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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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In data sheets and application notes which still contain NXP or Philips Semiconductors references, use the references to Nexperia, as shown below.

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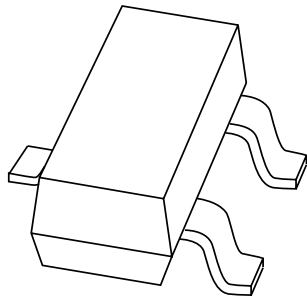
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **[salesaddresses@nexperia.com](mailto:salesaddresses@nexperia.com)**). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

# 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 <sup>(1)</sup>
BAS17	*A9

## Note

- \* = p : Made in Hong Kong.  
 \* = t : Made in Malaysia.  
 \* = W : Made in China.

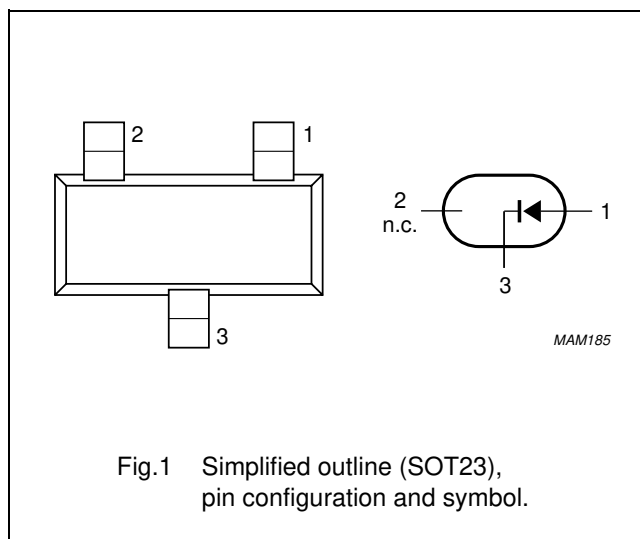
## LIMITING VALUES

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	$T_{amb} = 25\text{ °C}$	–	250	mW
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	150	°C

## PINNING

PIN	DESCRIPTION
1	anode
2	not connected
3	cathode



## Low-voltage stabistor

BAS17

**ELECTRICAL CHARACTERISTICS** $T_j = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

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

**THERMAL CHARACTERISTICS**

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

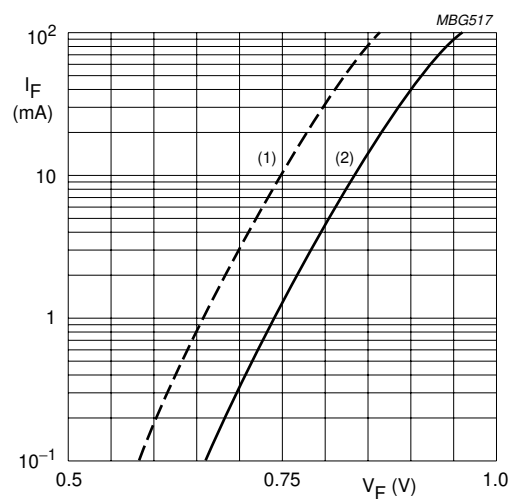
**Note**

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

## Low-voltage stabistor

BAS17

## GRAPHICAL DATA

 $T_J = 25\text{ }^{\circ}\text{C}$ .

(1) Minimum values.

(2) Maximum values.

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

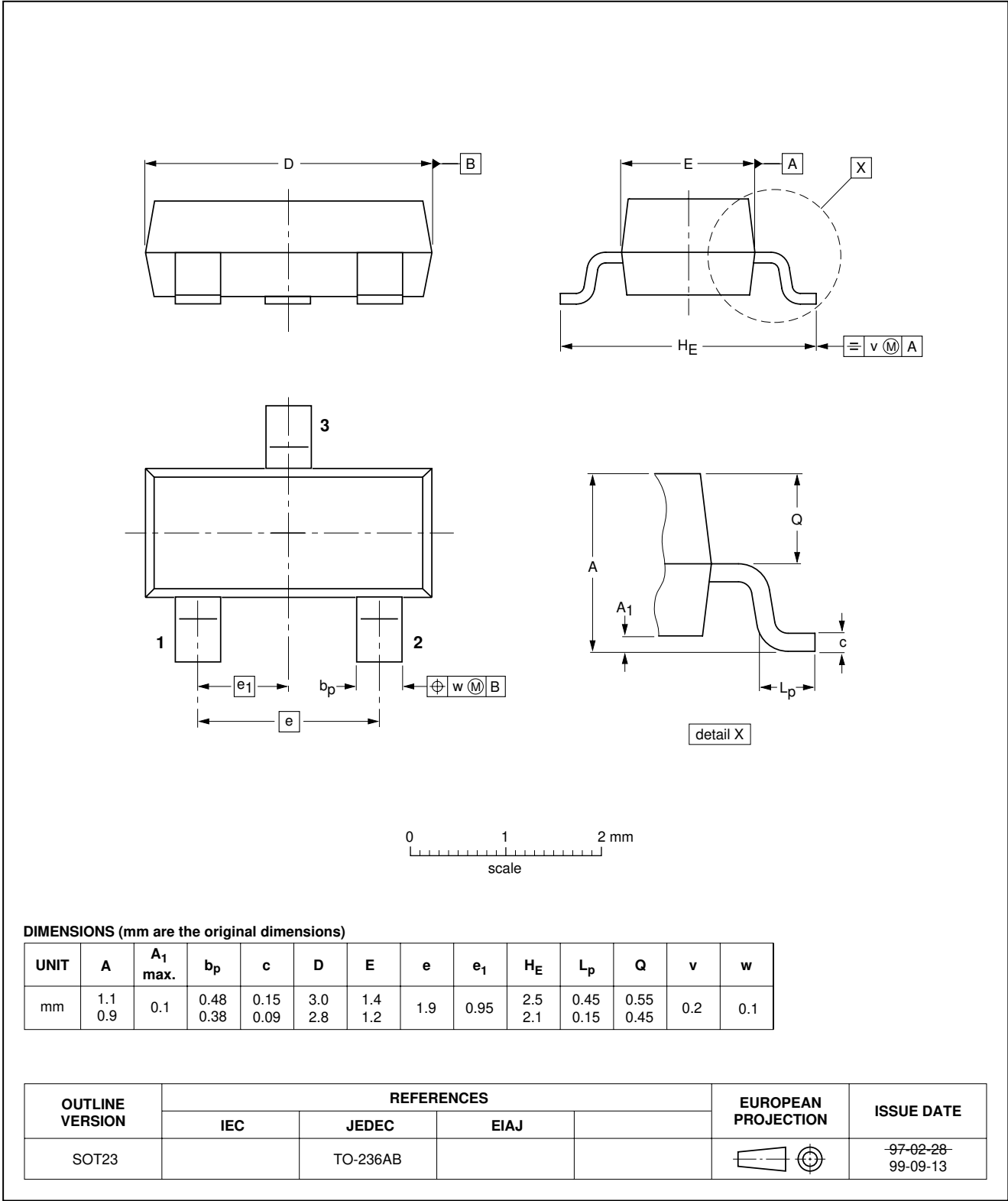
Low-voltage stabistor

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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



## Low-voltage stabistor

BAS17

## DATA SHEET STATUS

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	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

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# ***NXP Semiconductors***

## **Customer notification**

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## **Contact information**

For additional information please visit: **<http://www.nxp.com>**

For sales offices addresses send e-mail to: **[salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)**

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