

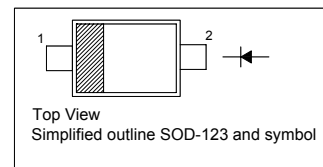
Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes

Type	BAV101	BAV102	BAV103
MARKING	T2	T3	T4

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



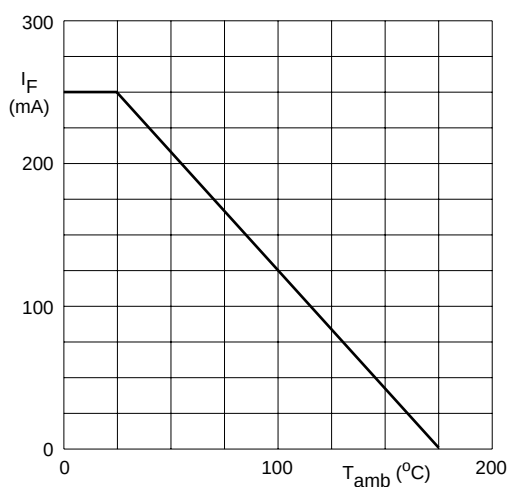
Absolute Maximum Ratings ($T_a = 25\text{ °C}$)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	BAV101	V_{RRM}	120	V
	BAV102		200	
	BAV103		250	
Reverse Voltage	BAV101	V_R	100	V
	BAV102		150	
	BAV103		200	
Continuous Forward Current		I_F	250	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	at $t = 1\text{ s}$	I_{FSM}	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	°C
Storage Temperature Range		T_{stg}	- 65 to + 175	°C

Characteristics at $T_a = 25\text{ °C}$

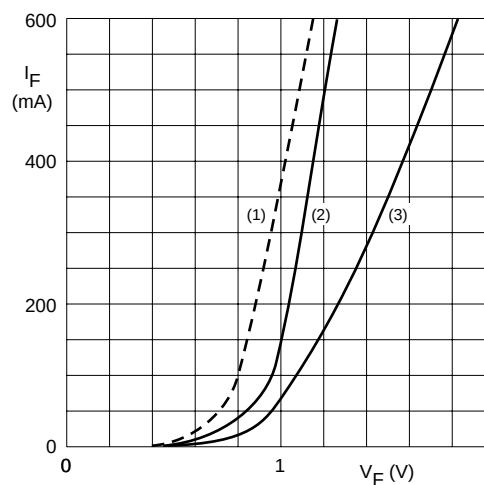
Parameter		Symbol	Max.	Unit
Forward Voltage	at $I_F = 100\text{ mA}$	V_F	1	V
	at $I_F = 200\text{ mA}$		1.25	
Reverse Current	at $V_R = 100\text{ V}$	I_R	100	nA
	at $V_R = 150\text{ V}$		100	nA
	at $V_R = 200\text{ V}$		100	nA
	at $V_R = 100\text{ V}$, $T_j = 150\text{ °C}$		100	μA
	at $V_R = 150\text{ V}$, $T_j = 150\text{ °C}$		100	μA
	at $V_R = 200\text{ V}$, $T_j = 150\text{ °C}$		100	μA
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



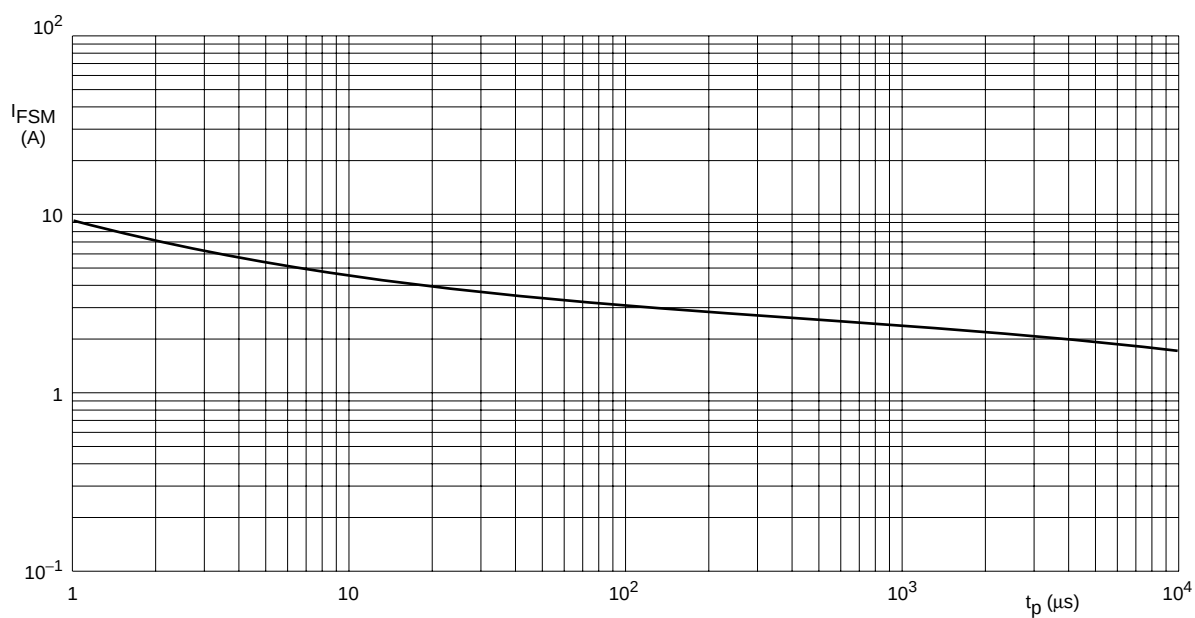
Device mounted on an FR4 printed-circuit board.

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



- (1) $T_j = 150$ °C; typical values.
- (2) $T_j = 25$ °C; typical values.
- (3) $T_j = 25$ °C; maximum values.

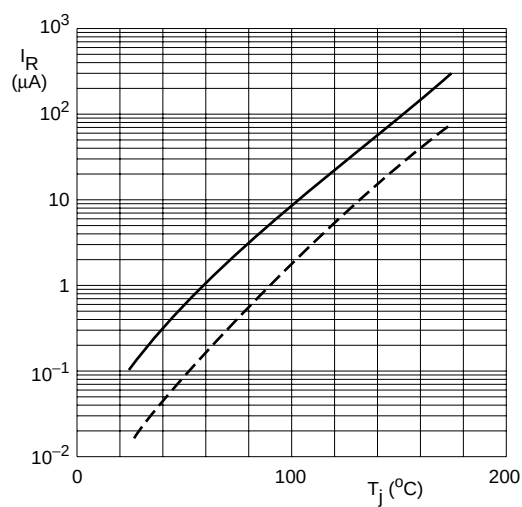
Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.
 $T_j = 25$ °C prior to surge.

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

Typical Characteristics

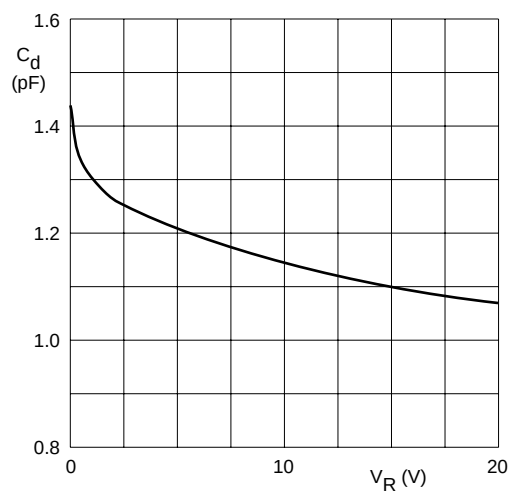


$V_R = V_{Rmax}$.

Solid line; maximum values.

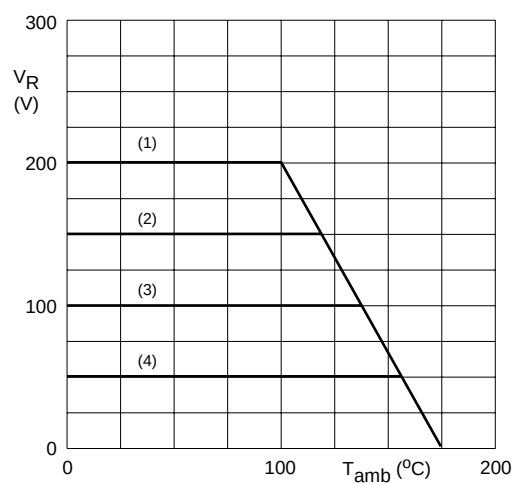
Dotted line; typical values.

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.

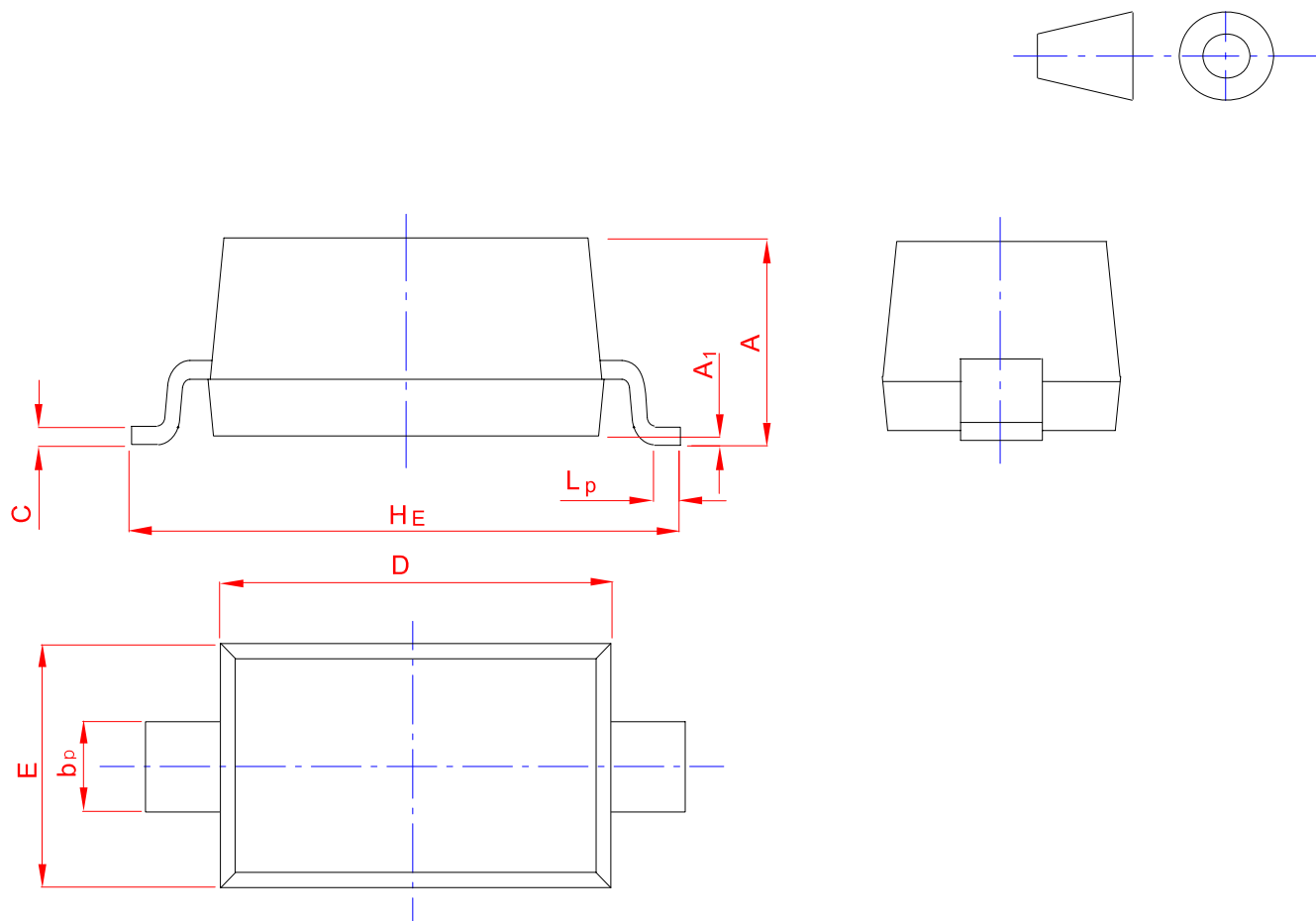
(4) BAV100.

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

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b_p	C	D	E	H_E	A_1	L_p
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20