

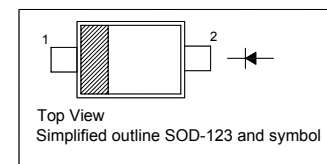
## BAV101~BAV103 Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes

Type	BAV101	BAV102	BAV103
MARKING	T2	T3	T4

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



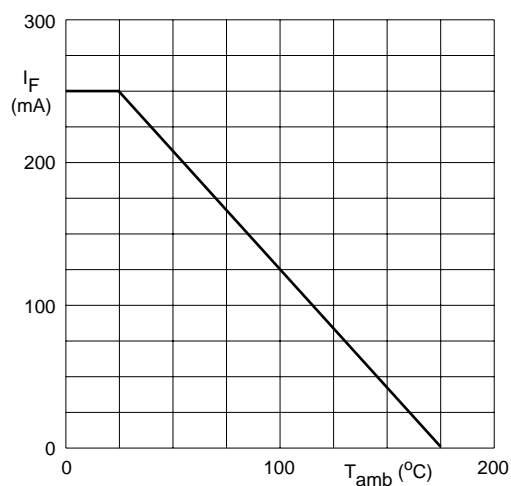
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	120	V
		200	
		250	
Reverse Voltage	$V_R$	100	V
		150	
		200	
Continuous Forward Current	$I_F$	250	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	at $t = 1\text{ s}$ 1	A
		at $t = 100\text{ }\mu\text{s}$ 3	
		at $t = 1\text{ }\mu\text{s}$ 9	
Total Power Dissipation	$P_{tot}$	400	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 175	$^\circ\text{C}$

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

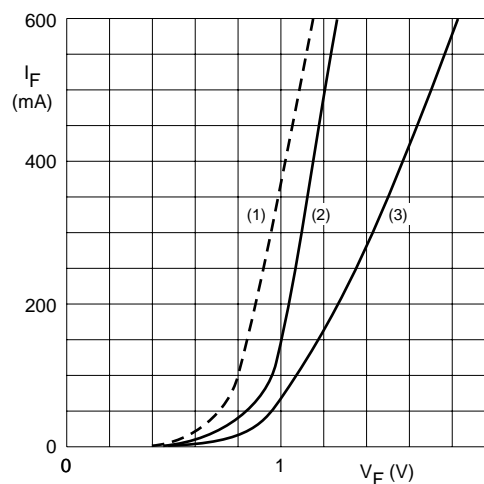
Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	$V_F$	1	V
		1.25	
Reverse Current at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$ at $V_R = 100\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 150\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 200\text{ V}, T_j = 150\text{ }^\circ\text{C}$	$I_R$	BAV101 100	nA
		BAV102 100	nA
		BAV103 100	nA
		BAV101 100	$\mu\text{A}$
		BAV102 100	$\mu\text{A}$
		BAV103 100	$\mu\text{A}$
Diode Capacitance at $V_R = 0, f = 1\text{ MHz}$	$C_d$	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, I_{rr} = 3\text{ mA}, R_L = 100\text{ }\Omega$	$t_{rr}$	50	ns

## Typical Characteristics



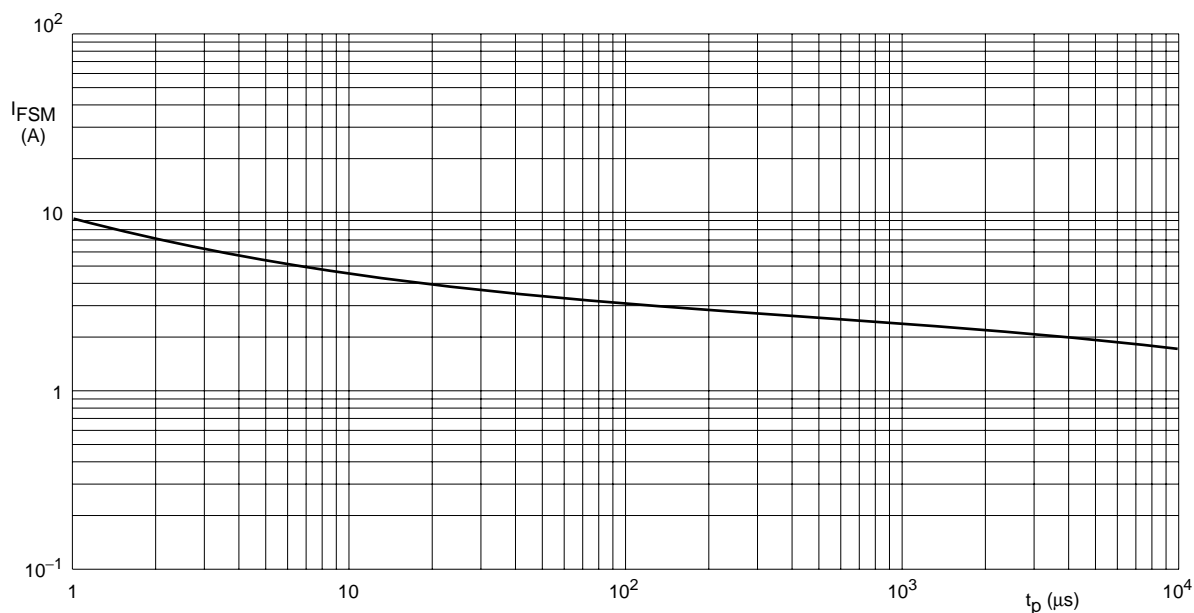
Device mounted on an FR4 printed-circuit board.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.



- (1)  $T_j = 150^\circ\text{C}$ ; typical values.
- (2)  $T_j = 25^\circ\text{C}$ ; typical values.
- (3)  $T_j = 25^\circ\text{C}$ ; maximum values.

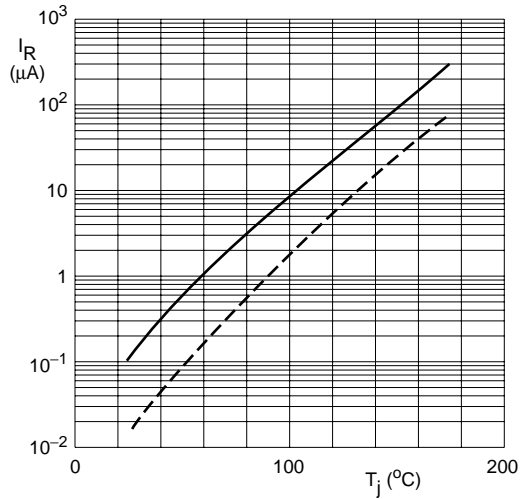
Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.  
 $T_j = 25^\circ\text{C}$  prior to surge.

Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

## Typical Characteristics

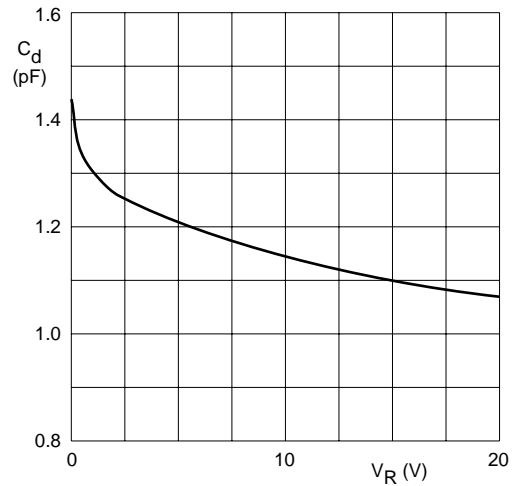


$V_R = V_{Rmax}$ .

Solid line; maximum values.

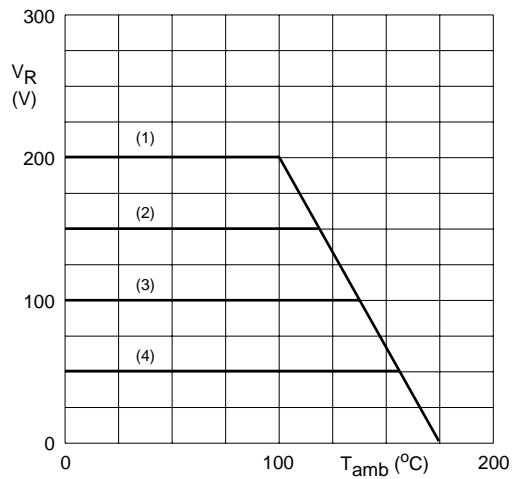
Dotted line; typical values.

Fig.4 Reverse current as a function of junction temperature.



$f = 1 \text{ MHz}; T_i = 25^\circ \text{C}$ .

Fig.5 Diode capacitance as a function of reverse voltage; typical values.



- (1) BAV103.
- (2) BAV102.
- (3) BAV101.
- (4) BAV100.

Fig.6 Maximum permissible continuous reverse voltage as a function of ambient temperature.

## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123

