

## BAS116 Silicon Epitaxial Planar Diode

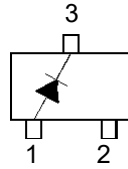
Low leakage switching diode

### Features

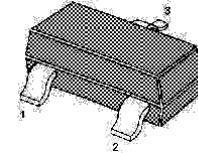
- Plastic SMD package
- Low leakage current

### Application

- Low leakage current applications in surface mounted circuits.



Marking Code: JV



SOT-23 Plastic Package

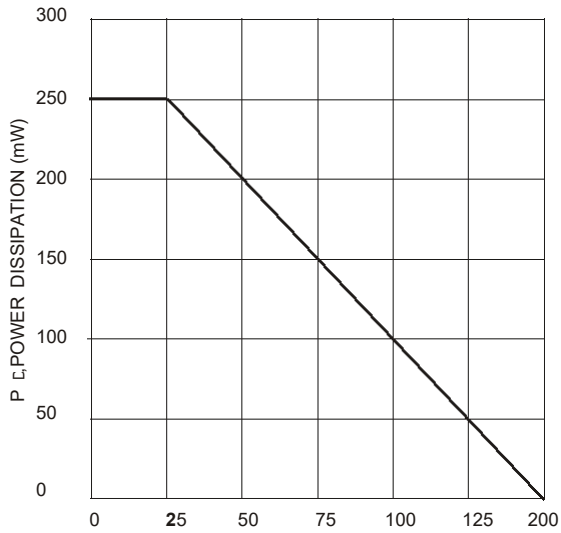
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V
Continuous Reverse Voltage	$V_R$	75	V
Continuous Forward Current	$I_F$	215	mA
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-Repetitive Peak Forward Surge Current	$t = 1 \mu\text{s}$	4	A
	$t = 1 \text{ms}$	1	
	$t = 1 \text{s}$	0.5	
Power Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

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

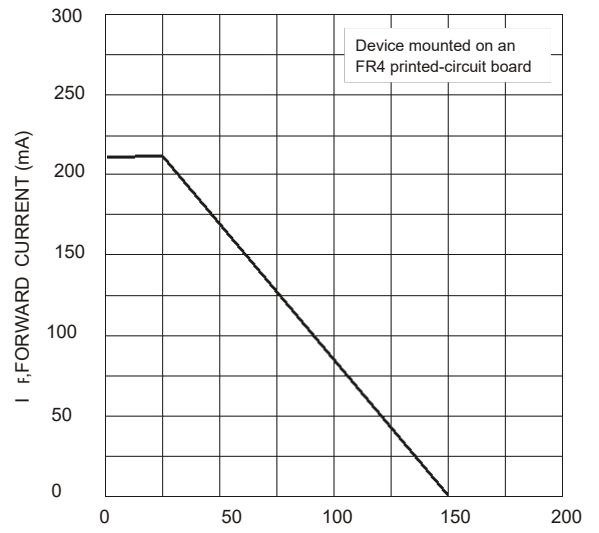
Parameter	Symbol	Typ.	Max.	Unit	
Forward Voltage	$V_F$	-	0.9	V	
			at $I_F = 1 \text{mA}$	1	V
			at $I_F = 10 \text{mA}$	1.1	V
			at $I_F = 150 \text{mA}$	1.25	V
Reverse Current	$I_R$	-	5	nA	
			at $V_R = 75 \text{V}, T_j = 150^\circ\text{C}$		80
Diode Capacitance	$C_d$	2	-	pF	
Reverse Recovery Time	$t_{rr}$	-	3	$\mu\text{s}$	
at $I_F = I_R = 10 \text{mA}, R_L = 100 \Omega, i_{rr} = 0.1 I_R$					

## Typical Characteristics



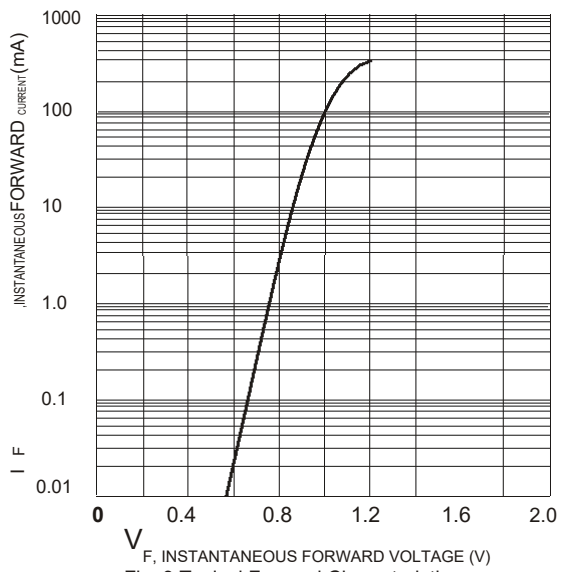
T<sub>A</sub>, AMBIENT TEMPERATURE (°C)

Fig. 1 Power Derating Curve



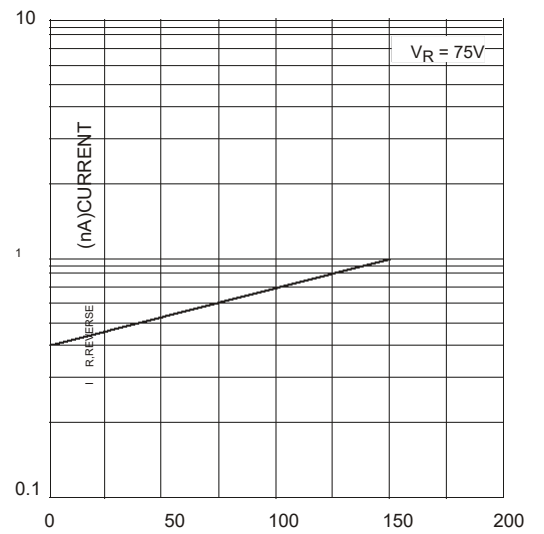
T<sub>A</sub>, AMBIENT TEMPERATURE (°C)

Fig. 2 Current Derating Curve



V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 3 Typical Forward Characteristics



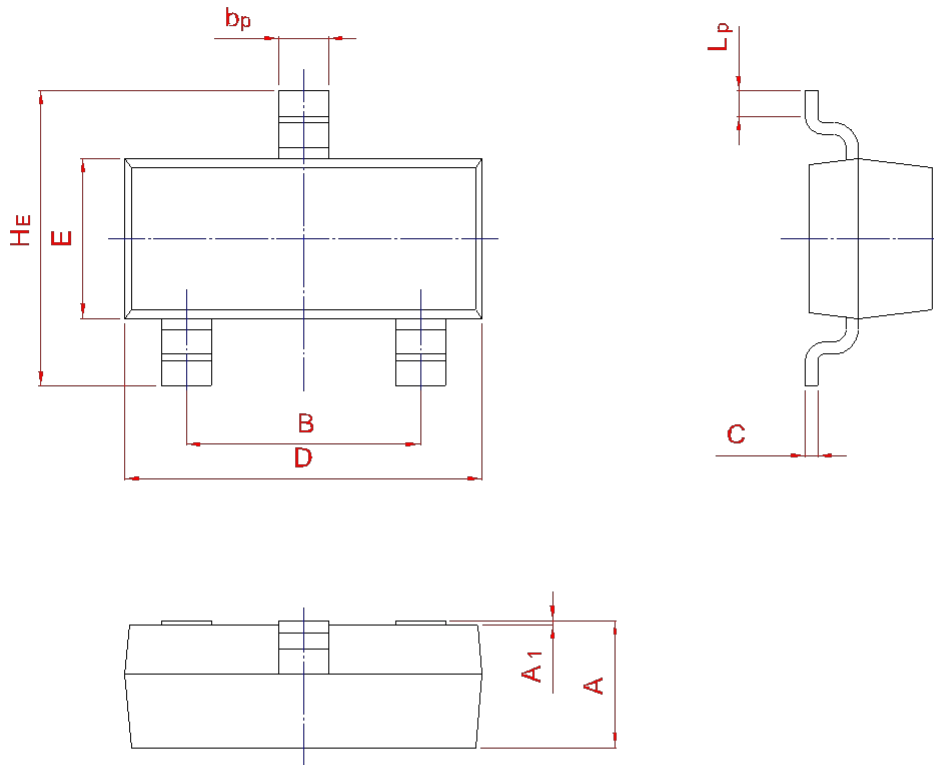
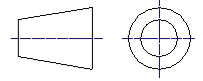
T<sub>A</sub>, AMBIENT TEMPERATURE (°C)

Fig. 4 Typical Reverse Characteristics

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	$b_p$	C	D	E	$H_e$	$A_1$	$L_p$
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20