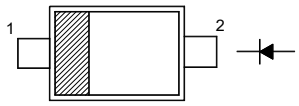
Silicon Epitaxial Planar Switching Diode

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

Features

- AEC-Q101 Qualified
- High switching speed
- Low capacitance
- Low leakage current
- Halogen and Antimony Free(HAF), RoHS compliant

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Reverse Voltage		V_R	100	V
Continuous Forward Current		I_F	215	mA
Repetitive Peak Forward Current	at $t_p \leq 0.5$ ms	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current	at t_p = 1 s at t_p = 1 ms at t_p = 1 μs	I_{FSM}	0.5 1 4	A
Power Dissipation [1)]		P_D	400	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	313	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, 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
Reverse Current at V_R = 25 V at V_R = 80 V at V_R = 25 V, T_j = 150℃ at V_R = 80 V, T_j = 150℃	I_R	 - - - -	 30 0.5 30 50	 nA μA μA μA
Diode Capacitance at V_R = 0 V, f = 1 MHz	C_d	-	1.5	pF
Reverse Recovery Time at I_F = 10 mA, I_{rr} = 0.1 X I_R, V_R = 6 V, R_L = 100 Ω	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig 1. Power Derating Curve

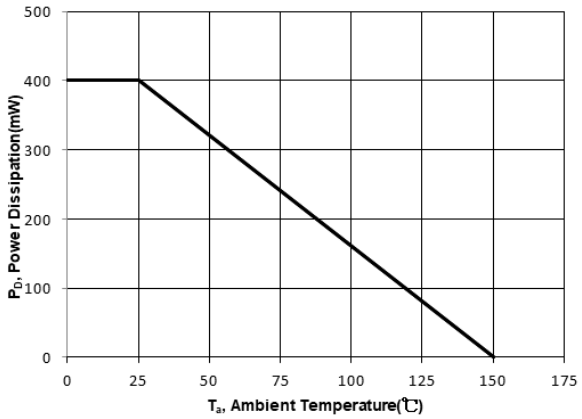


Fig 2. Capacitance Characteristics

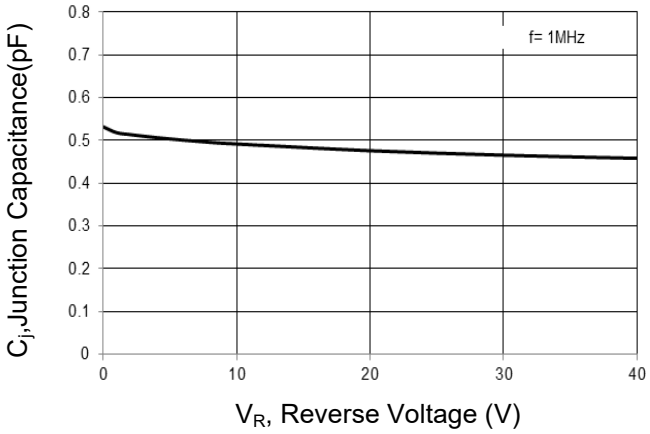


Fig 3. Reverse Characteristics

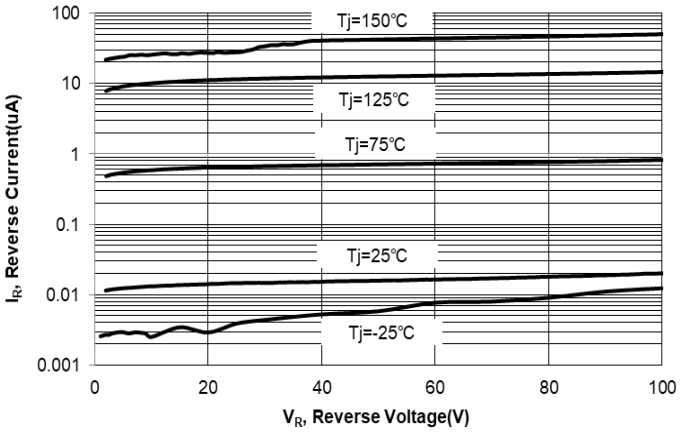
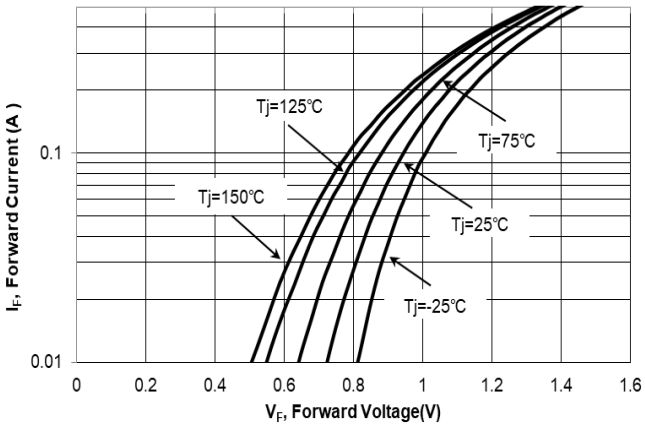
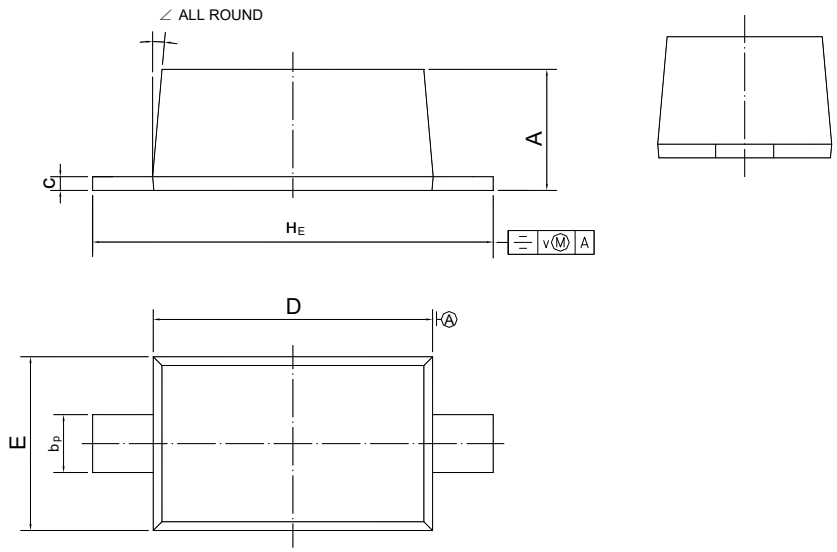


Fig 4. Forward Characteristics



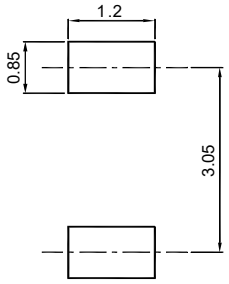
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123**



UNIT	A	b_p	c	D	E	H_E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint



Packing information

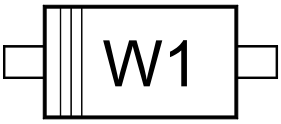
Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" W1 " = Part No

" III " = Cathode line

Font type: Arial



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