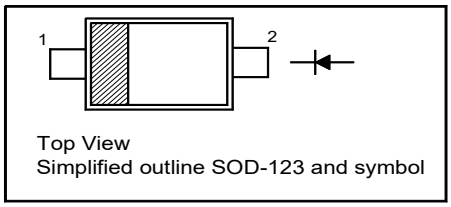
1N4148W-CH

Silicon Epitaxial Planar Switching Diode

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

Features

- Fast switching
- AEC-Q101 Qualified
- 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
Forward Continuous 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		P_D	400	mW
Operating Junction Temperature Range		T_j	- 65 to + 150	℃
Storage Temperature Range		T_{stg}	- 65 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.

Dated: 12/04/2024 Rev:01

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 x I_R , V_R = 6 V, R_L = 100 Ω	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig 1. Power Dissipation vs Ambient Temperature

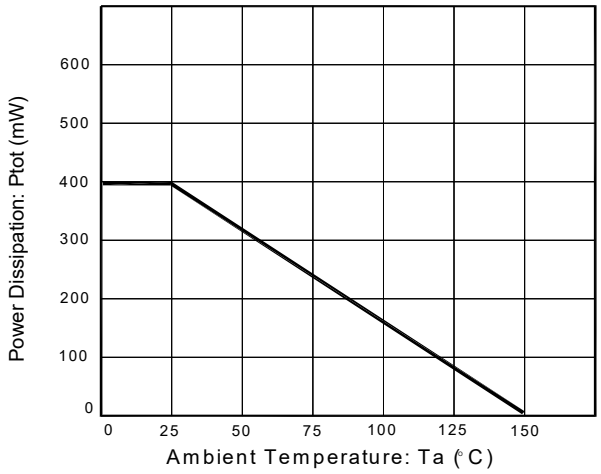


Fig 2. Total Capacitance vs. Reverse Voltage

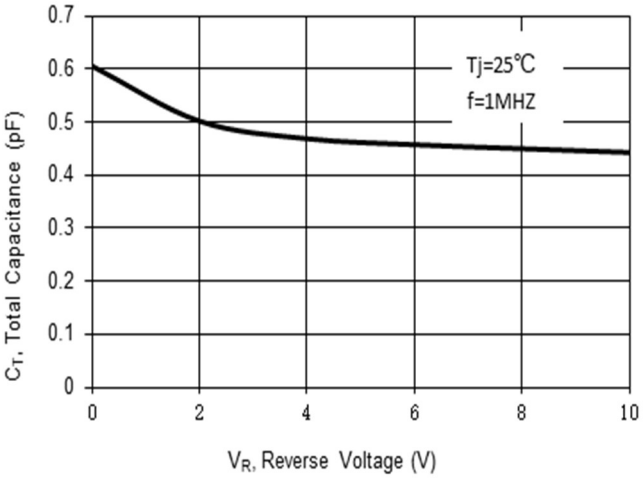


Fig 3. Reverse Current vs. Reverse Voltage

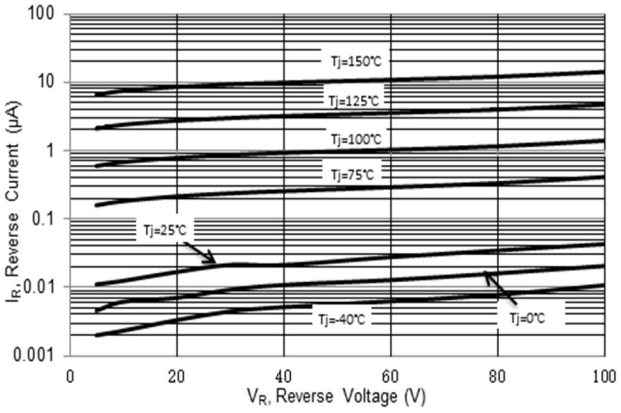
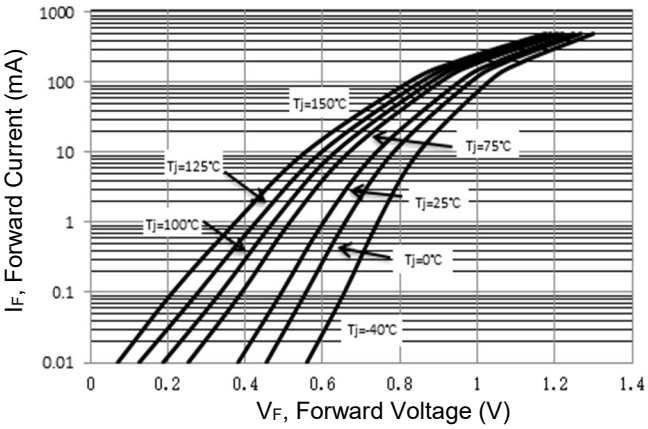
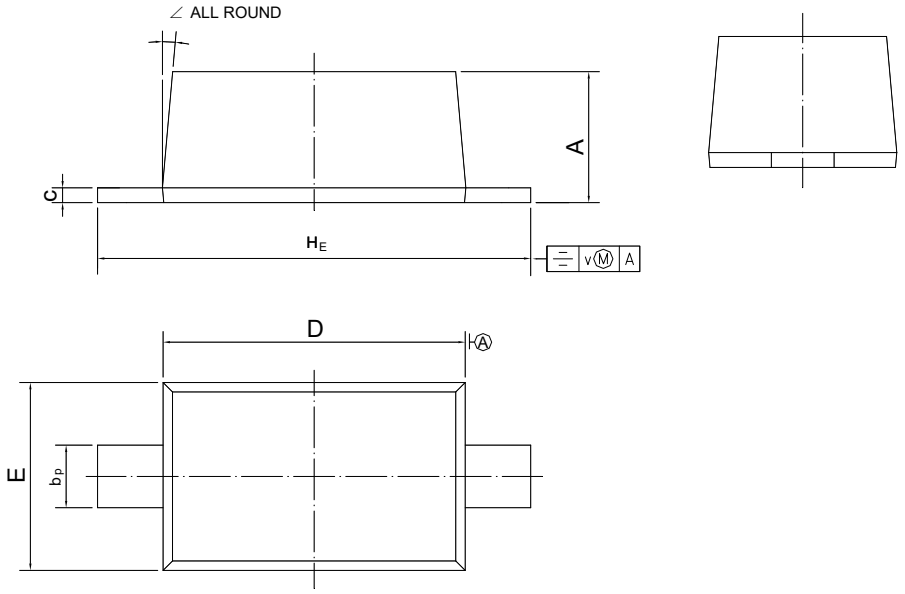


Fig 4. Forward Characteristics



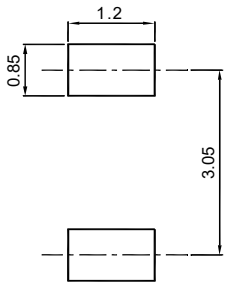
PACKAGE OUTLINE

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



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

" • " = HAF (Halogen and Antimony Free)

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