

DATA SHEET



1PS10SB82 Schottky barrier diode

Product specification

2003 Aug 20

Schottky barrier diode

1PS10SB82

FEATURES

- Low forward voltage
- Low diode capacitance
- Leadless ultra small plastic package (1.0 mm × 0.6 mm × 0.5 mm)
- Boardspace 1.17 mm² (approx. 10% of SOT23)
- Power dissipation comparable to SOT23.

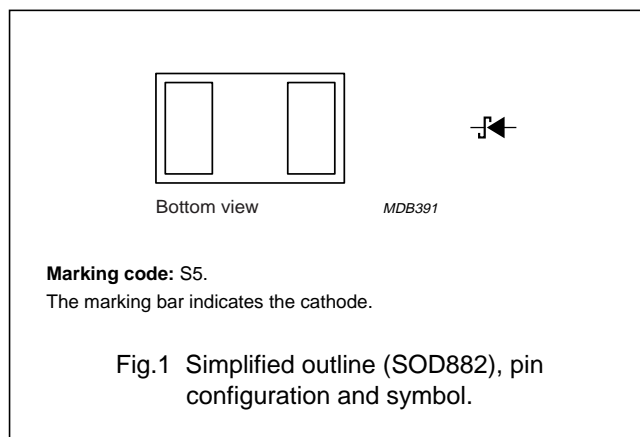
APPLICATIONS

- UHF mixers
- Sampling circuits
- Modulators
- Phase detectors
- Mobile communication, digital (still) cameras, PDA's and PCMCIA cards.

DESCRIPTION

An epitaxial Schottky barrier diode encapsulated in a SOD882 leadless ultra small plastic package.

ESD sensitive device, observe handling precautions.



LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V _R	continuous reverse voltage	–	15	V
I _F	continuous forward current	–	30	mA
T _{stg}	storage temperature	–65	+150	°C
T _j	junction temperature	–	150	°C

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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			
		$I_F = 1\text{ mA}$	–	340	mV
		$I_F = 30\text{ mA}$	–	700	mV
r_D	differential diode forward resistance	$f = 1\text{ MHz}; I_F = 5\text{ mA};$ see Fig.5	12	–	Ω
I_R	continuous reverse current	$V_R = 1\text{ V};$ see Fig.3; note 1	–	0.2	μA
C_d	diode capacitance	$V_R = 0\text{ V}; f = 1\text{ MHz};$ see Fig.4	1	–	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	500	K/W

Note

1. Refer to SOD882 standard mounting conditions (footprint), FR4 with $60\text{ }\mu\text{m}$ copper strip line.

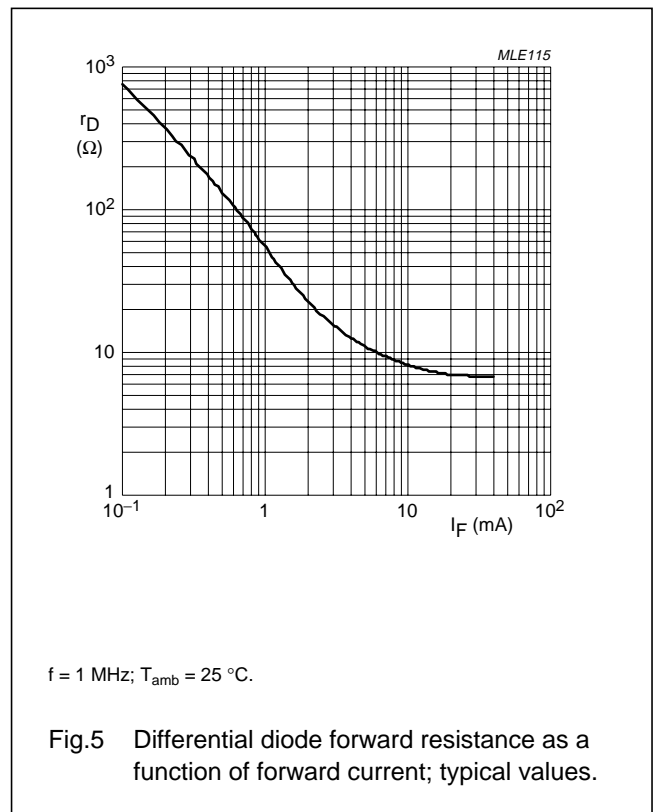
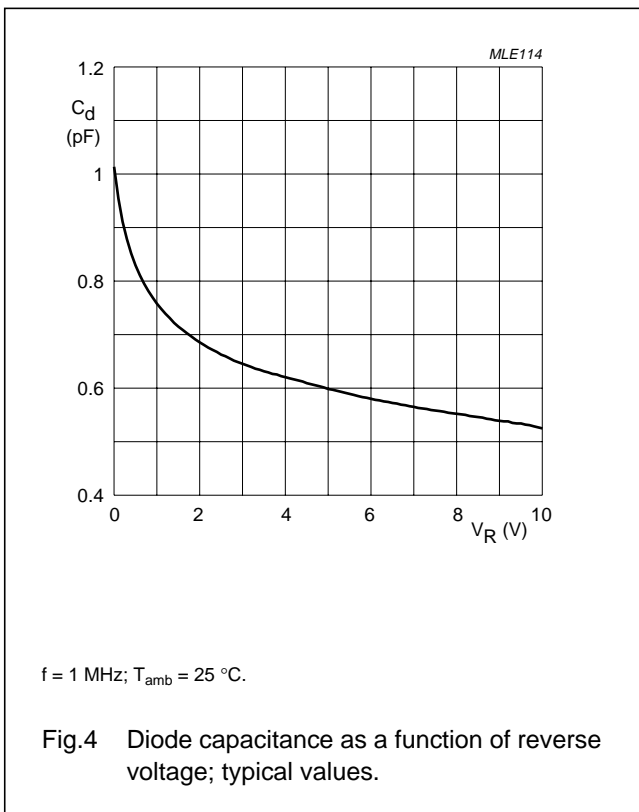
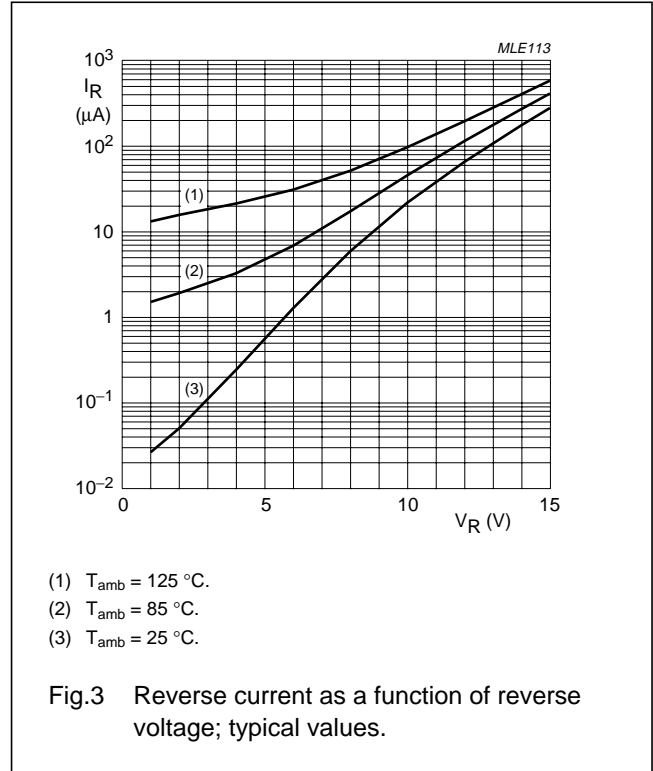
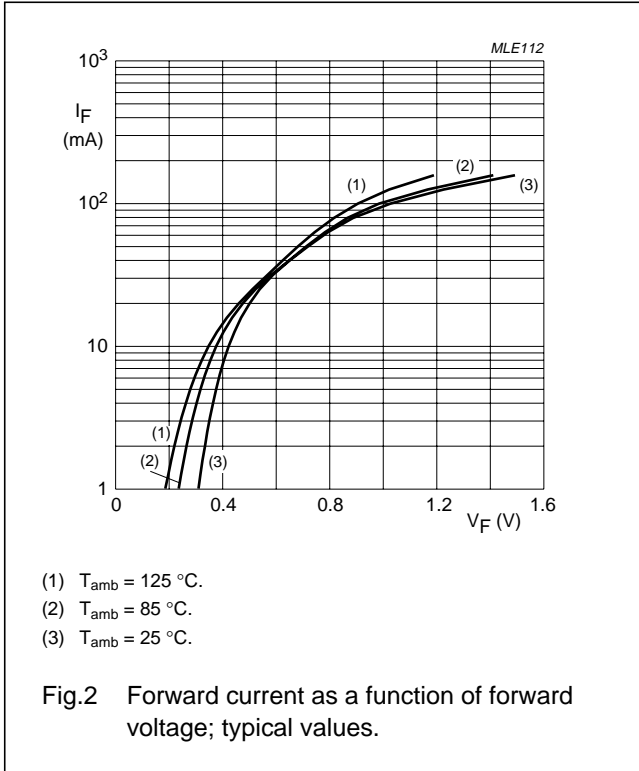
Soldering

Reflow soldering is the only recommended soldering method.

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GRAPHICAL DATA



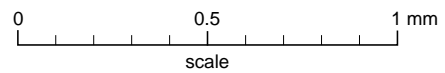
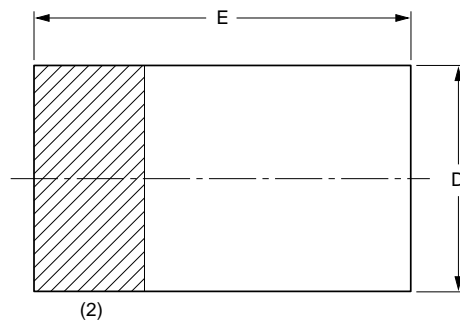
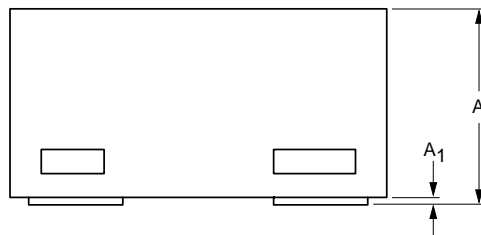
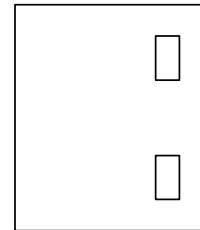
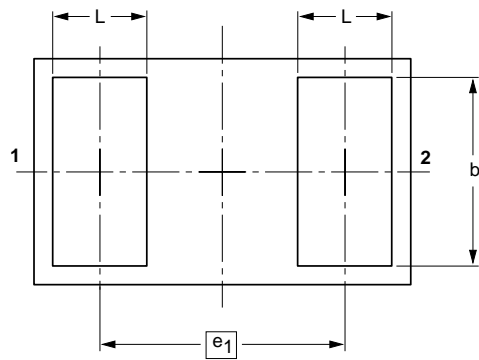
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PACKAGE OUTLINE

Leadless ultra small plastic package; 2 terminals; body 1.0 x 0.6 x 0.5 mm

SOD882



DIMENSIONS (mm are the original dimensions)

UNIT	A ⁽¹⁾	A ₁ max.	b	D	E	e ₁	L
mm	0.50 0.46	0.03	0.55 0.47	0.62 0.55	1.02 0.95	0.65	0.30 0.22

Notes

- Including plating thickness
- The marking bar indicates the cathode

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOD882						03-04-16 03-04-17

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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.
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Printed in The Netherlands

613514/01/pp7

Date of release: 2003 Aug 20

Document order number: 9397 750 11309

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