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Should be replaced with:

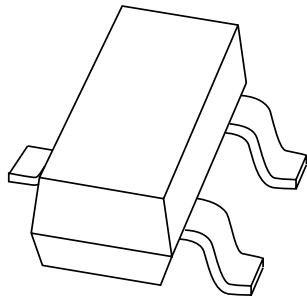
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via salesaddresses@nexperia.com). Thank you for your cooperation and understanding,

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

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

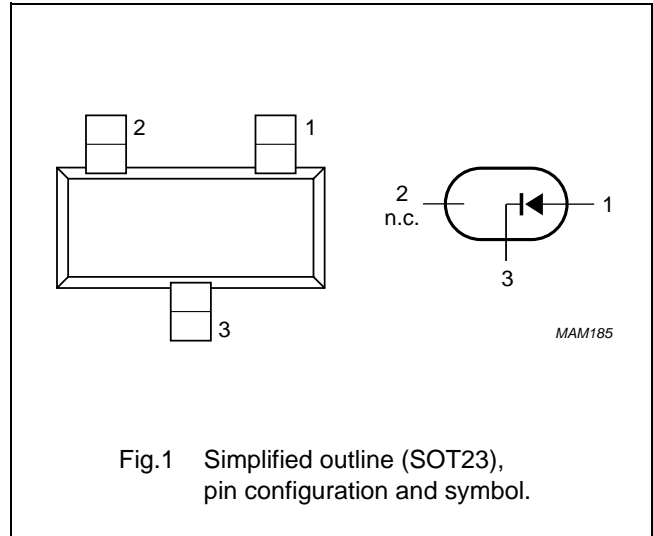
LIMITING VALUES

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 | $T_{amb} = 25\text{ °C}$ | – | 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 $T_j = 25\text{ °C}$ 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 |

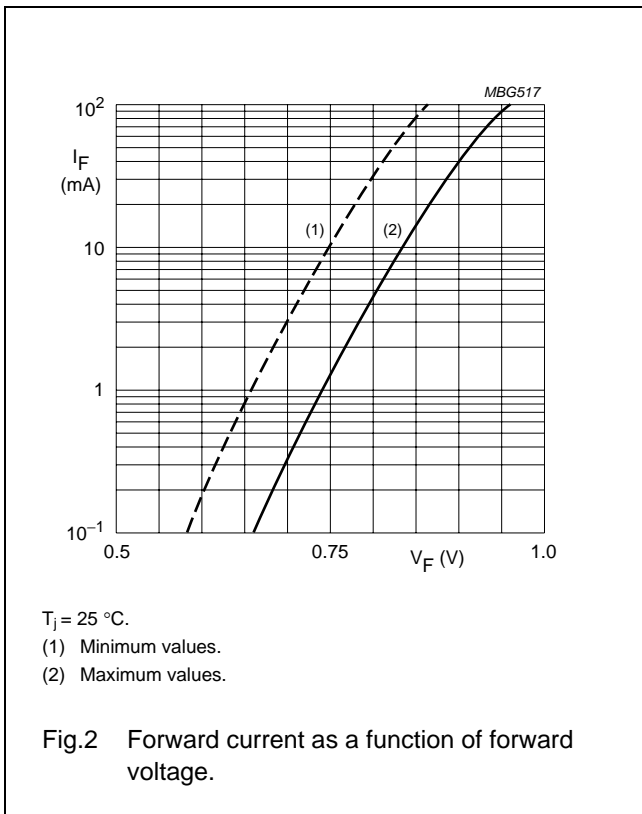
Note

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

Low-voltage stabistor

BAS17

GRAPHICAL DATA



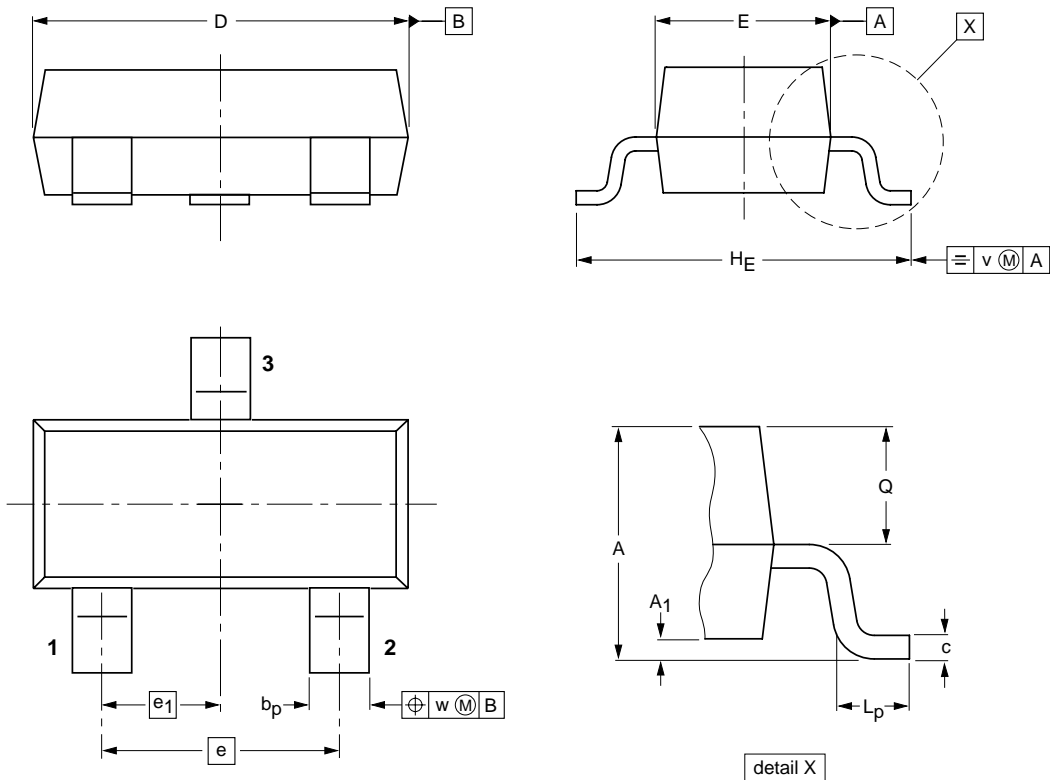
Low-voltage stabistor

BAS17

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. |

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

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