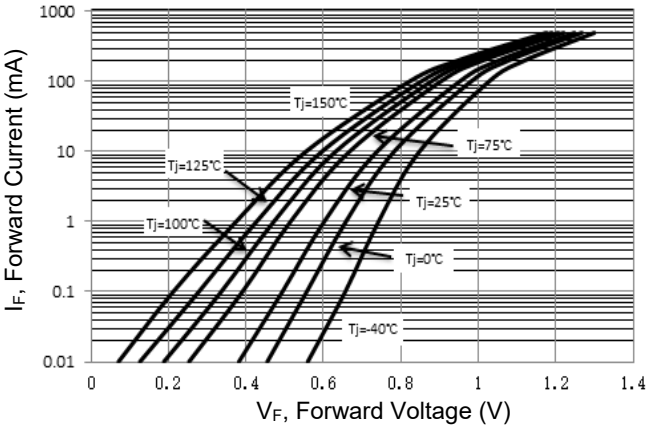
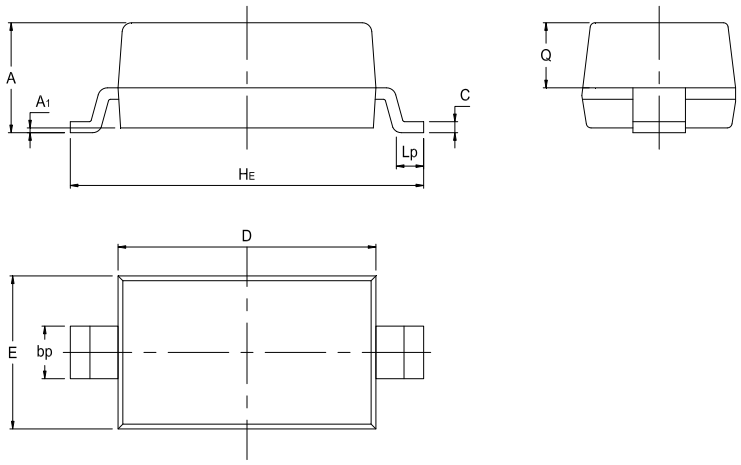


Fig. 4 Forward Characteristics



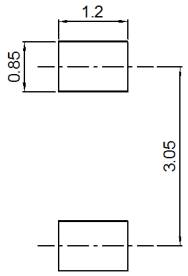
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123(Bend Lead)**



UNIT	A	A_1	bp	C	D	E	H_E	Lp	Q
mm	1.21	0.1	0.7	0.14	2.7	1.7	3.8	0.4	0.65
	0.91	0	0.5	0.08	2.54	1.5	3.5	0.2	0.55

Recommended Soldering Footprint

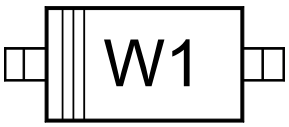


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123BL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" W1 " = Part No.
" III " = Cathode line
Font type: Arial



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