为芯半导体科技有限公司

VC1N4148WB

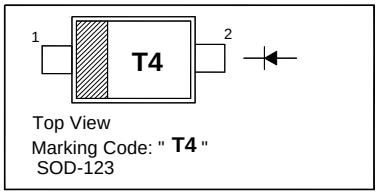
Silicon Epitaxial Planar Switching Diode

SOD-123 400mW

Features

- SOD-123 package
- Fast switching

PIN	DESCRIPTION
1	Cathode
2	Anode



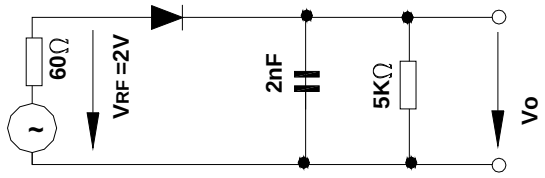
Top View
Marking Code: " **T4** "
SOD-123

Absolute Maximum Ratings (T_a = 25℃)

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
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_{tot}	400	mW
Thermal Resistance from Junction to Ambient Air		$R_{\theta JA}$	312	℃/W
Junction Temperature		T_j	- 55 to + 150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

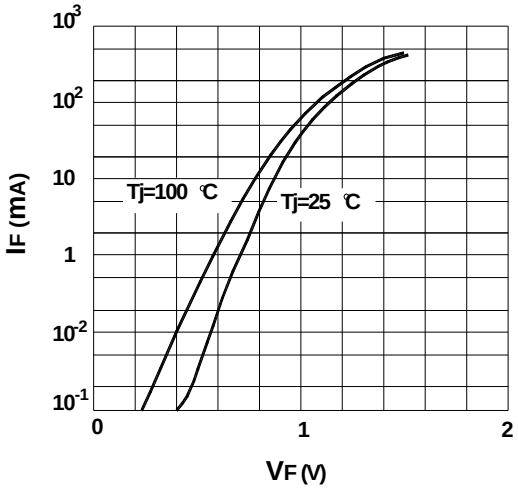
Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Max.	Unit
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 = 75 V at V_R = 20 V at V_R = 75 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_{rr} = 0.1 X I_R, I_F = I_R = 10 mA, R_L = 100 Ω	t_{rr}	-	4	ns

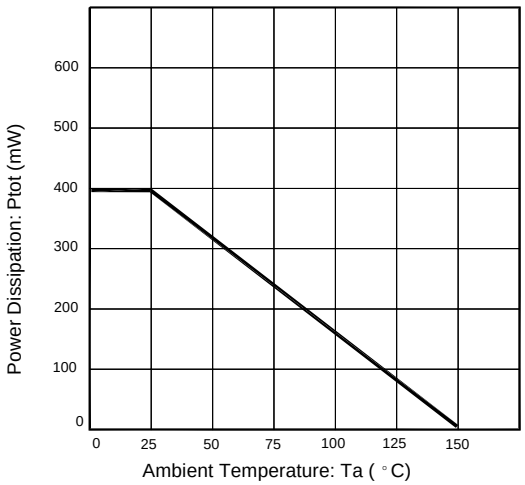


Rectification Efficiency Measurement Circuit

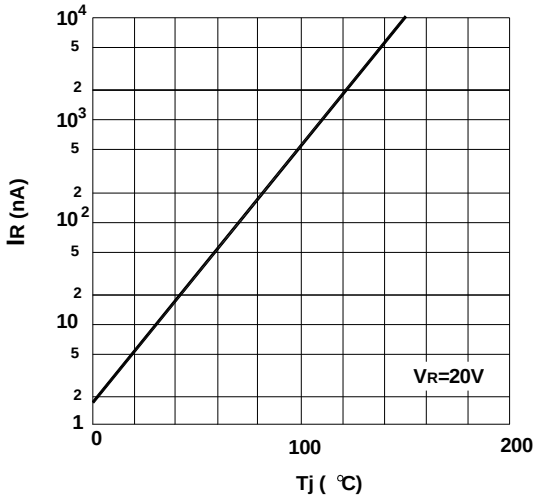
Forward characteristics



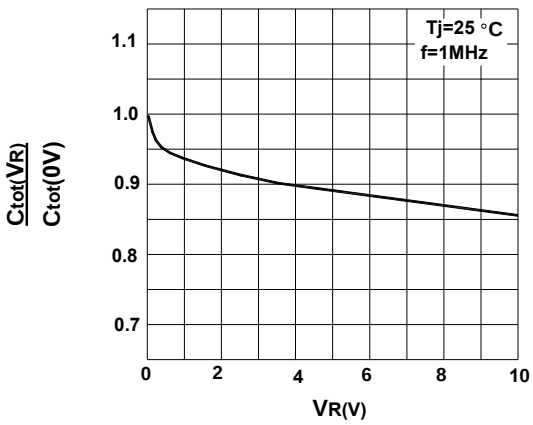
Power Dissipation vs Ambient Temperature



Leakage current vs. junction temperature

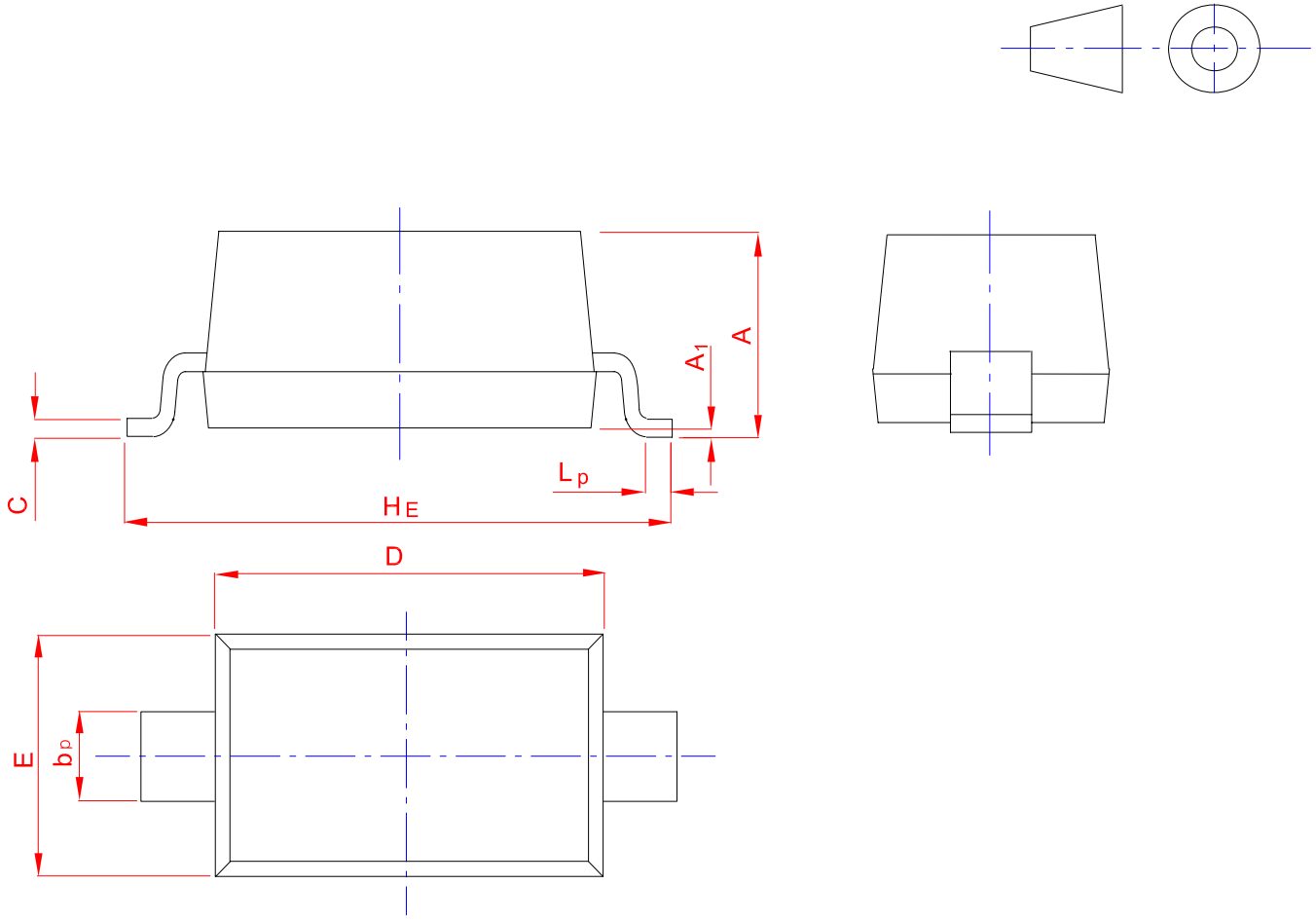


Reverse capacitance vs. reverse voltage



PACKAGE OUTLINE

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



UNIT	A	b_p	C	D	E	H_E	A_1	L_p
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20

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