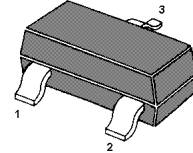
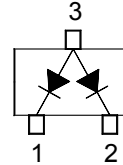


## Silicon Epitaxial Planar Switching Diode

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

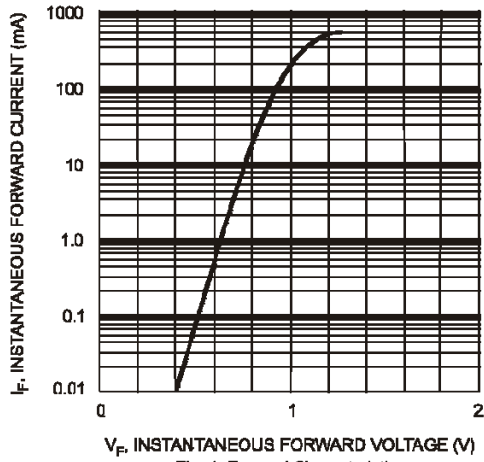


Fig. 1 Forward Characteristics

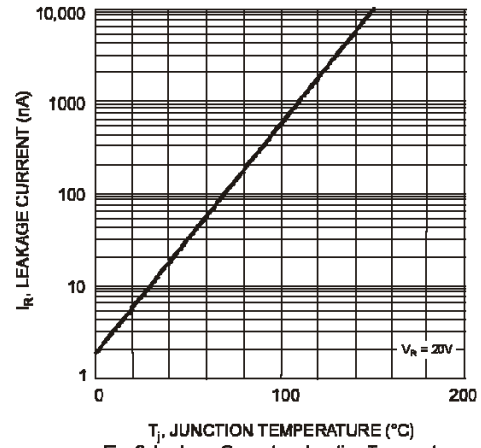


Fig. 2 Leakage Current vs Junction Temperature

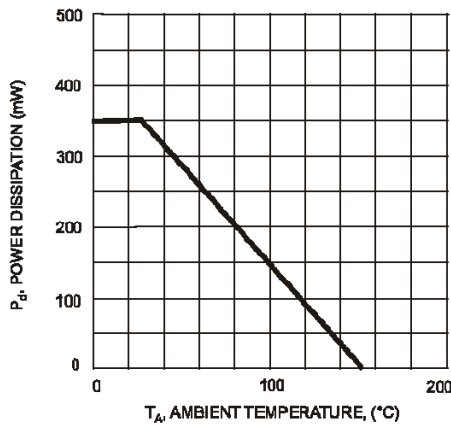
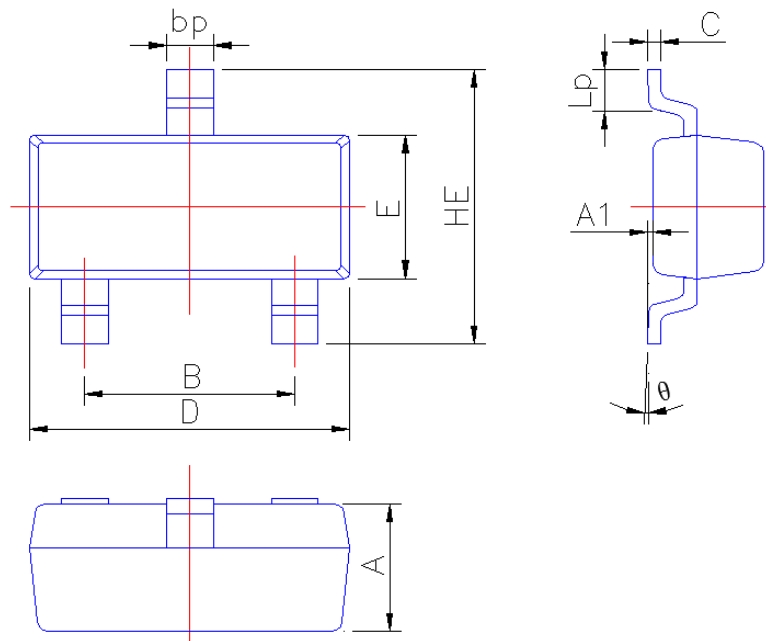


Fig. 3 Power Derating Curve, total package

### PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.10
A1	0.013	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.150
D	2.80	3.00
E	1.20	1.40
HE	2.20	2.80
Lp	0.20	0.50
θ	0°	5°