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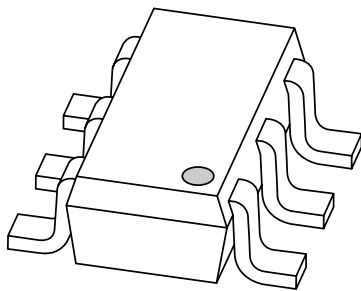
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via [salesaddresses@nexperia.com](mailto:salesaddresses@nexperia.com)). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

# DATA SHEET



## **1PS74SB23** Schottky barrier diode

Product specification  
Supersedes data of 2001 Aug 27

2003 Aug 04

# Schottky barrier diode

# 1PS74SB23

### FEATURES

- Ultra fast switching speed
- Low forward voltage
- Fast recovery time
- Guard ring protected
- Small plastic SMD package
- Capability of absorbing very high surge current.

### APPLICATIONS

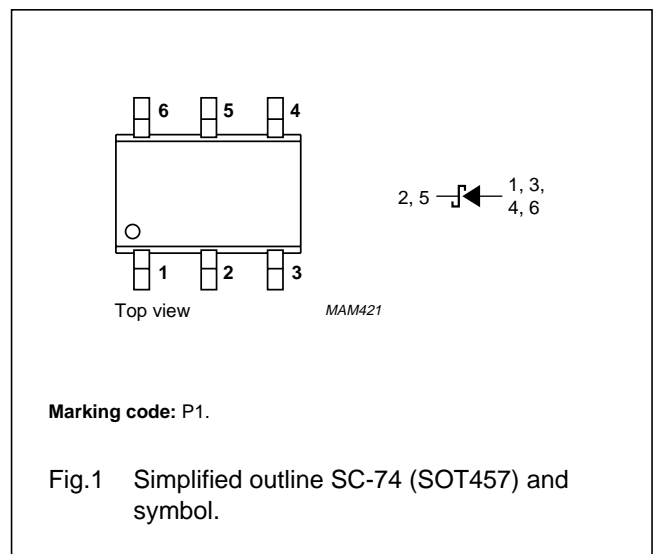
- Rectification
- Circuit protection
- Polarity protection
- Switched-mode power supplies.

### DESCRIPTION

Planar Schottky barrier diode encapsulated in an SC-74 (SOT457) small plastic SMD package.

### PINNING

PIN	DESCRIPTION
1	anode
2	cathode
3	anode
4	anode
5	cathode
6	anode



### LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage		–	25	V
$I_F$	continuous forward current		–	1	A
$I_{FSM}$	non-repetitive peak forward current	$t_p = 8.3$ ms; half sinewave; JEDEC method; note 1	–	25	A
$I_{RSM}$	non-repetitive peak reverse current	$t_p = 100$ $\mu$ s	–	0.5	A
$T_{stg}$	storage temperature		–65	+150	$^{\circ}$ C
$T_j$	junction temperature		–	125	$^{\circ}$ C

### Note

1. Pins 1, 3, 4 and 6 are connected in parallel; pins 2 and 5 are connected in parallel.

## Schottky barrier diode

## 1PS74SB23

**ELECTRICAL CHARACTERISTICS**

$T_{amb} = 25\text{ °C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
$V_F$	forward voltage	$I_F = 100\text{ mA}$	260	300	mV
		$I_F = 1\text{ A}$	400	450	mV
$I_R$	reverse current	$V_R = 20\text{ V}$ ; note 1; see Fig.3	80	500	$\mu\text{A}$
		$V_R = 25\text{ V}$ ; note 1; see Fig.3	–	1	mA
$C_d$	diode capacitance	$f = 1\text{ MHz}$ ; $V_R = 4\text{ V}$ ; see Fig.4	100	–	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	250	K/W

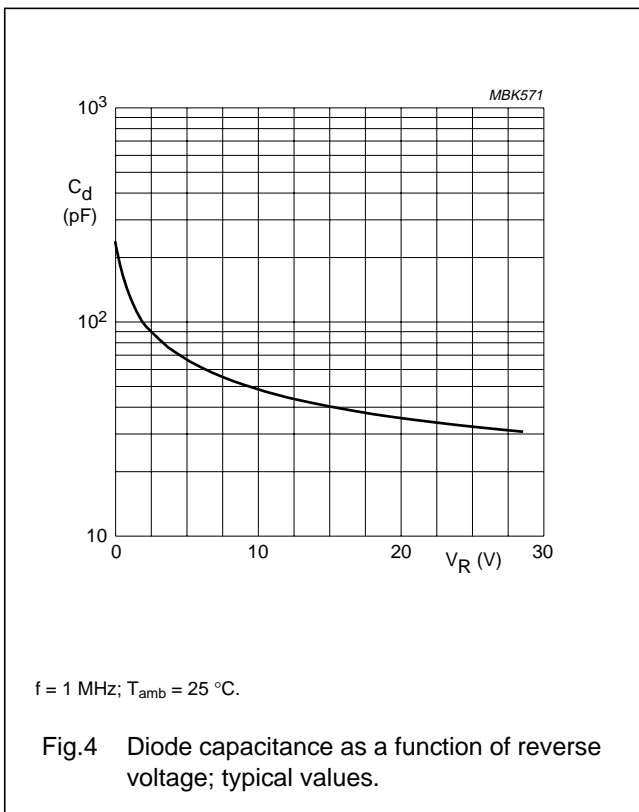
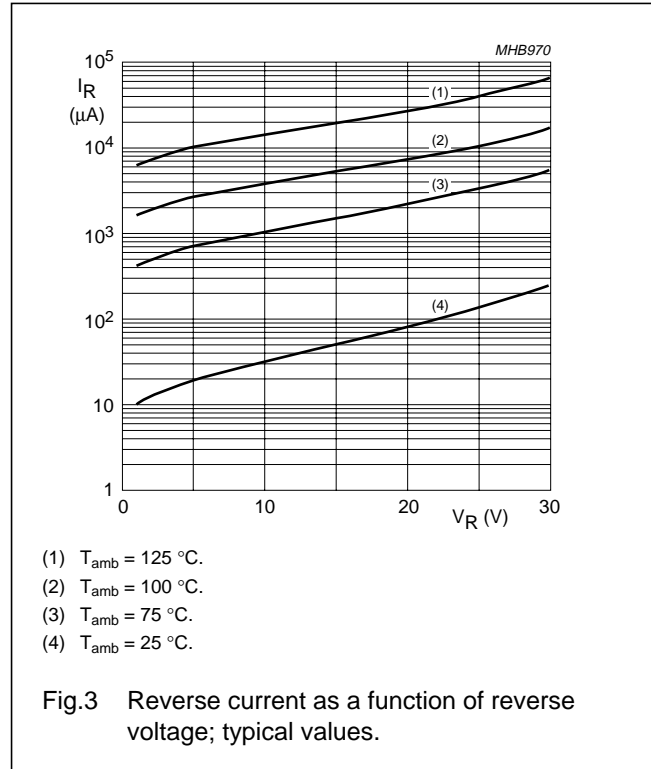
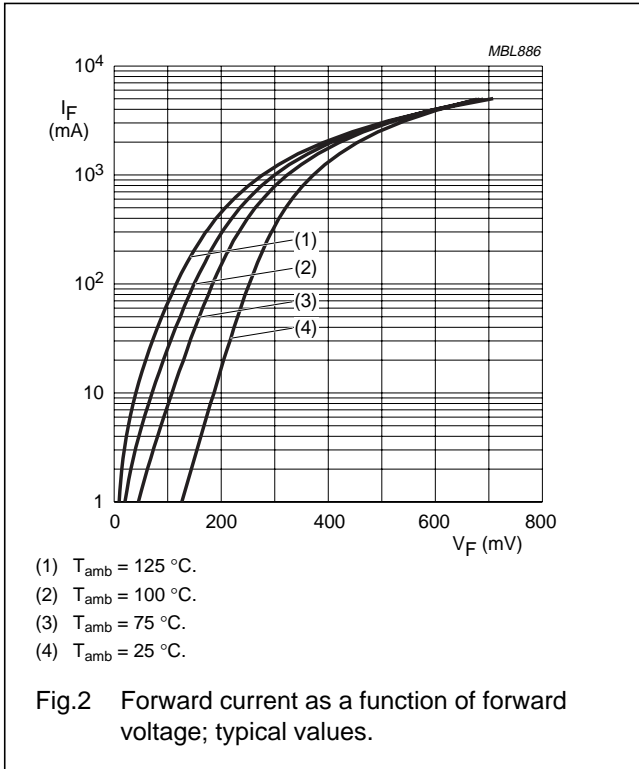
**Note**

1. Refer to SC-74 (SOT457) standard mounting conditions.

Schottky barrier diode

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GRAPHICAL DATA



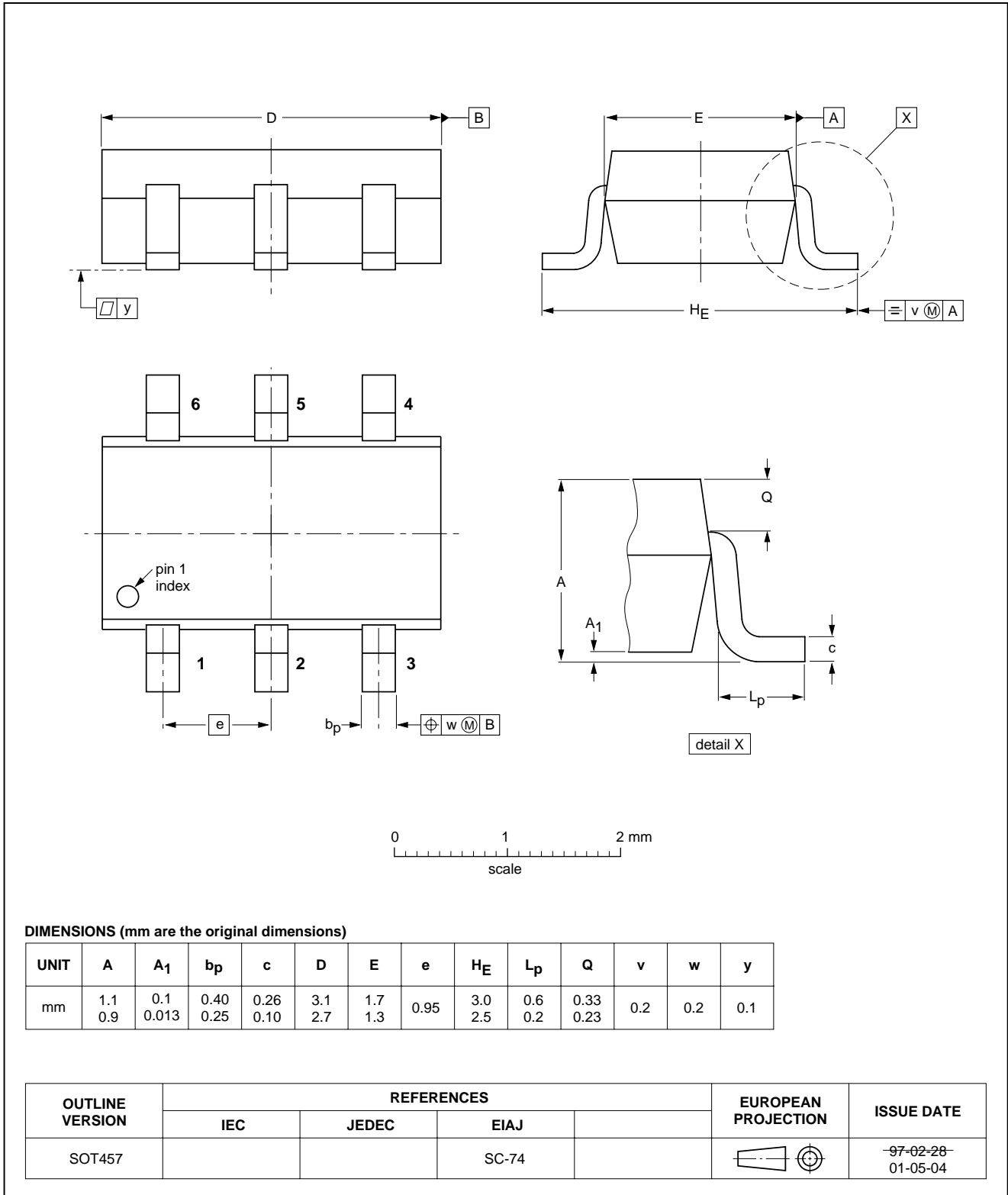
Schottky barrier diode

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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT457



## Schottky barrier diode

1PS74SB23

## DATA SHEET STATUS

LEVEL	DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)(3)</sup>	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.
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