

## Silicon Epitaxial Planar Diode

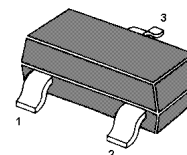
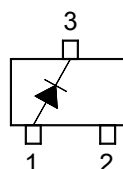
Low leakage switching diode

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

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	$I_{FSM}$	$t = 1\ \mu\text{s}$	4
		$t = 1\ \text{ms}$	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 $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Typ.	Max.	Unit
Forward Voltage at $I_F = 1\ \text{mA}$ at $I_F = 10\ \text{mA}$ at $I_F = 50\ \text{mA}$ at $I_F = 150\ \text{mA}$	$V_F$	-	0.9	V
	$V_F$	-	1	V
	$V_F$	-	1.1	V
	$V_F$	-	1.25	V
Reverse Current at $V_R = 75\ \text{V}$ at $V_R = 75\ \text{V}, T_j = 150\text{ }^\circ\text{C}$	$I_R$	-	5	nA
		-	80	
Diode Capacitance at $V_R = 0, f = 1\ \text{MHz}$	$C_d$	2	-	pF
Reverse Recovery Time at $I_F = I_R = 10\ \text{mA}, R_L = 100\ \Omega, i_{rr} = 0.1 I_R$	$t_{rr}$	-	3	$\mu\text{s}$

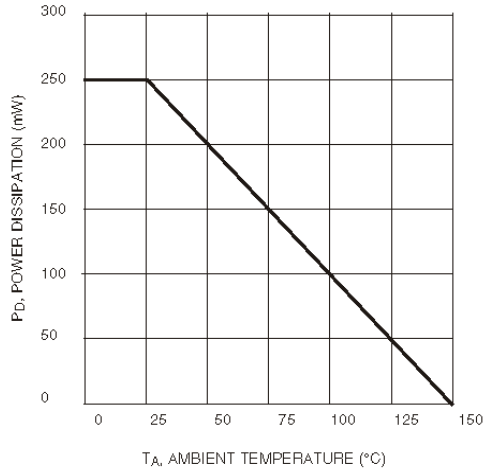


Fig. 1 Power Derating Curve

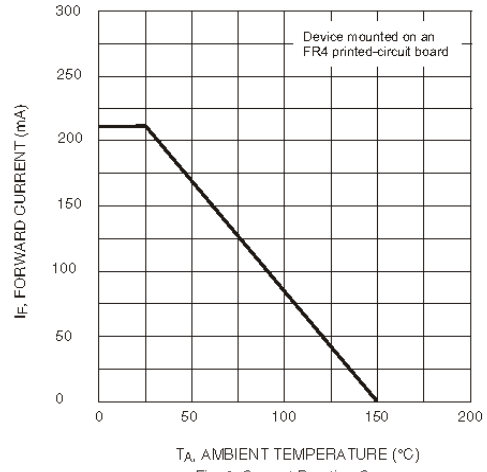


Fig. 2 Current Derating Curve

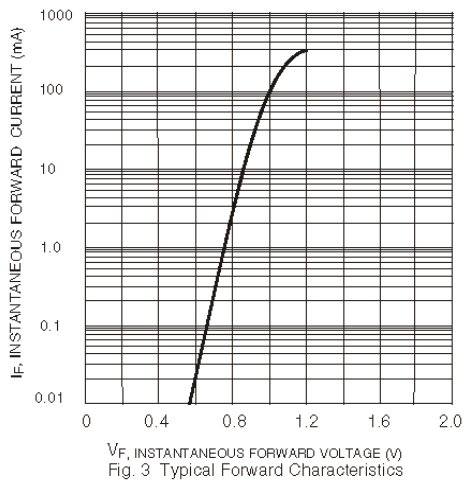


Fig. 3 Typical Forward Characteristics

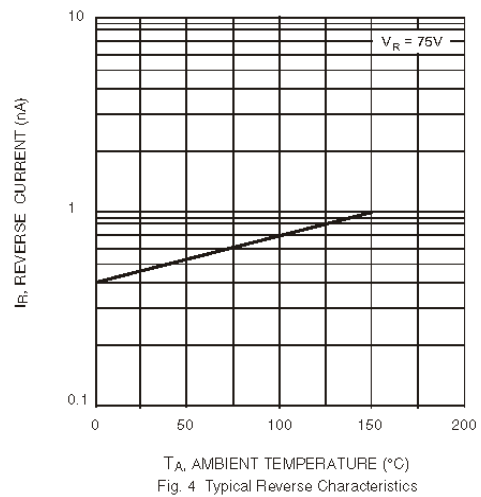
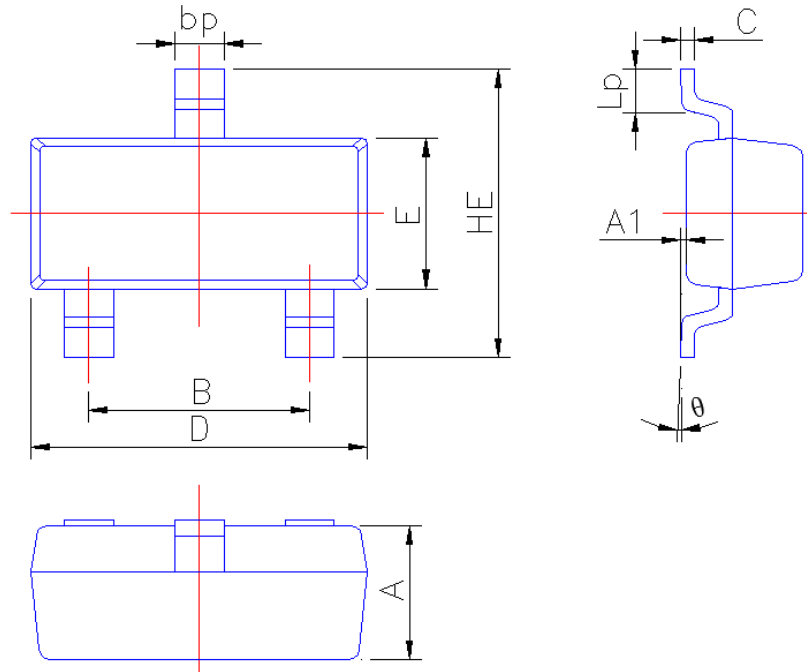


Fig. 4 Typical Reverse Characteristics

## 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
$\theta$	0°	5°