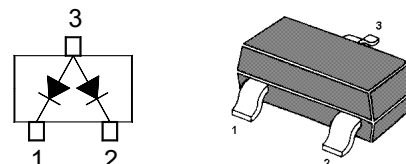


Silicon Epitaxial Planar Switching Diode

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



Marking Code: A1
SOT-23 Plastic Package

Applications

- Ultra high speed switching application

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	85	V
Continuous Reverse Voltage	V_R	75	V
Forward Current (DC)	I_F	215	mA
Single Diode Loaded		125	
Double Diode Loaded			
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5	A
at $t = 1\text{ s}$		1	
at $t = 1\text{ ms}$		4	
at $t = 1\text{ }\mu\text{s}$			
Power Dissipation	P_{tot}	350	mW
Operating Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Max.	Unit
Forward Voltage			
at $I_F = 1\text{ mA}$	V_F	715	mV
at $I_F = 10\text{ mA}$	V_F	855	mV
at $I_F = 50\text{ mA}$	V_F	1	V
at $I_F = 150\text{ mA}$	V_F	1.25	V
Reverse Current			
at $V_R = 25\text{ V}$	I_R	30	nA
at $V_R = 75\text{ V}$	I_R	1	μA
at $V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	I_R	30	μA
at $V_R = 75\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	I_R	50	μA
Diode Capacitance			
at $V_R = 0, f = 1\text{ MHz}$	C_d	2	pF
Reverse Recovery Time			
at $I_F = I_R = 10\text{ mA}, R_L = 100\text{ }\Omega$	t_{rr}	4	ns

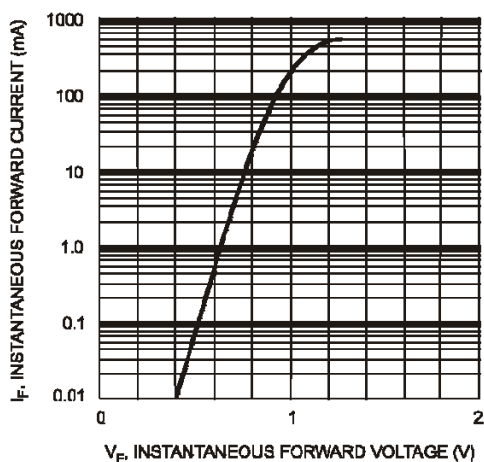


Fig. 1 Forward Characteristics

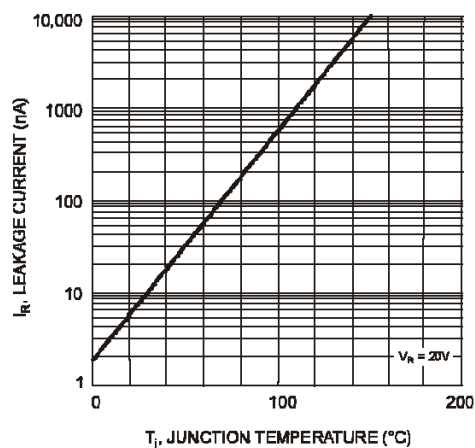


Fig. 2 Leakage Current vs Junction Temperature

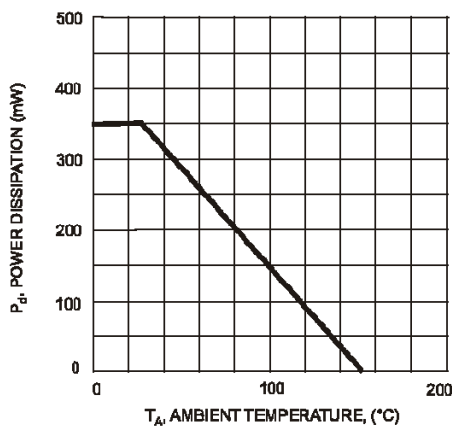
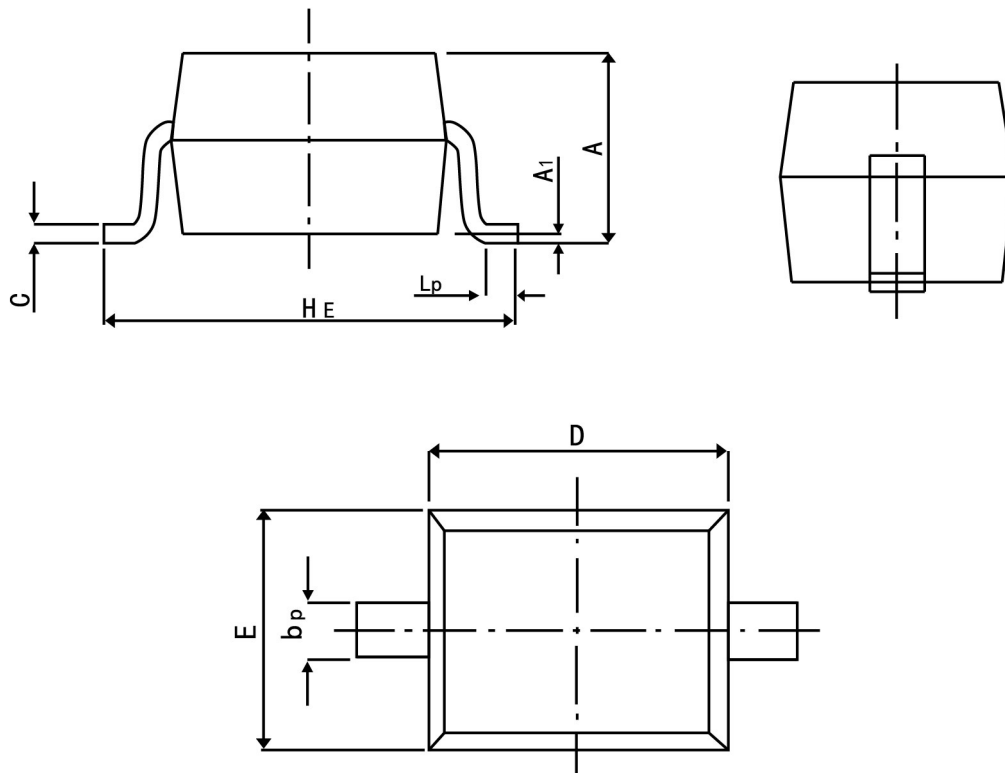


Fig. 3 Power Derating Curve, total package

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.20
bp	0.25	0.40
C	0.10	0.15
D	1.60	1.80
E	1.15	1.35
HE	2.30	2.80
A1	0.01	0.10
Lp	0.20	0.50