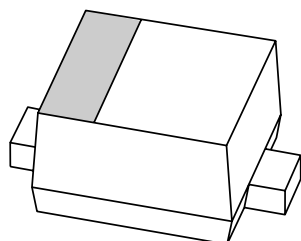


DATA SHEET



1PS79SB30 Schottky barrier diode

Product specification

2001 Feb 20

Schottky barrier diode

1PS79SB30

FEATURES

- Very low forward voltage
- Very low reverse current
- Guard ring protected
- Ultra small SMD package.

APPLICATIONS

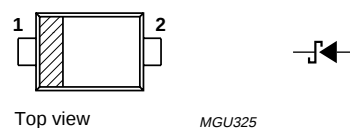
- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Blocking diodes
- Low power consumption applications (e.g. hand-held applications).

DESCRIPTION

Planar Schottky barrier diode encapsulated in a SC-79 (SOD523) ultra small SMD plastic package.

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



Marking code: G1.

Fig.1 Simplified outline (SC-79; SOD523) and symbol.

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	40	V
I_F	continuous forward current		–	200	mA
I_{FRM}	repetitive peak forward current	$t_p \leq 1$ s; $\delta \leq 0.5$	–	300	mA
I_{FSM}	non-repetitive peak forward current	$t = 8.3$ ms half sinewave; JEDEC method	–	1	A
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		–65	+150	°C

Schottky barrier diode

1PS79SB30

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	forward voltage	see Fig.2			
		$I_F = 0.1\text{ mA}$	190	220	mV
		$I_F = 1\text{ mA}$	250	290	mV
		$I_F = 10\text{ mA}$	320	360	mV
		$I_F = 100\text{ mA}$	440	500	mV
		$I_F = 200\text{ mA}$	520	600	mV
I_R	continuous reverse current	$V_R = 25\text{ V}$; note 1; see Fig.3	–	0.5	μA
C_d	diode capacitance	$V_R = 1\text{ V}$; $f = 1\text{ MHz}$; see Fig.4	–	20	pF

Note

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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\text{ j-a}}$	thermal resistance from junction to ambient	note 1	450	K/W

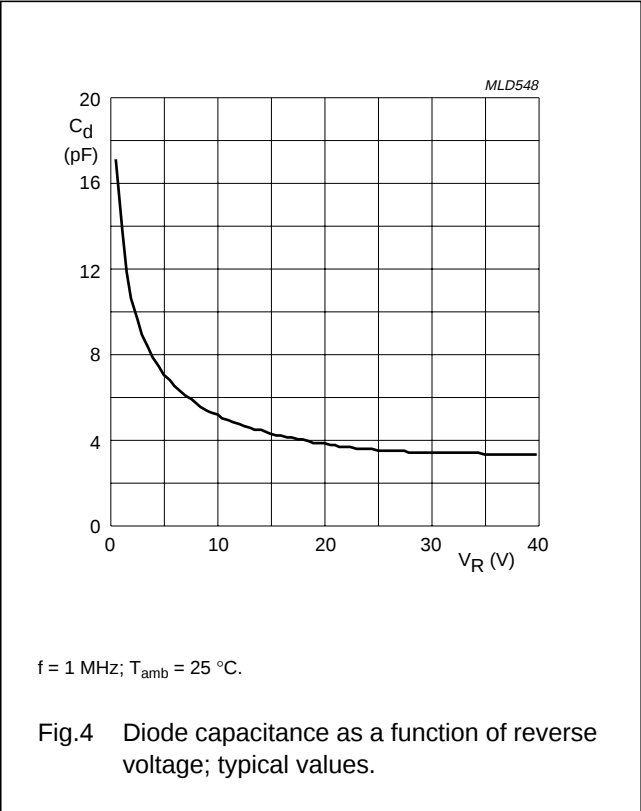
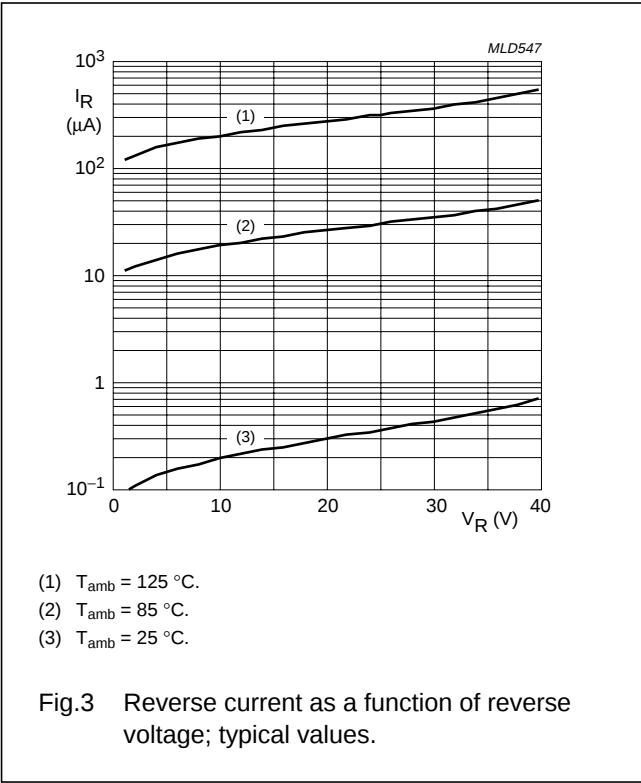
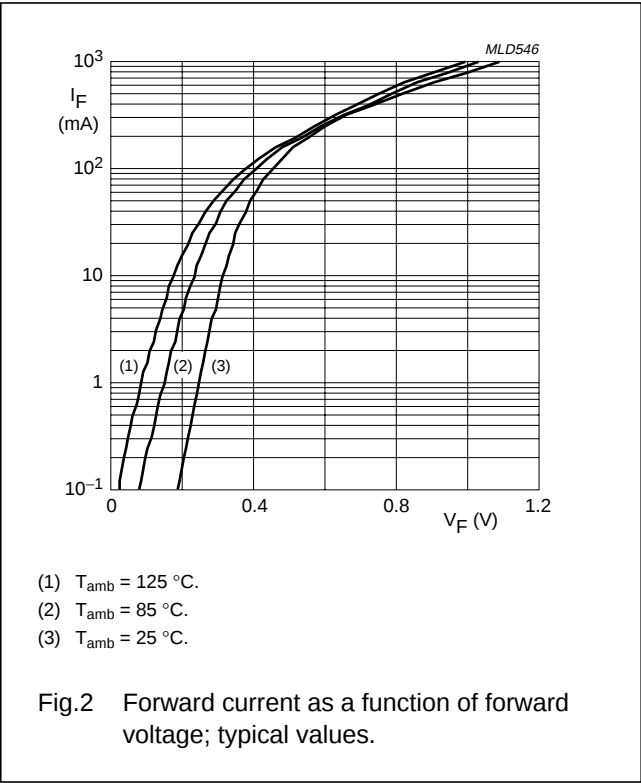
Note

1. Refer to SC-79 (SOD523) standard mounting conditions.

Schottky barrier diode

1PS79SB30

GRAPHICAL DATA



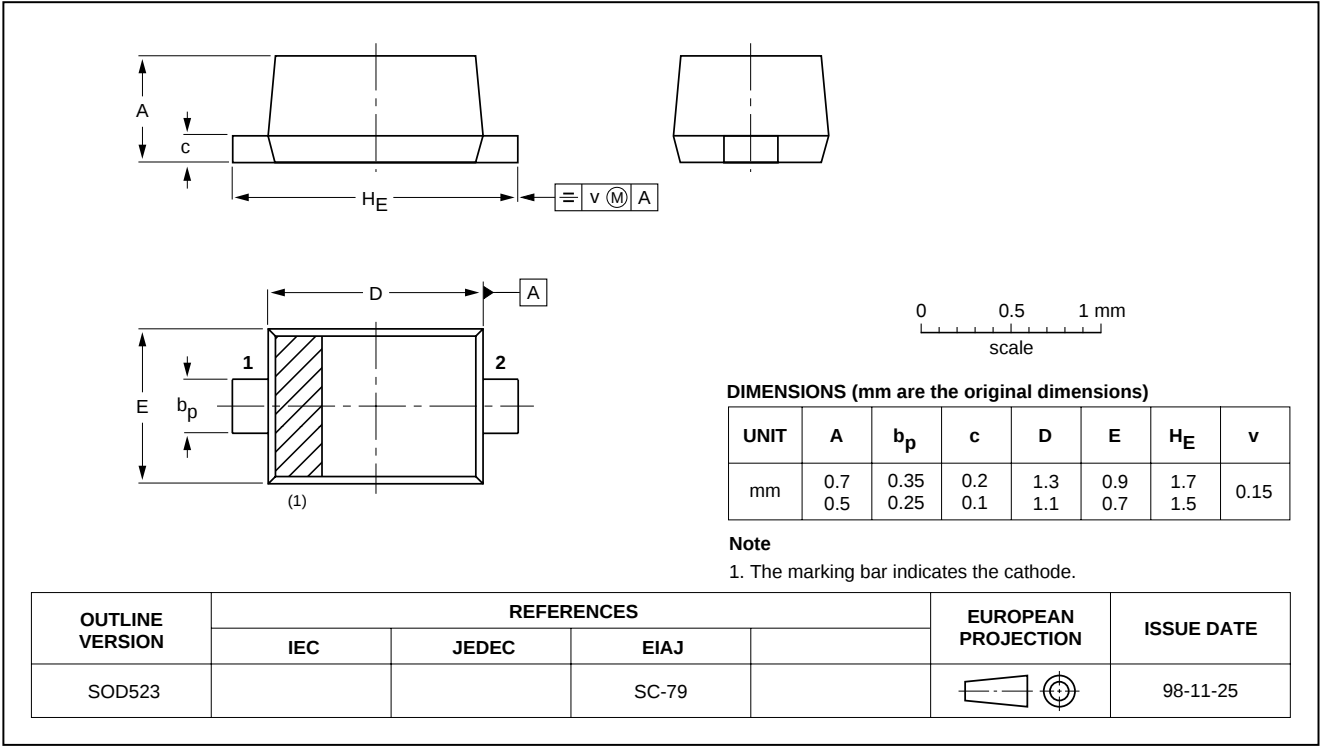
Schottky barrier diode

1PS79SB30

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD523



Schottky barrier diode

1PS79SB30

DATA SHEET STATUS

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS ⁽¹⁾
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**1PS79SB30**

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