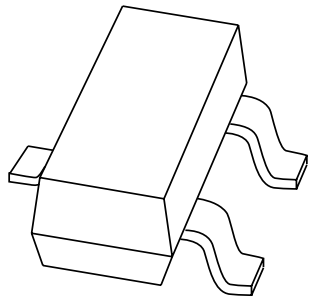


# DATA SHEET



## **BAS17** Low-voltage stabistor

Product specification  
Supersedes data of 1996 Mar 20

1999 May 31

# Low-voltage stabistor

# BAS17

### FEATURES

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

### APPLICATIONS

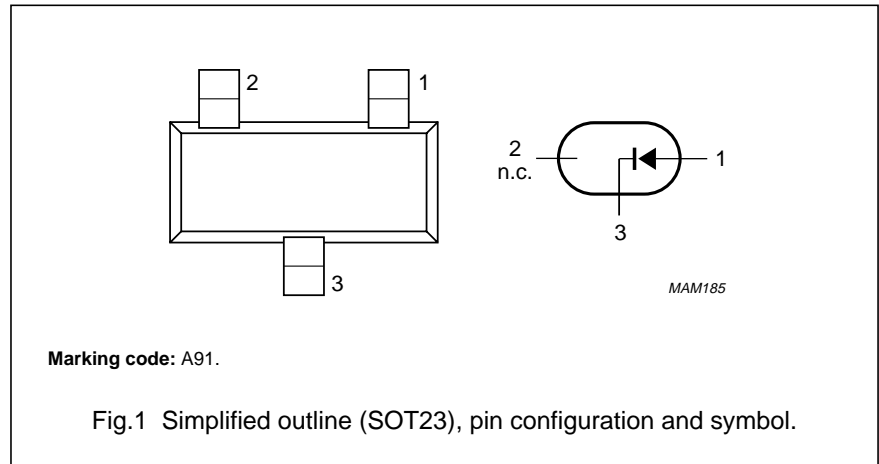
- Low-voltage stabilization e.g.
  - Bias stabilizer in class-B output stages
  - Clipping
  - Clamping
  - Meter protection.

### DESCRIPTION

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

### PINNING

PIN	DESCRIPTION
1	anode
2	not connected
3	cathode



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

### ELECTRICAL CHARACTERISTICS

$T_j = 25\text{ °C}$  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

Low-voltage stabistor

BAS17

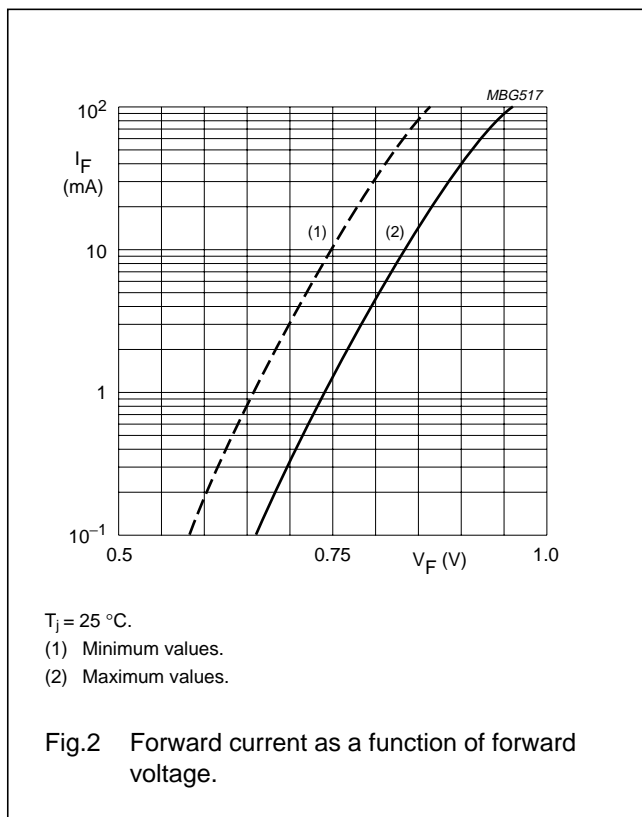
**THERMAL CHARACTERISTICS**

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.

**GRAPHICAL DATA**



# Low-voltage stabistor

# BAS17

## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	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

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**Low-voltage stabistor**
**BAS17**


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**DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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**NOTES**

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**NOTES**

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