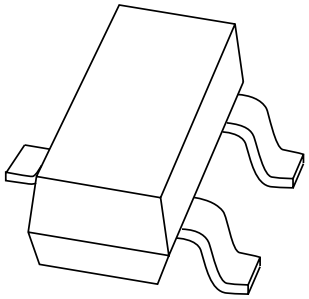
DATA SHEET



BAS17
Low-voltage stabistor

Product data sheet
Supersedes data of 1999 May 31

2003 Mar 25

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.

MARKING

TYPE NUMBER	MARKING CODE(1)
BAS17	∗A9

Note

1. ∗ = p : Made in Hong Kong.
   ∗ = t : Made in Malaysia.
   ∗ = W : Made in China.

PINNING

PIN	DESCRIPTION
1	anode
2	not connected
3	cathode

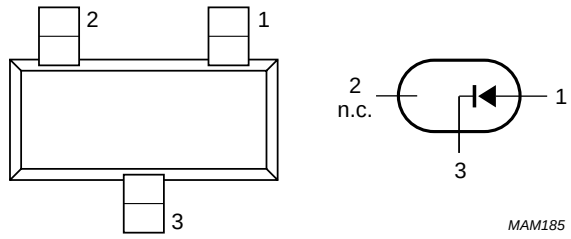


Fig.1 Simplified outline (SOT23), pin configuration and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

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

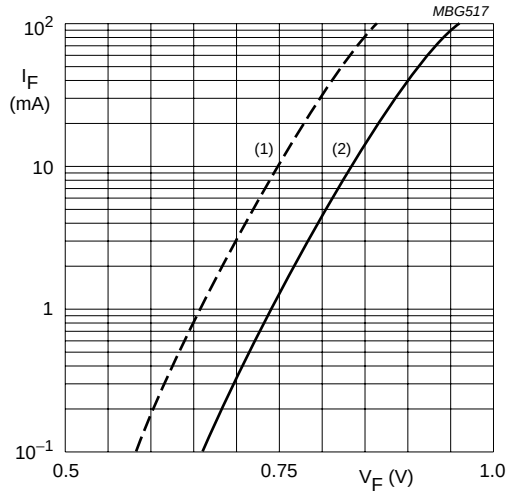
THERMAL CHARACTERISTICS

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.

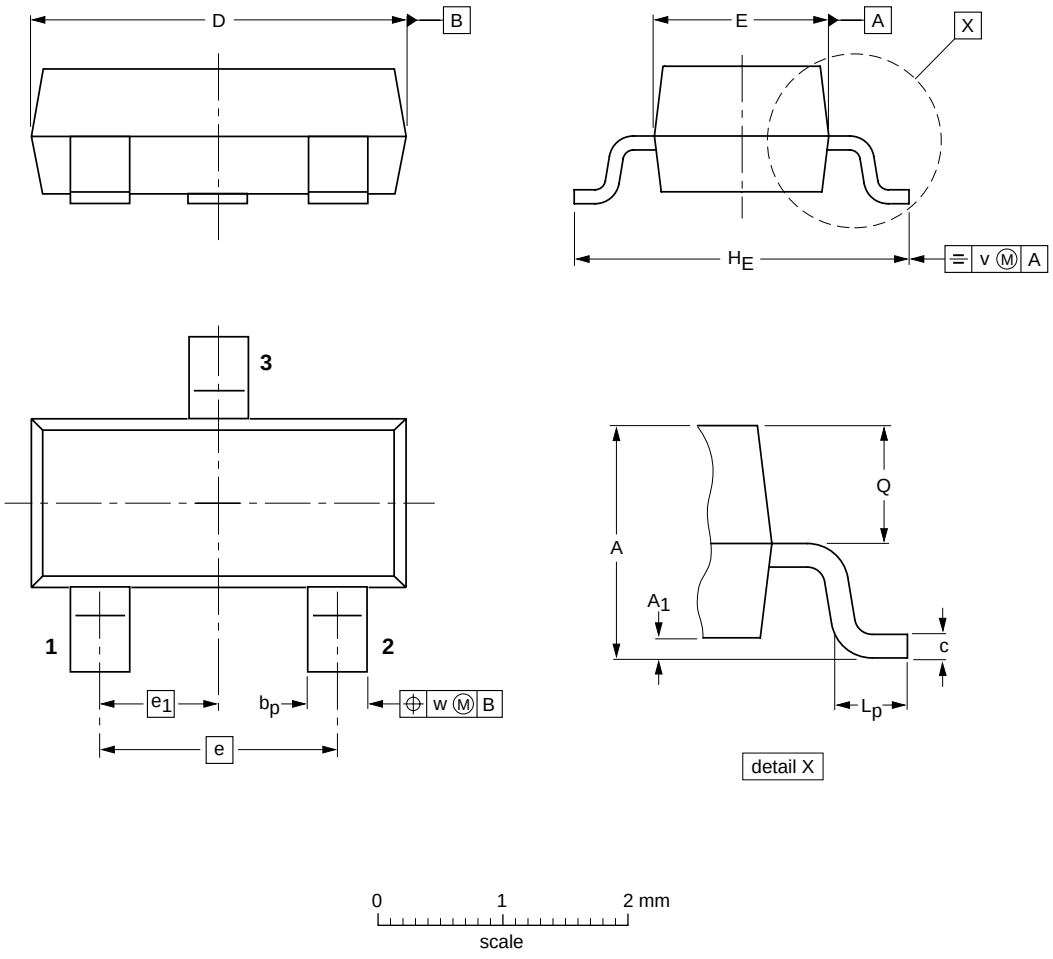
(1) Minimum values.

(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		TO-236AB				~~97-02-28~~ 99-09-13

DATA SHEET STATUS

DOCUMENT STATUS[1]	PRODUCT STATUS[2]	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

Notes

1. Please consult the most recently issued document before initiating or completing a design.
2. The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL http://www.nxp.com.

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Customer notification

This data sheet was changed to reflect the new company name NXP Semiconductors. No changes were made to the content, except for the legal definitions and disclaimers.

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