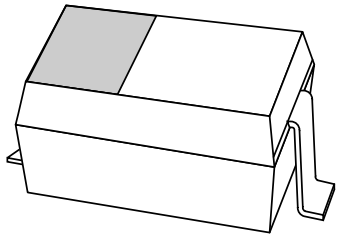


# DATA SHEET



## **BAT760** Schottky barrier diode

Product specification

2001 Mar 12

# Schottky barrier diode

# BAT760

## FEATURES

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

## APPLICATIONS

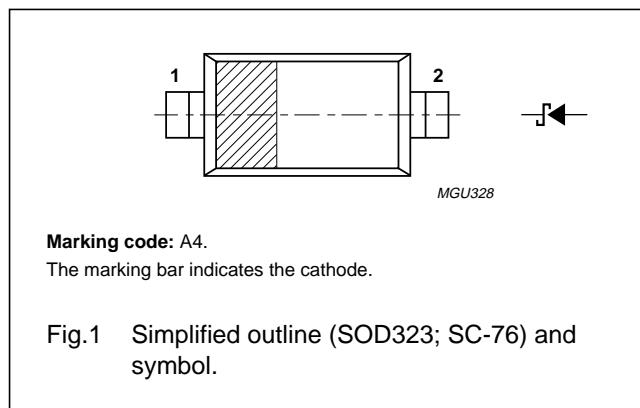
- Ultra high-speed switching
- Voltage clamping
- Protection circuits.

## 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



## 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	$t = 8.3$ ms half sinewave; JEDEC method	–	5	A
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	125	°C
$T_{amb}$	operating ambient temperature		–65	+125	°C

## Schottky barrier diode

BAT760

**ELECTRICAL CHARACTERISTICS** $T_{amb} = 25\text{ °C}$ ; unless otherwise specified.

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

**Note**

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

**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

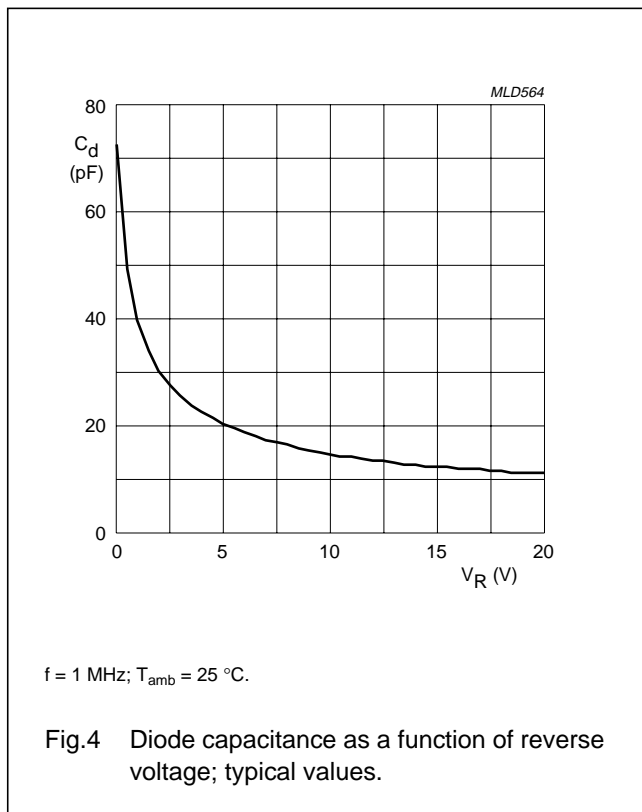
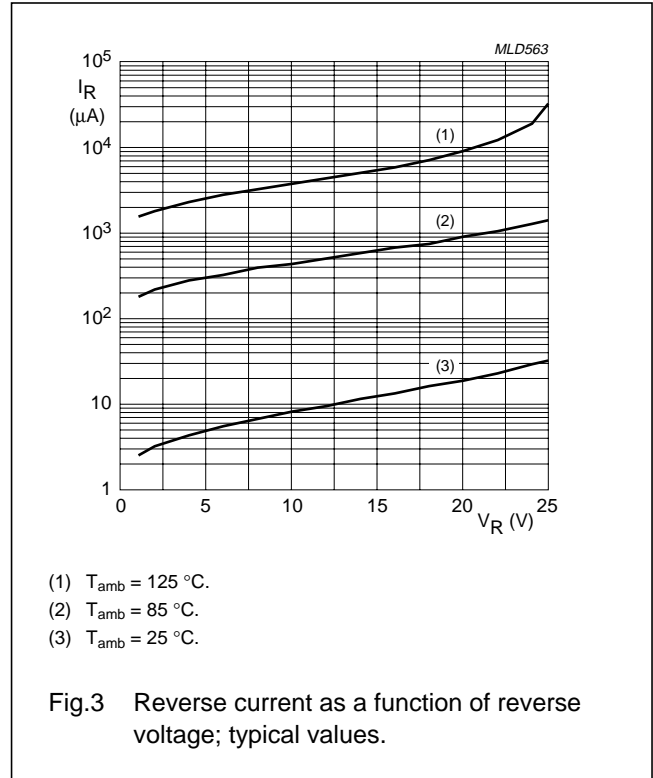
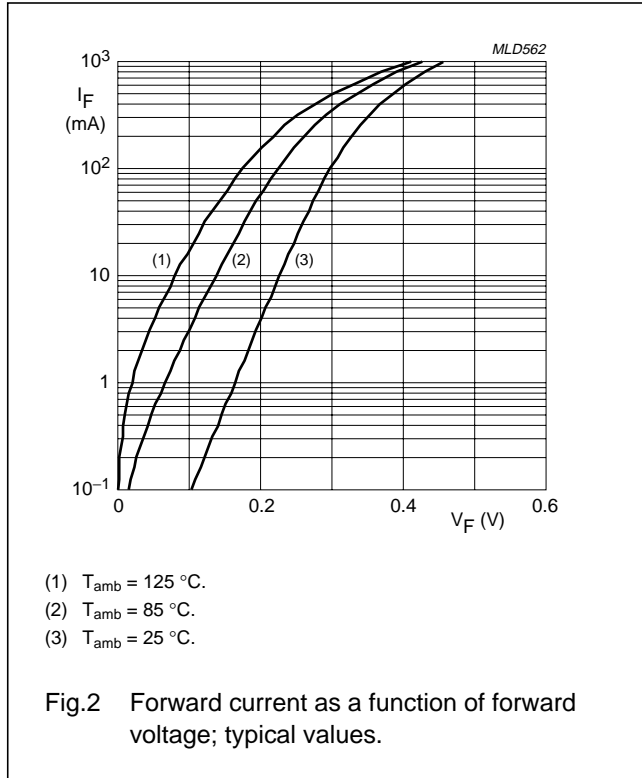
**Notes**

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

BAT760

GRAPHICAL DATA



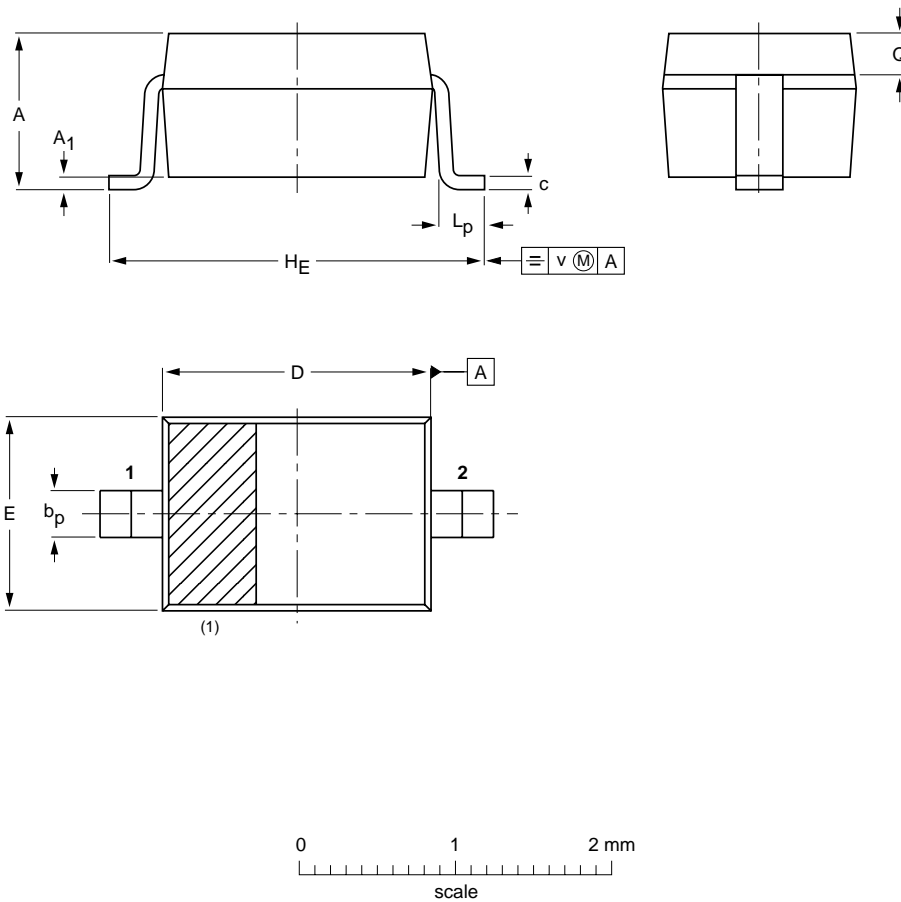
Schottky barrier diode

BAT760

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	H <sub>E</sub>	L <sub>p</sub>	Q	v
mm	1.1 0.8	+0.05 -0.05	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	EIAJ		
SOD323			SC-76		98-09-14 99-09-13

## Schottky barrier diode

BAT760

## DATA SHEET STATUS

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS <sup>(1)</sup>
Objective specification	Development	This data sheet contains the design target or goal specifications for product development. Specification may change in any manner without notice.
Preliminary specification	Qualification	This data sheet contains preliminary data, and supplementary data will be published at a later date. Philips Semiconductors reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.
Product specification	Production	This data sheet contains final specifications. Philips Semiconductors reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.

## Note

1. Please consult the most recently issued data sheet before initiating or completing a design.

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**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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Schottky barrier diode

BAT760

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