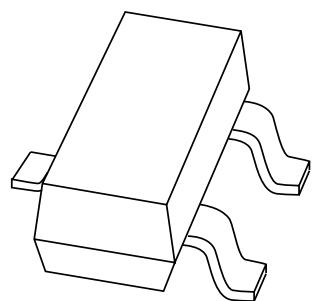


DATA SHEET



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.

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	$T_{amb} = 25^\circ\text{C}$	–	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

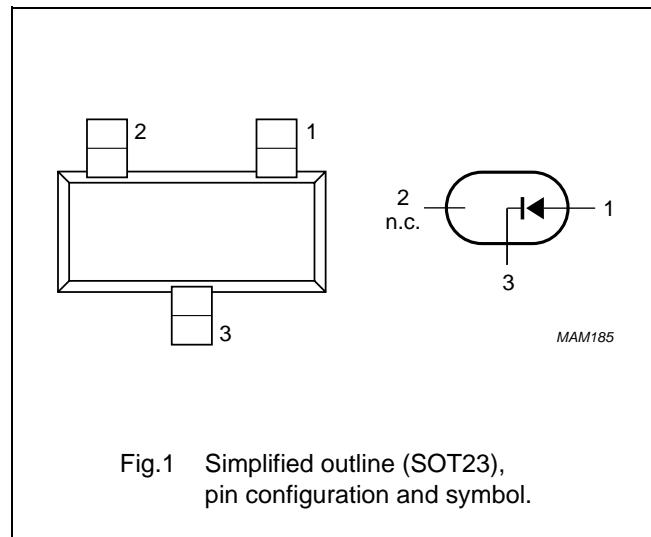


Fig.1 Simplified outline (SOT23), pin configuration and symbol.

Low-voltage stabistor

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_F	forward voltage	see Fig.2 $I_F = 0.1 \text{ mA}$ $I_F = 1 \text{ mA}$ $I_F = 5 \text{ mA}$ $I_F = 10 \text{ mA}$ $I_F = 100 \text{ mA}$	580 665 725 750 870	— — — — —	660 745 805 830 960	mV mV mV mV 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
$R_{\text{th j-tp}}$	thermal resistance from junction to tie-point		330	K/W
$R_{\text{th j-a}}$	thermal resistance from junction to ambient	note 1	500	K/W

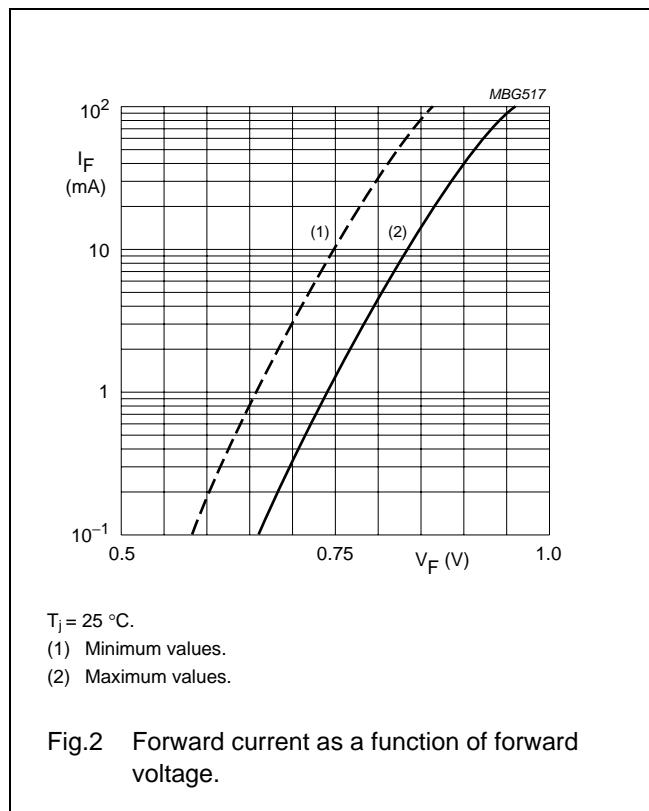
Note

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

Low-voltage stabistor

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GRAPHICAL DATA



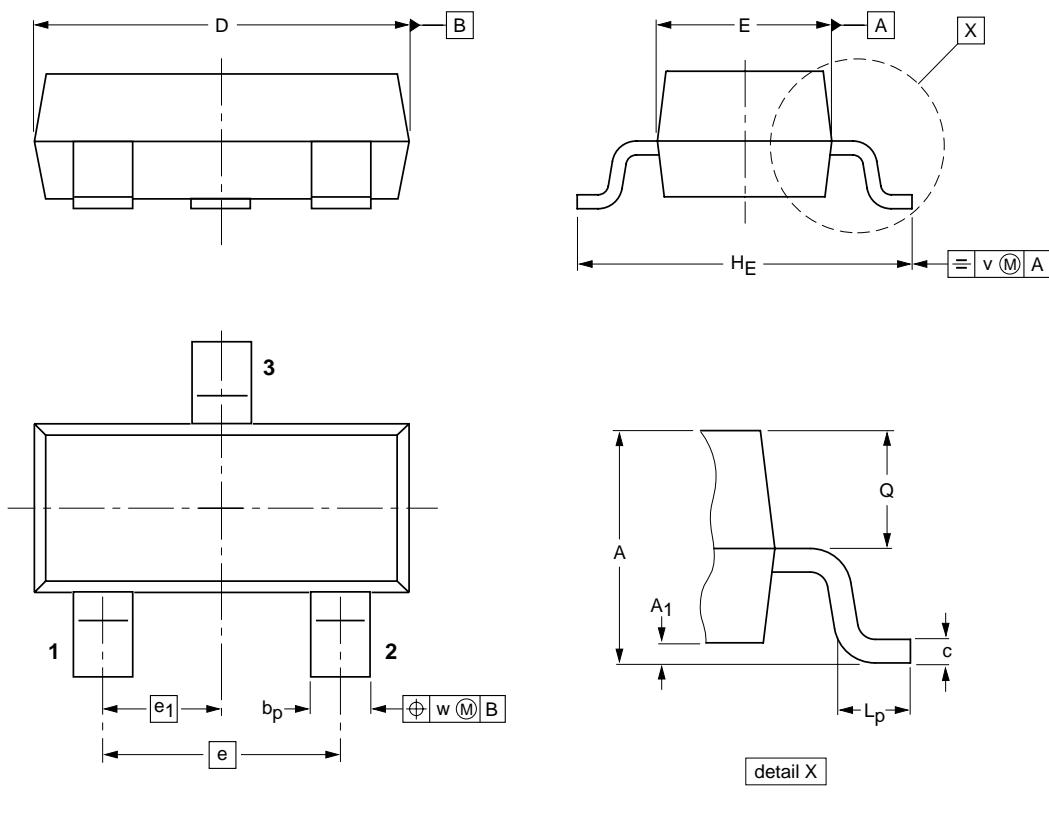
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PACKAGE OUTLINE

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

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.

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