Low-voltage stabistor BAS17

FEATURES

- Low-voltage stabilization
- Forward voltage range: 580 to 960 mV
- Total power dissipation: max. 250 mW.

APPLICATIONS

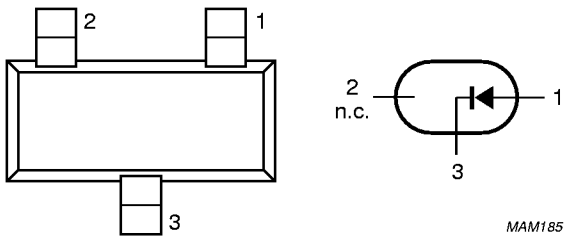
- Low-voltage stabilization e.g.
  - Bias stabilizer in class-B output stages
  - Clipping
  - Clamping
  - Meter protection.

DESCRIPTION

Low-voltage stabilization diode in a small SOT23 plastic package.

PINNING

PIN	DESCRIPTION
1	anode
2	not connected
3	cathode



Marking code: A91.

Fig.1 Simplified outline (SOT23), pin configuration and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	5	V
I_F	continuous forward current		–	200	mA
P_{tot}	total power dissipation	T_{amb} = 25 °C	–	250	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_F	forward voltage	see Fig.2				
		I_F = 0.1 mA	580	–	660	mV
		I_F = 1 mA	665	–	745	mV
		I_F = 5 mA	725	–	805	mV
		I_F = 10 mA	750	–	830	mV
		I_F = 100 mA	870	–	960	mV
I_R	reverse current	V_R = 4 V	–	–	5	µA
r_{dif}	differential resistance	I_F = 0.5 mA	–	120	–	Ω
		I_F = 2 mA	–	80	–	Ω
S_F	temperature coefficient	I_F = 1 mA	–	–1.8	–	mV/K
C_d	diode capacitance	V_R = 0 V; f = 1 MHz	–	–	140	pF

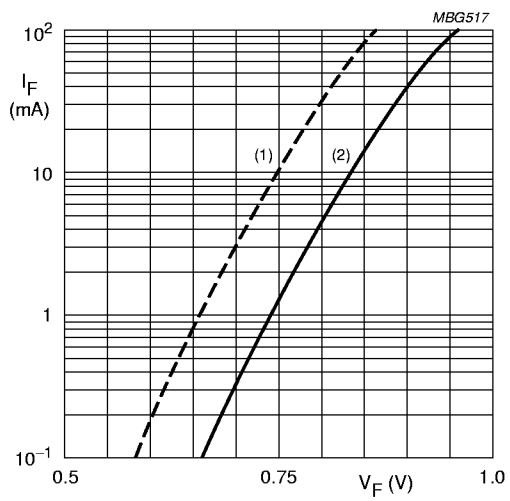
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}tp}$	thermal resistance from junction to tie-point		330	K/W
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	note 1	500	K/W

Note

1. Device mounted on a FR4 printed-circuit board.

GRAPHICAL DATA

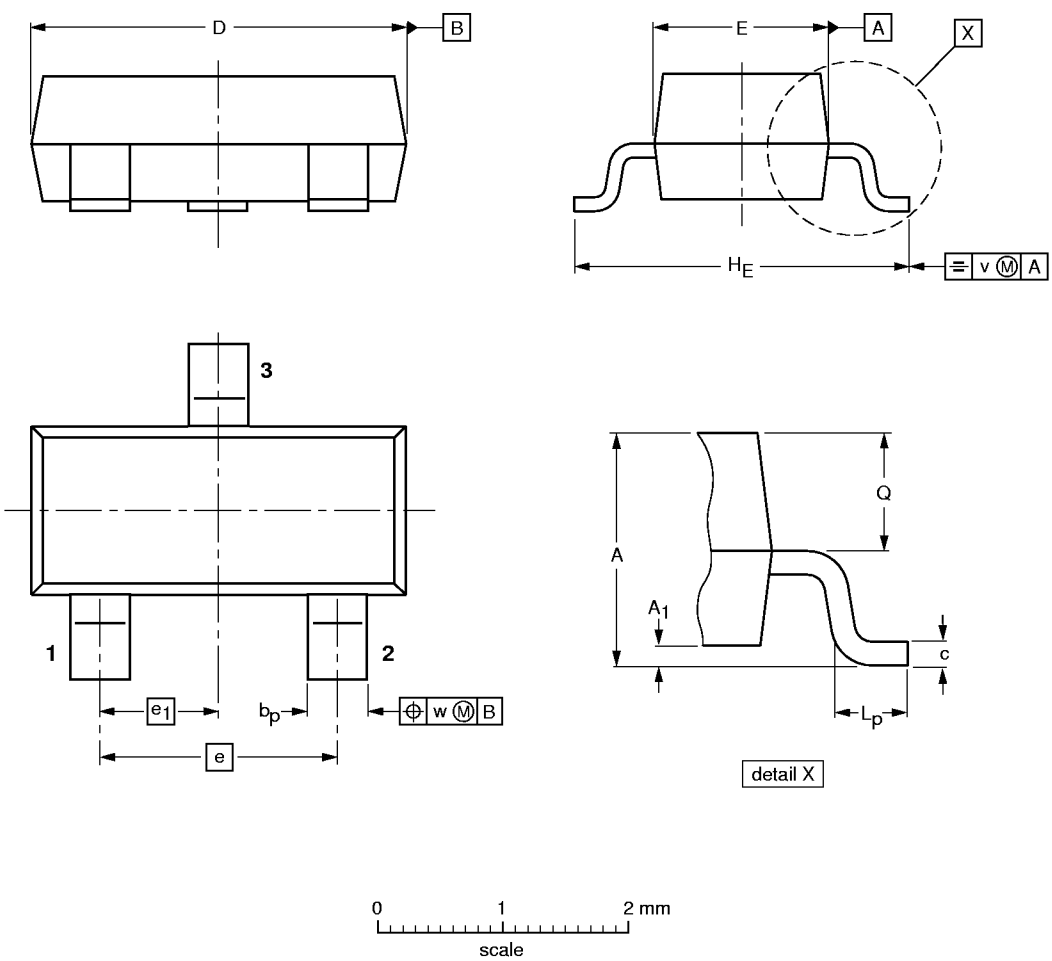


T_j = 25 °C.
(1) Minimum values.
(2) Maximum values.

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

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT23**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23						97-02-28