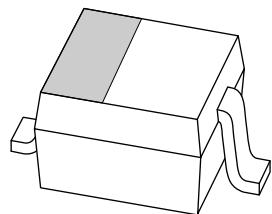


DATA SHEET



BAT760 Schottky barrier diode

Product specification
Supersedes data of 2001 Mar 12

2004 Jan 26

Schottky barrier diode**BAT760****FEATURES**

- Ultra high-speed switching
- Very low forward voltage
- Guard ring protected
- Very small SMD plastic package.

APPLICATIONS

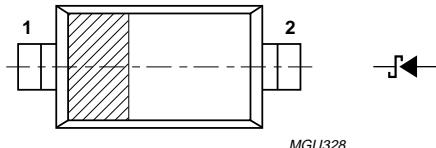
- Ultra high-speed switching
- Voltage clamping
- Protection circuits.

DESCRIPTION

Planar Schottky barrier diode with an integrated guard ring for stress protection in a SOD323 (SC-76) very small SMD plastic package.

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



MGU328

Marking code: A4.

The marking bar indicates the cathode.

Fig.1 Simplified outline (SOD323; SC-76) and symbol.

ORDERING INFORMATION

TYPE NUMBER	PACKAGE			VERSION
	NAME	DESCRIPTION		
BAT760	–	plastic surface mounted package; 2 leads		SOD323

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	20	V
I_F	continuous forward current		–	1	A
I_{FSM}	non-repetitive peak forward current	$t = 8.3 \text{ ms half sinewave};$ JEDEC method	–	5	A
T_{stg}	storage temperature		–65	+150	$^{\circ}\text{C}$
T_j	junction temperature		–	125	$^{\circ}\text{C}$
T_{amb}	operating ambient temperature		–65	+125	$^{\circ}\text{C}$

Schottky barrier diode

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CHARACTERISTICS

 $T_{amb} = 25^\circ C$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	continuous forward voltage	see Fig.2 and note 1 $I_F = 10 \text{ mA}$ $I_F = 100 \text{ mA}$ $I_F = 1 \text{ A}$	240 300 480	270 350 550	mV mV mV
I_R	reverse current	see Fig.3 and note 1 $V_R = 5 \text{ V}$ $V_R = 8 \text{ V}$ $V_R = 15 \text{ V}$	5 7 10	10 20 50	μA μA μA
C_d	diode capacitance	$V_R = 5 \text{ V}; f = 1 \text{ MHz};$ see Fig.4	19	25	pF

Note

1. Pulse test: $t_p = 300 \mu\text{s}; \delta = 0.02$.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th(j-a)}$	thermal resistance from junction to ambient	note 1	220	K/W
		note 2	180	K/W

Notes

1. Mounted on printed-circuit board $10 \times 10 \text{ mm}^2$ Cu.
2. Mounted on printed-circuit board $40 \times 40 \text{ mm}^2$ Cu.

Schottky barrier diode

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GRAPHICAL DATA

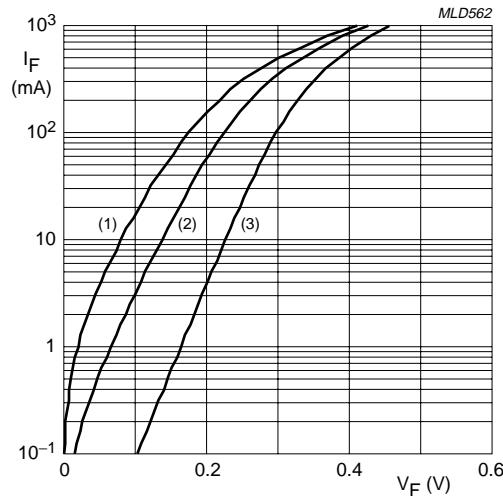


Fig.2 Forward current as a function of forward voltage; typical values.

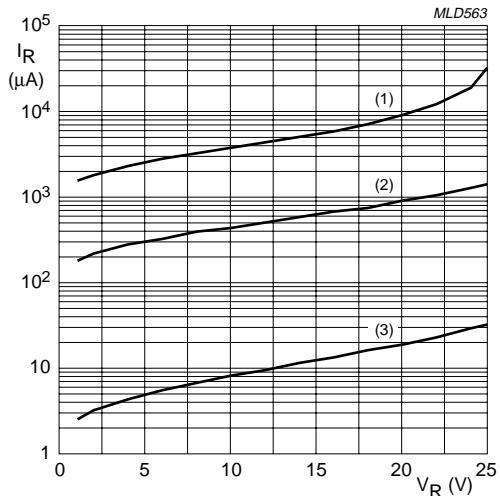


Fig.3 Reverse current as a function of reverse voltage; typical values.

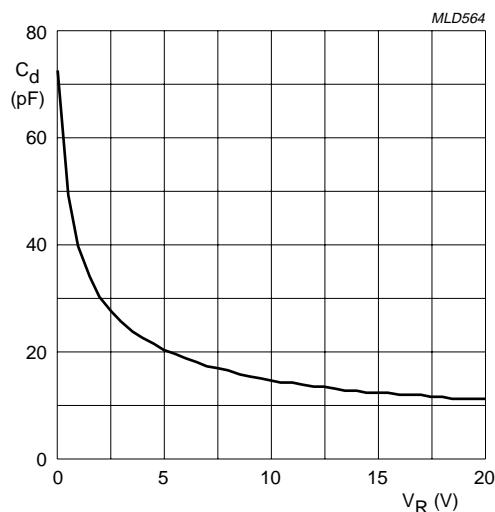
 $T_{amb} = 25$ °C; $f = 1$ MHz.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

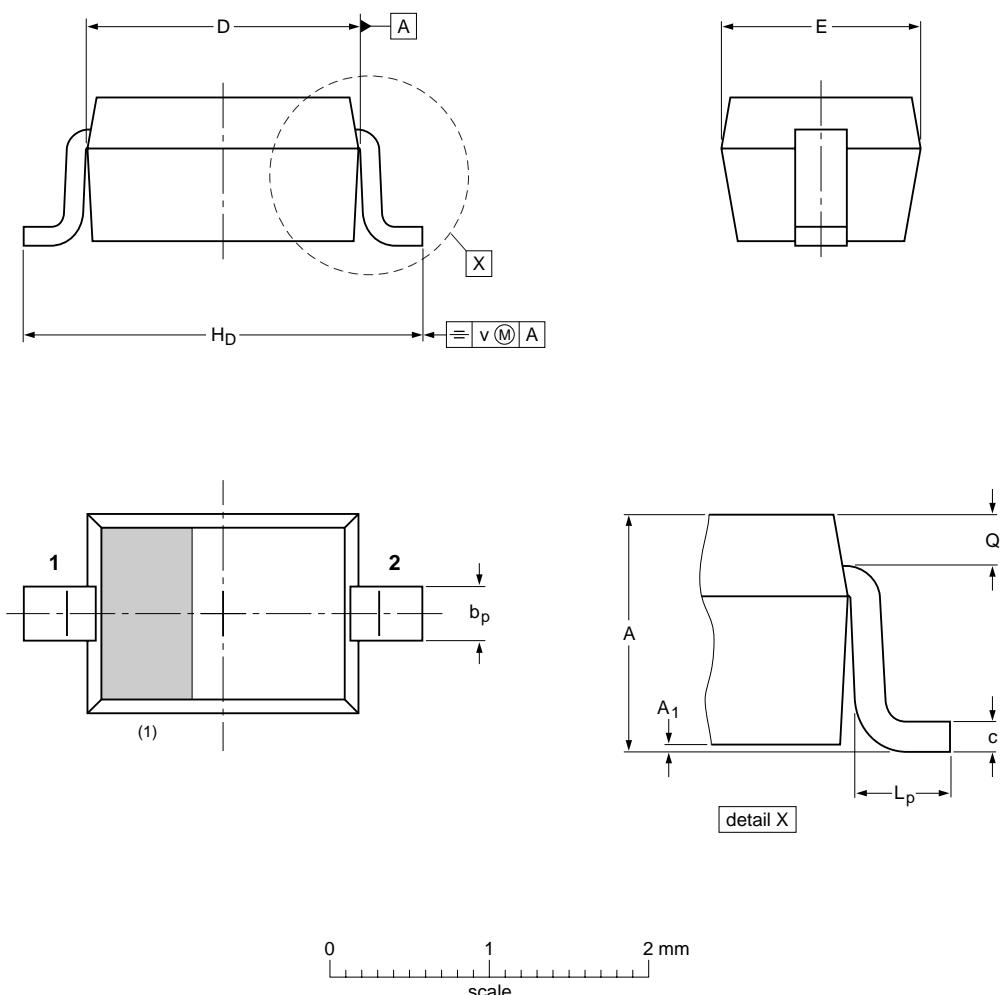
Schottky barrier diode

BAT760

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	H _D	L _p	Q	v
mm	1.1 0.8	0.05 0.25	0.40 0.25	0.25 0.10	1.8 1.6	1.35 1.15	2.7 2.3	0.45 0.15	0.25 0.15	0.2

Note

1. The marking bar indicates the cathode

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA	SC-76		
SOD323						99-09-13 03-12-17

Schottky barrier diode

BAT760

DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
I	Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
II	Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
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Notes

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3. For data sheets describing multiple type numbers, the highest-level product status determines the data sheet status.

DEFINITIONS

Short-form specification — The data in a short-form specification is extracted from a full data sheet with the same type number and title. For detailed information see the relevant data sheet or data handbook.

Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). 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.

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