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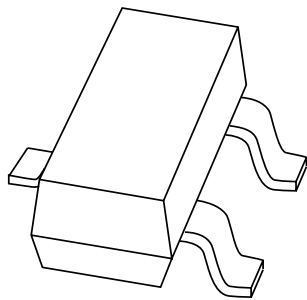
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **salesaddresses@nexperia.com**). Thank you for your cooperation and understanding,

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 ⁽¹⁾
BAS17	*A9

Note

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

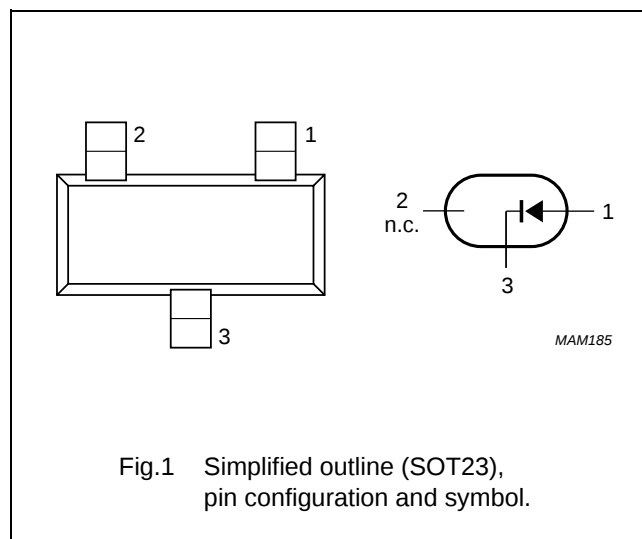
LIMITING VALUES

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	μA
r_{dif}	differential resistance	$I_F = 0.5\text{ mA}$	–	120	–	Ω
		$I_F = 2\text{ mA}$	–	80	–	Ω
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

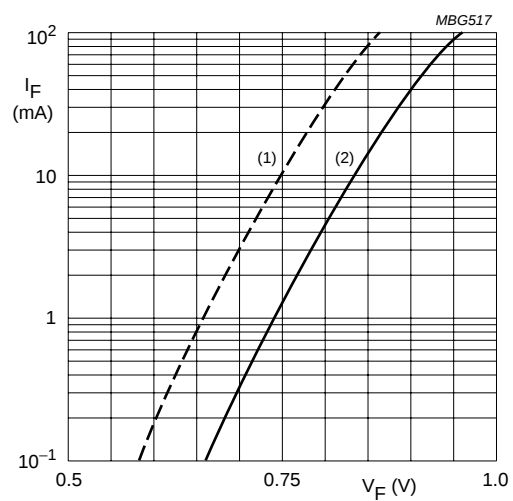
Note

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

Low-voltage stabistor

BAS17

GRAPHICAL DATA

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

(1) Minimum values.

(2) Maximum values.

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

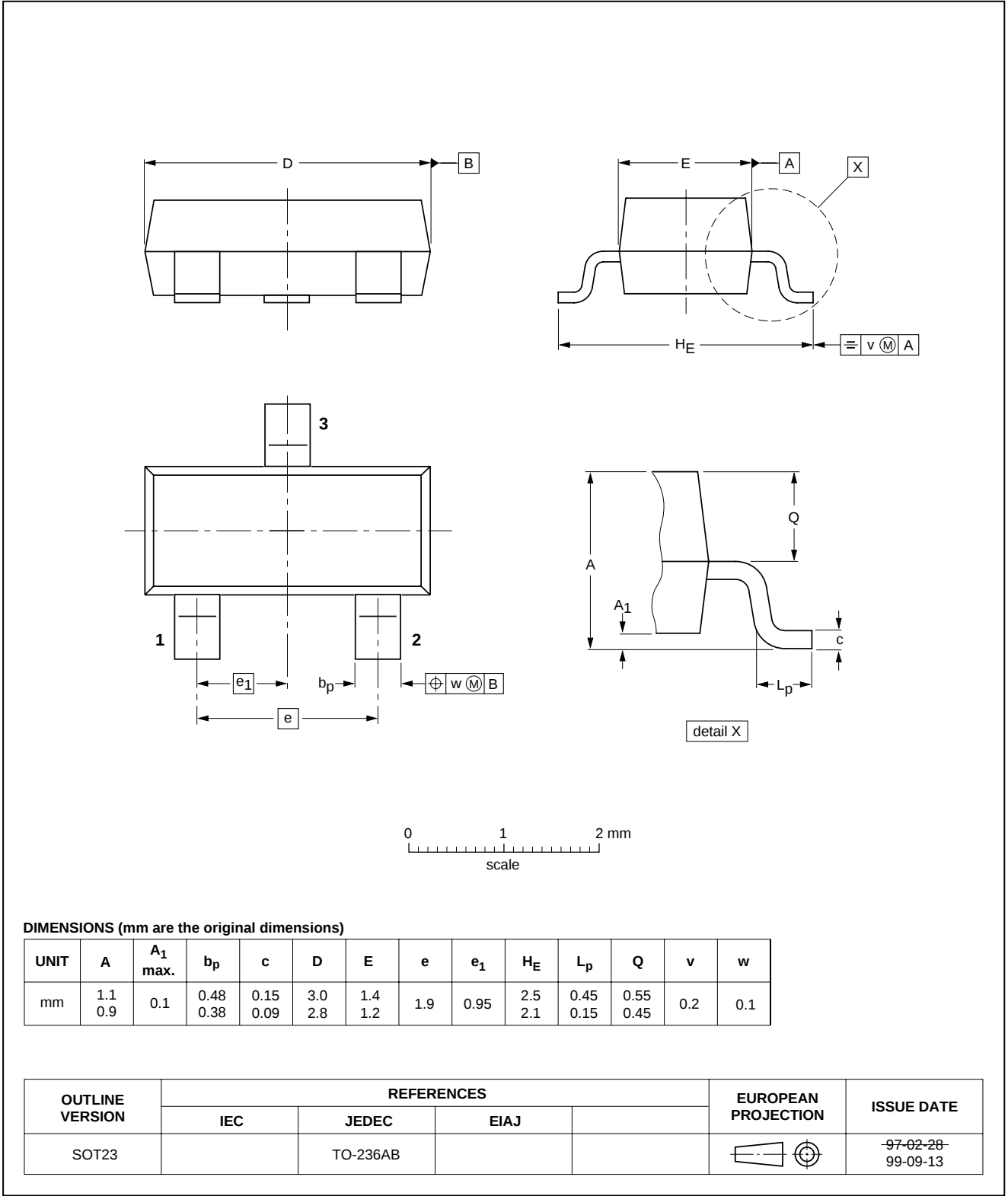
Low-voltage stabistor

BAS17

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



Low-voltage stabistor

BAS17

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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NXP Semiconductors

Customer notification

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Contact information

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

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