

1N4148W-HAF

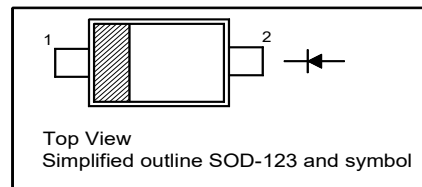
Silicon Epitaxial Planar Switching Diode

Features

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



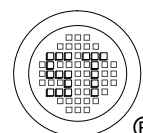
Absolute Maximum Ratings ($T_a = 25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Peak Forward Current	I_{FM}	300	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5 1 4	A
		at $t = 1\text{ s}$ at $t = 1\text{ ms}$ at $t = 1\text{ }\mu\text{s}$	
Power Dissipation	P_{tot}	400	mW
Operating Junction Temperature Range	T_j	- 65 to + 150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	312	$^{\circ}\text{C/W}$

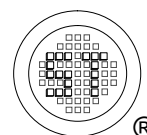
¹⁾ Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



1N4148W-HAF

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1 \mu\text{A}$	$V_{(BR)R}$	75	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	V_F	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}$, $T_J = 150^\circ\text{C}$ at $V_R = 25 \text{ V}$, $T_J = 150^\circ\text{C}$	I_R	- - - -	1 25 50 30	μA nA μA μA
Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	2	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}$, $I_{rr} = 0.1 \cdot I_R$, $V_R = 6 \text{ V}$, $R_L = 100 \Omega$	t_{rr}	-	4	ns



Electrical Characteristics Curves

Fig 1. Power Derating Curve

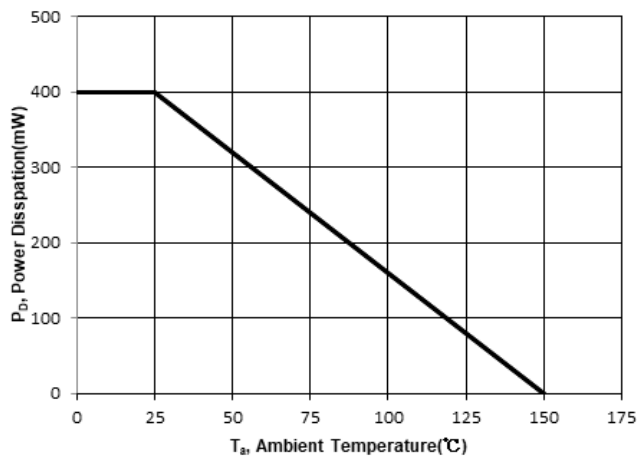


Fig 2. Total Capacitance vs. Reverse Voltage

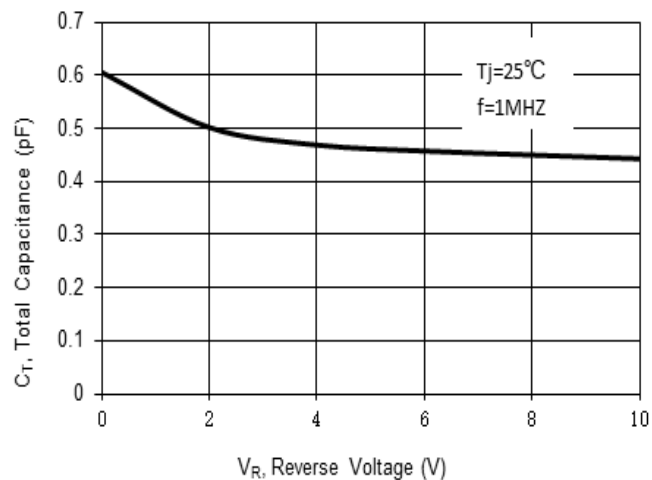


Fig 3. Reverse Current vs. Reverse Voltage

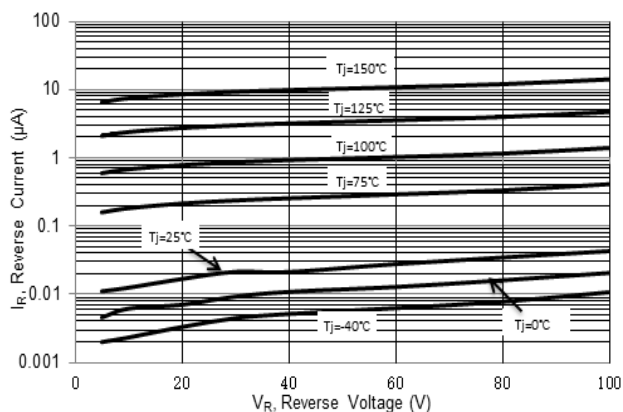
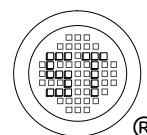
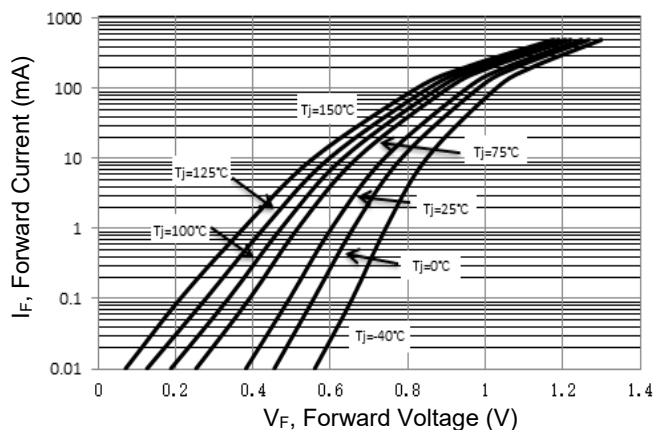


Fig 4. Forward Characteristics

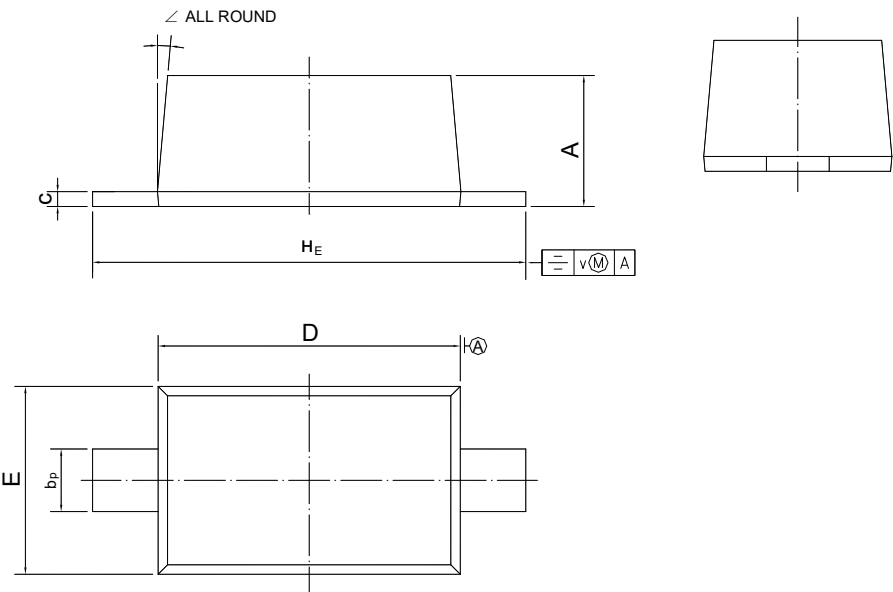


1N4148W-HAF

PACKAGE OUTLINE

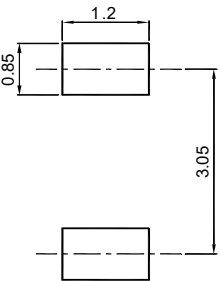
Plastic surface mounted package; 2 leads

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)
Font type: Arial

