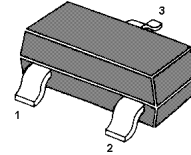
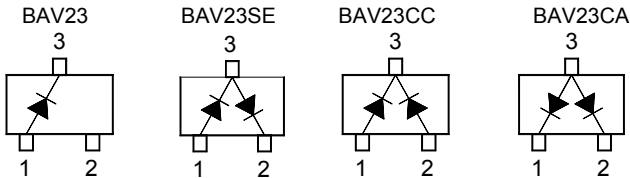


## Silicon Epitaxial Planar Diodes

High voltage switching diode



BAV23 Marking Code: **HC**  
BAV23SE Marking Code: **PY**  
BAV23CC Marking Code: **PZ**  
BAV23CA Marking Code: **RA**  
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	$V_{RRM}$	250	V
Reverse Voltage	$V_R$	200	V
Forward Current	$I_{F(AV)}$	400	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	1.7 3 9	A
		at $t = 10\text{ ms}$	
		at $t = 100\ \mu\text{s}$	
		at $t = 1\ \mu\text{s}$	
Power Dissipation	$P_{tot}$	350	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	250	-	V
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	$V_F$	- -	1 1.25	V
Reverse Current at $V_R = 200\text{ V}, T_j = 25^\circ\text{C}$ at $V_R = 200\text{ V}, T_j = 150^\circ\text{C}$	$I_R$	- -	100 100	nA $\mu\text{A}$
Total Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_{tot}$	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, I_{tr} = 0.1 \times I_R, R_L = 100\ \Omega$	$t_{rr}$	-	50	ns

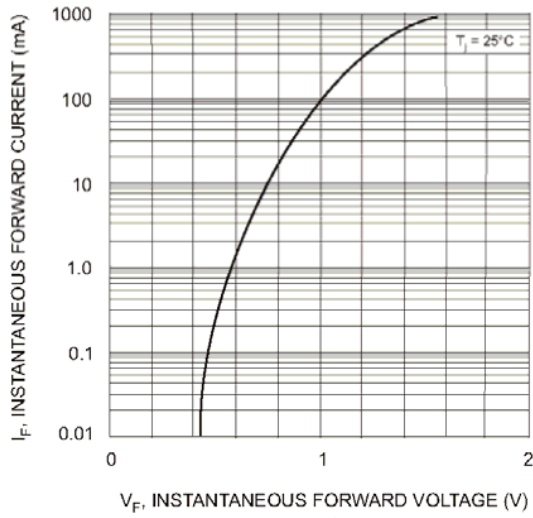


Fig. 1 Forward Characteristics

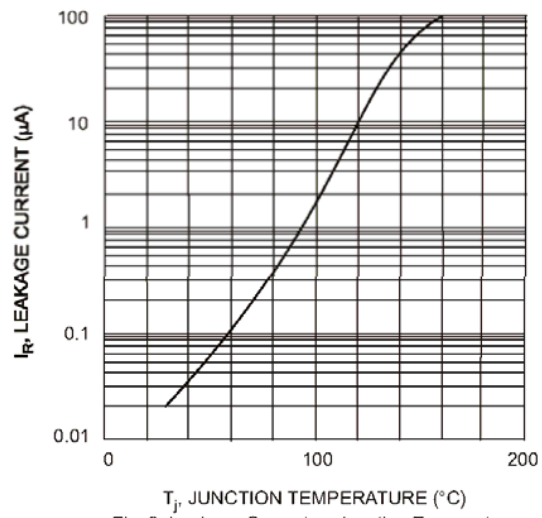
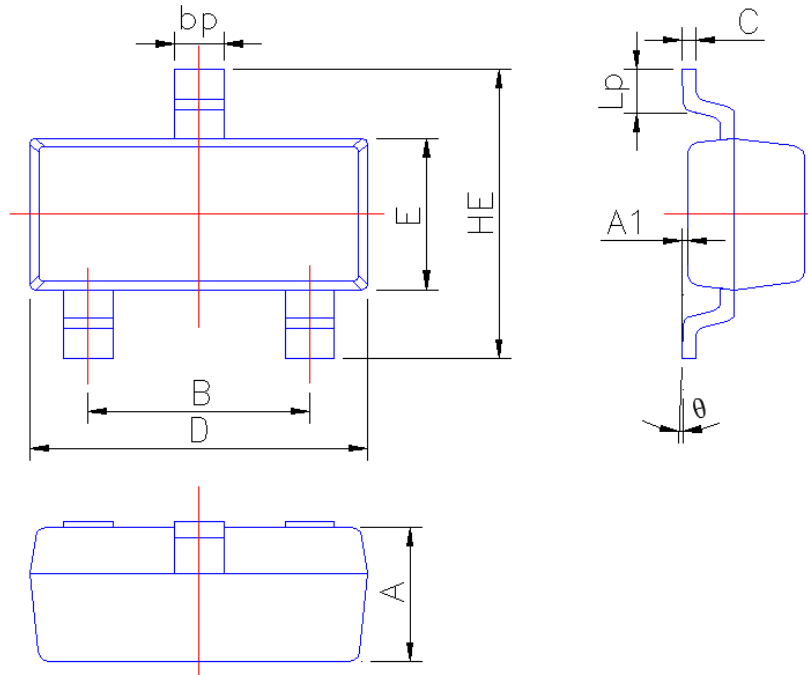


Fig. 2 Leakage Current vs Junction Temperature

## 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°