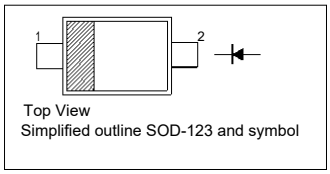
BAV101~BAV103 Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

Type	BAV101	BAV102	BAV103
MARKING	T2	T3	T4

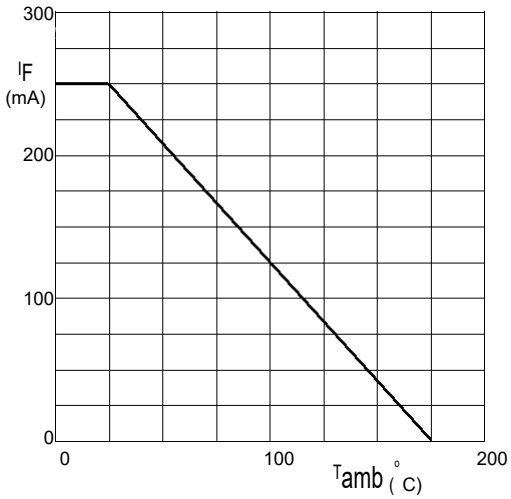
Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	BAV101 BAV102 BAV103	V_{RRM}	120 200 250	V
Reverse Voltage	BAV101 BAV102 BAV103	V_R	100 150 200	V
Continuous Forward Current		I_F	250	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 100 µs at t = 1 µs	I_{FSM}	1 3 9	A
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 °C

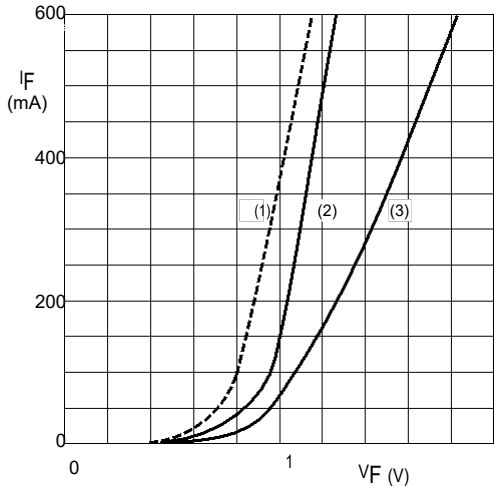
Parameter		Symbol	Max.	Unit
Forward Voltage at I_F = 100 mA at I_F = 200 mA		V_F	 1 1.25	V
Reverse Current at V_R = 100 V at V_R = 150 V at V_R = 200 V at V_R = 100 V, T_j = 150 °C at V_R = 150 V, T_j = 150 °C at V_R = 200 V, T_j = 150 °C	 BAV101 BAV102 BAV103 BAV101 BAV102 BAV103	I_R	 100 100 100 100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

Typical Characteristics



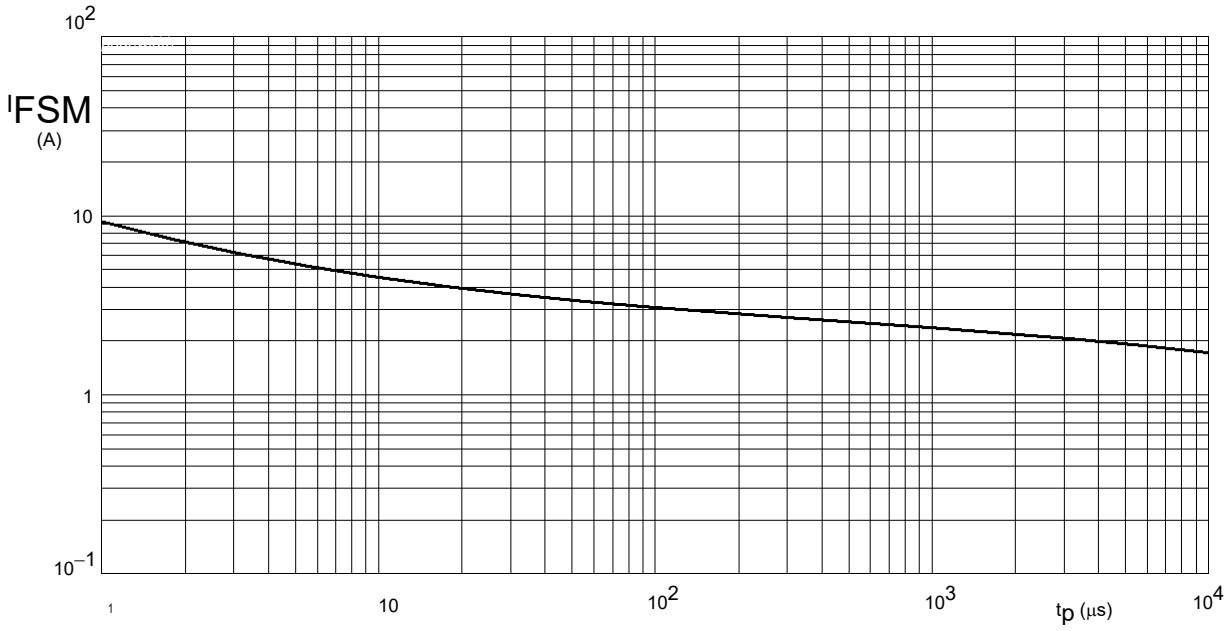
Device mounted on an FR4 printed-circuit board.

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.

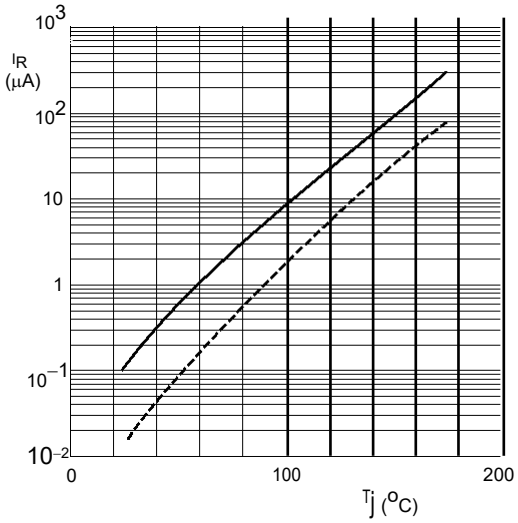
Fig.2 Forward current as a function of forward voltage.



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

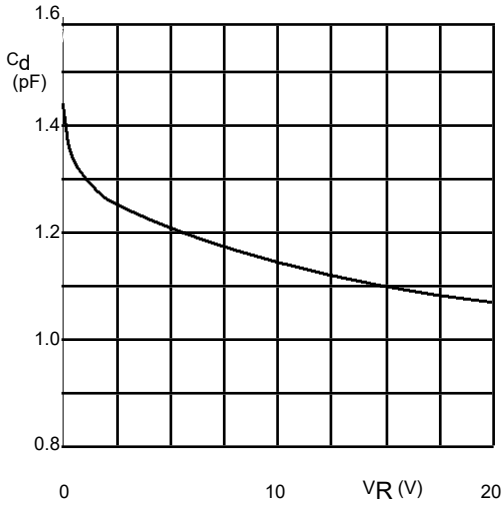
Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

Typical Characteristics



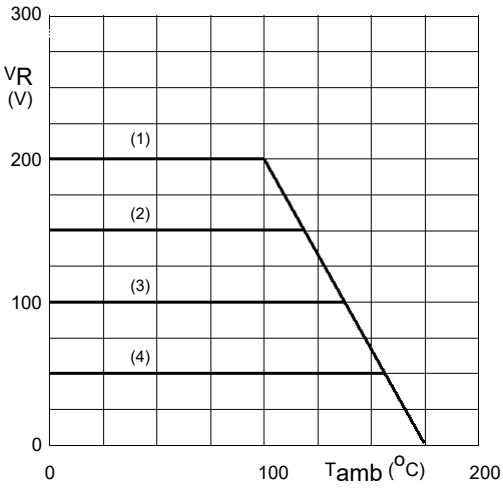
$V_R = V_{Rmax}$.
Solid line; maximum values.
Dotted line; typical values.

Fig.4 Reverse current as a function of jun tion temperature.



f = 1 MHz; T_j = 2 5 ° C.

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

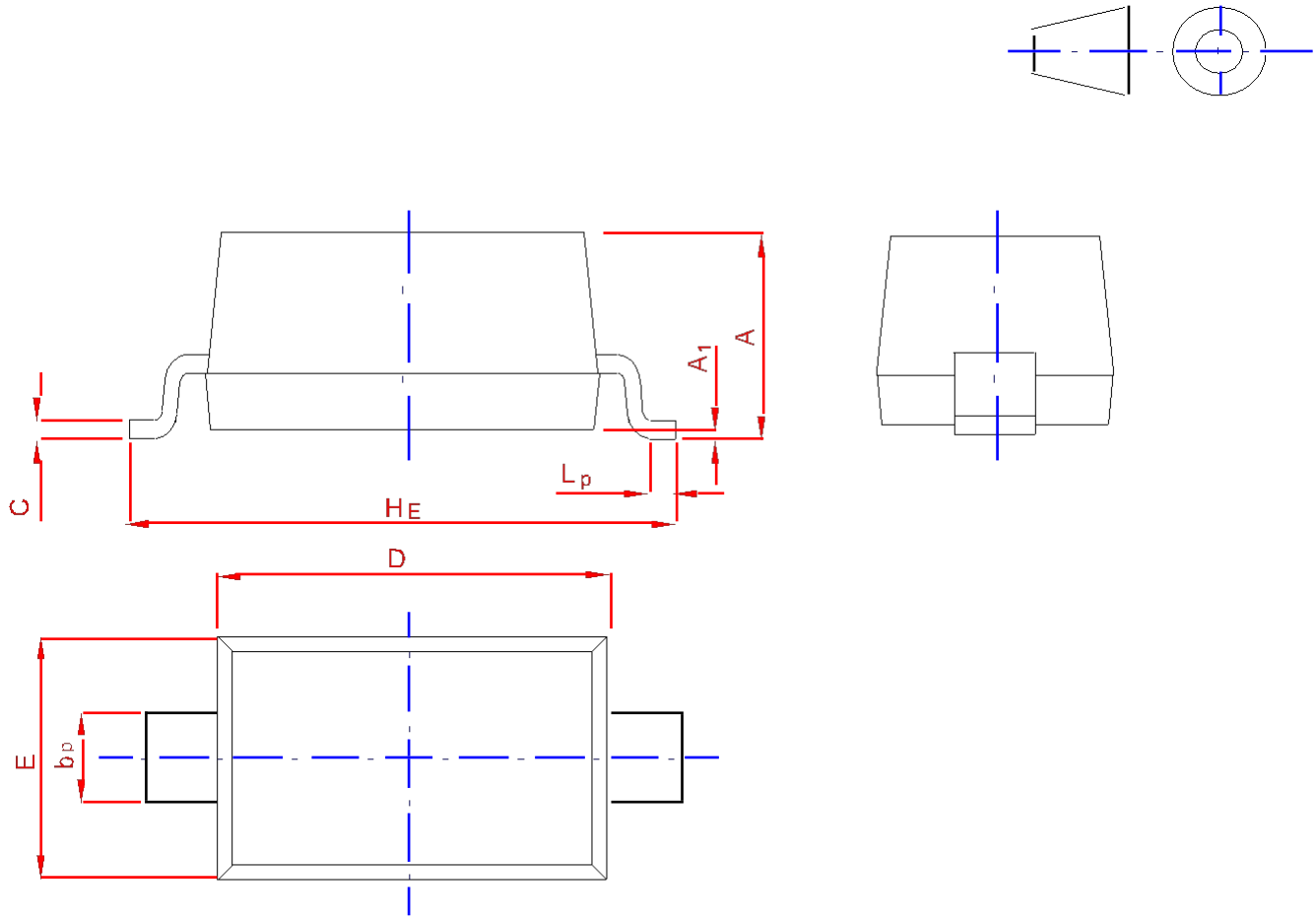


(1) BAV103.
(2) BAV102.
(3) BAV101.
(4) BAV100.

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