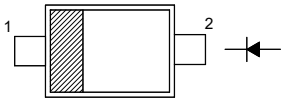
Silicon Epitaxial Planar Switching Diode

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

Features

- AEC-Q101 Qualified
- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- Ultra high speed switching application

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	80	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Forward Continuous Current	I_{FM}	300	mA
Non-Repetitive Peak Forward Surge Current (at t = 1 μs)	I_{FSM}	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, with minimum recommended pad layout.

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at I_F = 5 mA at I_F = 10 mA at I_F = 100 mA at I_F = 150 mA	V_F	 0.62 - - -	 0.72 0.855 1 1.25	V
Reverse Leakage Current at V_R = 80 V at V_R = 20 V at V_R = 75 V, T_J = 150 °C at V_R = 25 V, T_J = 150 °C	I_R	 - - - -	 100 25 50 30	 nA nA μA μA
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	80	-	V
Total Capacitance at V_R = 0.5 V, f = 1 MHz	C_{tot}	-	4	pF
Reverse Recovery Time at I_F = 10 mA, V_R = 6 V, I_{RR} = 0.1 × I_R, R_L = 100 Ω	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig 1. Power Derating Curve

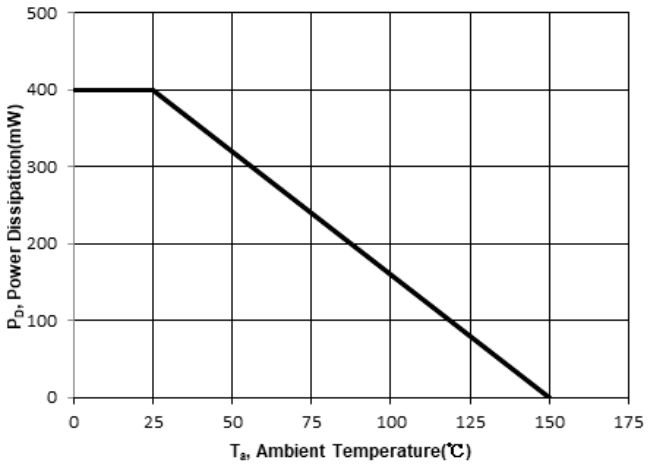


Fig 2. Total Capacitance vs. Reverse Voltage

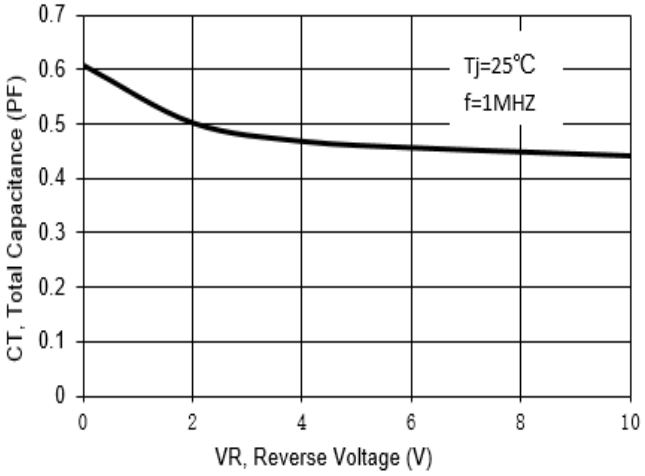


Fig 3. Reverse Current vs. Reverse Voltage

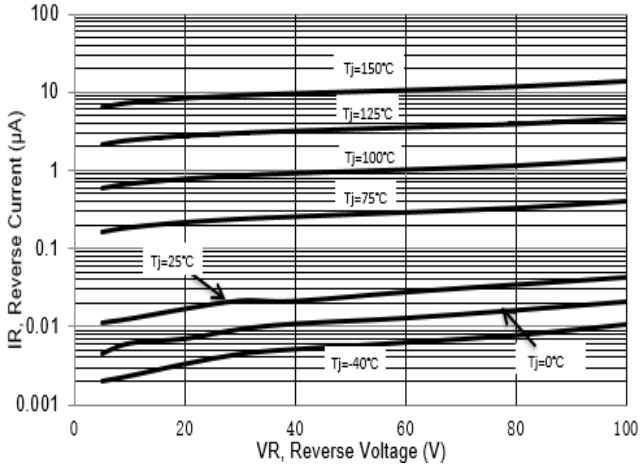
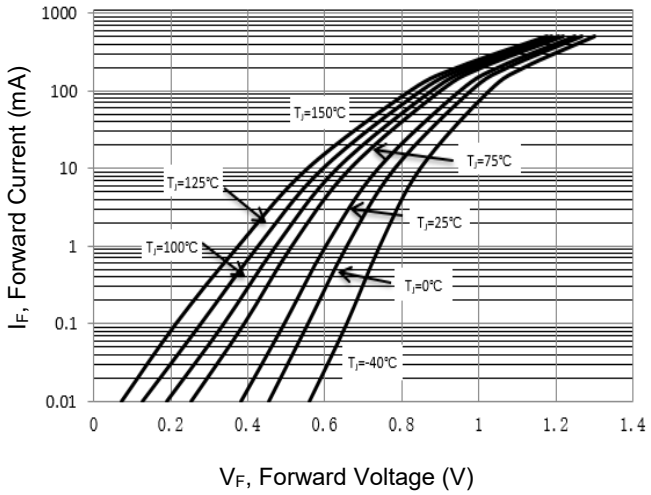
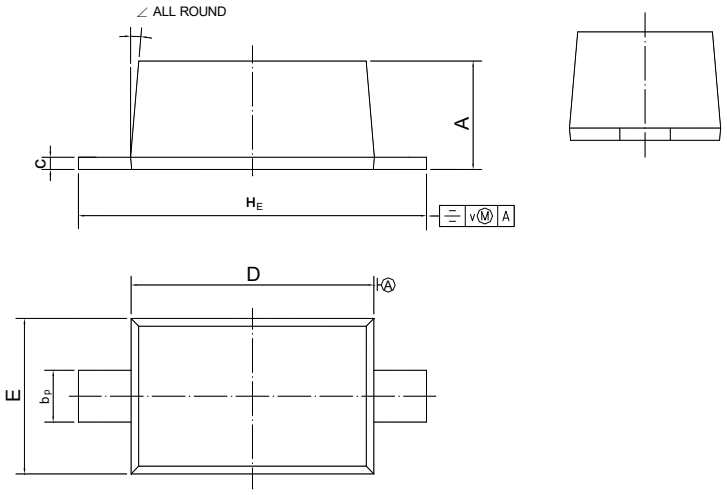


Fig 4. Forward Characteristics

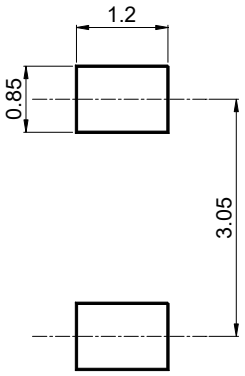


PACKAGE OUTLINE
Plastic surface mounted package **SOD-123**



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

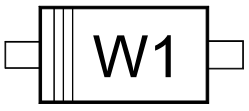


Packing information

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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