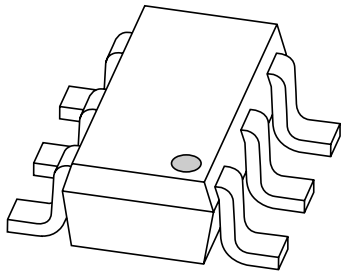


# DATA SHEET



## **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

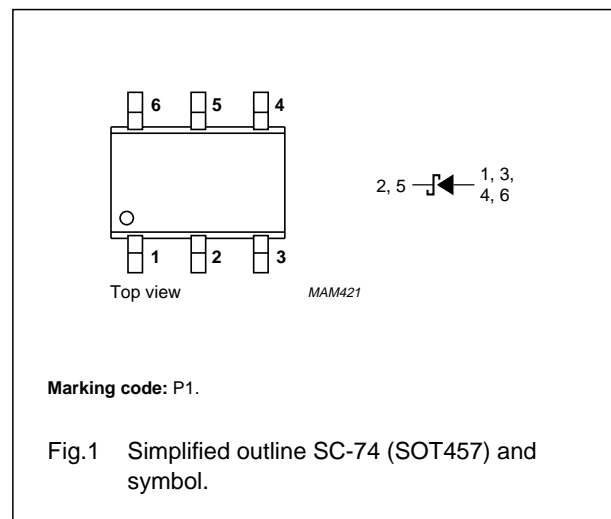
- Rectification
- Circuit protection
- Polarity protection
- Switched-mode power supplies.

## 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

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**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

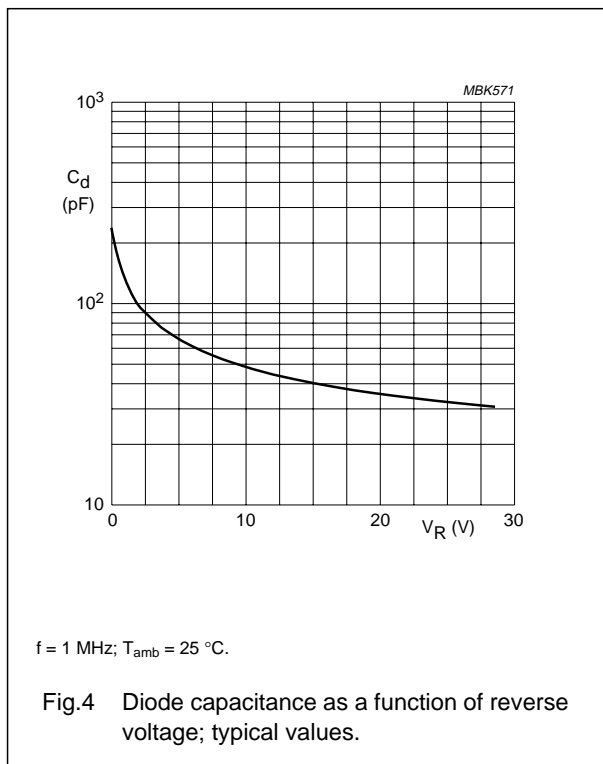
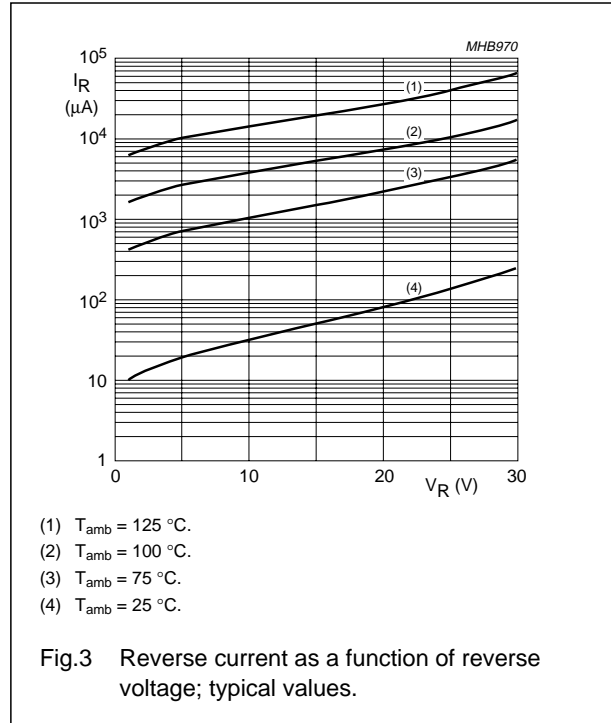
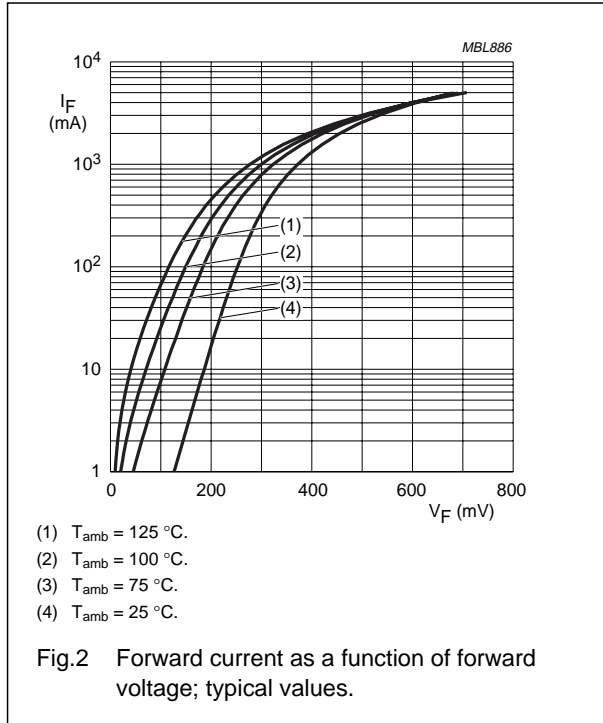
**Note**

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

Schottky barrier diode

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GRAPHICAL DATA



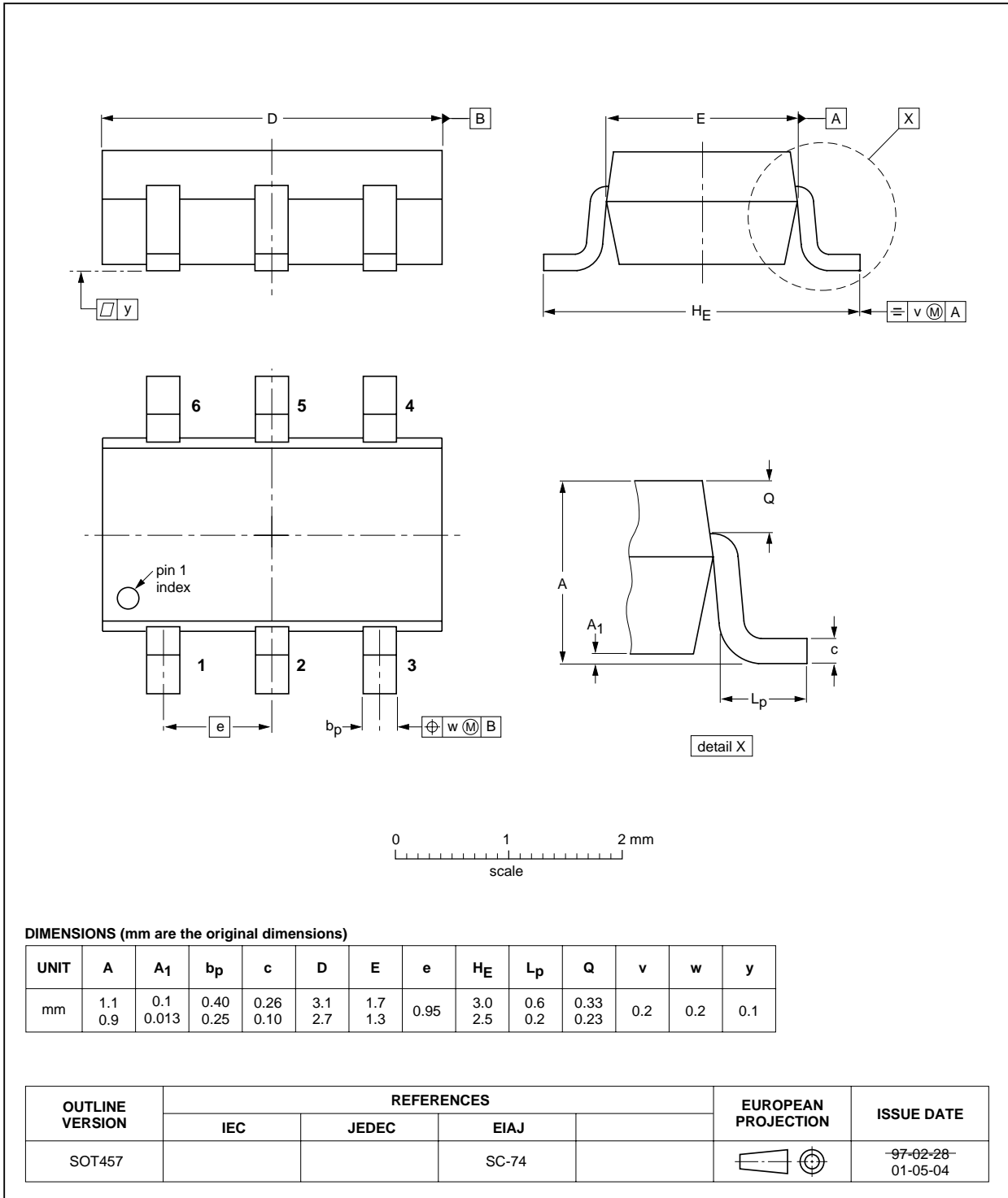
# Schottky barrier diode

# 1PS74SB23

## 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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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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