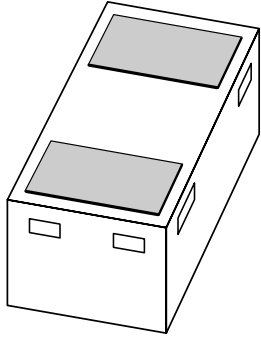


# DATA SHEET



**1PS10SB82**

Schottky barrier diode

Product data sheet

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 mm<sup>2</sup> (approx. 10% of SOT23)
- Power dissipation comparable to SOT23.

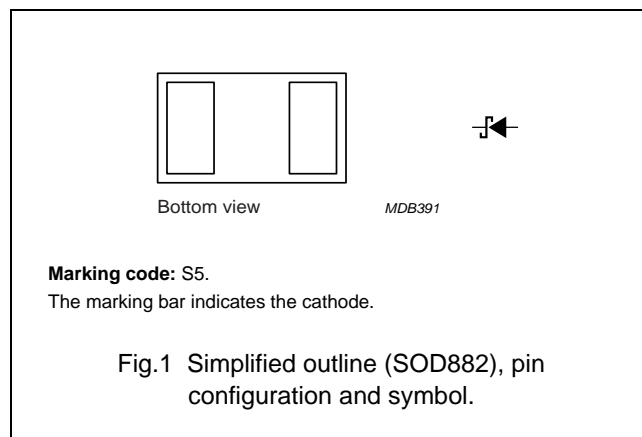
## APPLICATIONS

- 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 <sub>R</sub>	continuous reverse voltage	–	15	V
I <sub>F</sub>	continuous forward current	–	30	mA
T <sub>stg</sub>	storage temperature	–65	+150	°C
T <sub>j</sub>	junction temperature	–	150	°C

## Schottky barrier diode

1PS10SB82

**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	–	$\Omega$
$I_R$	continuous reverse current	$V_R = 1\text{ V}$ ; see Fig.3; note 1	–	0.2	$\mu\text{A}$
$C_d$	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  $\mu\text{m}$  copper strip line.

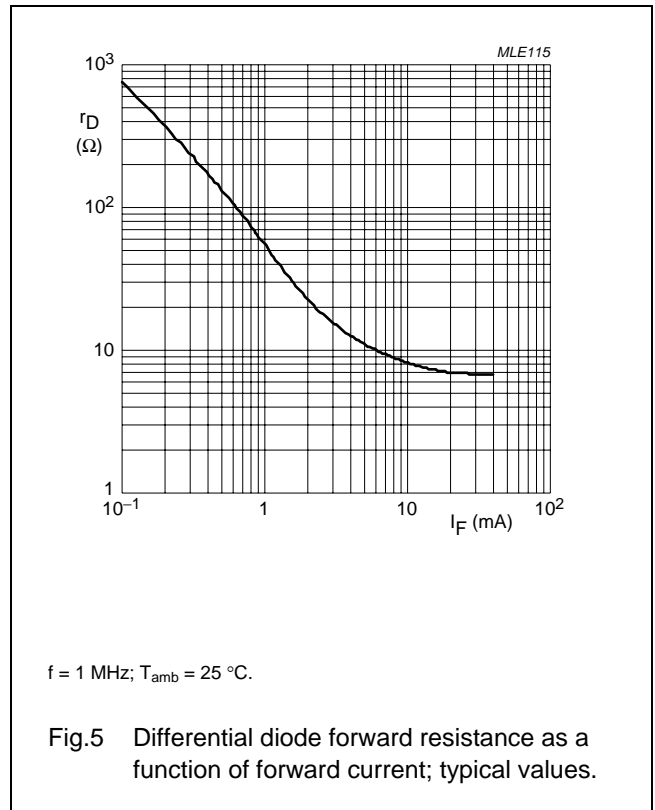
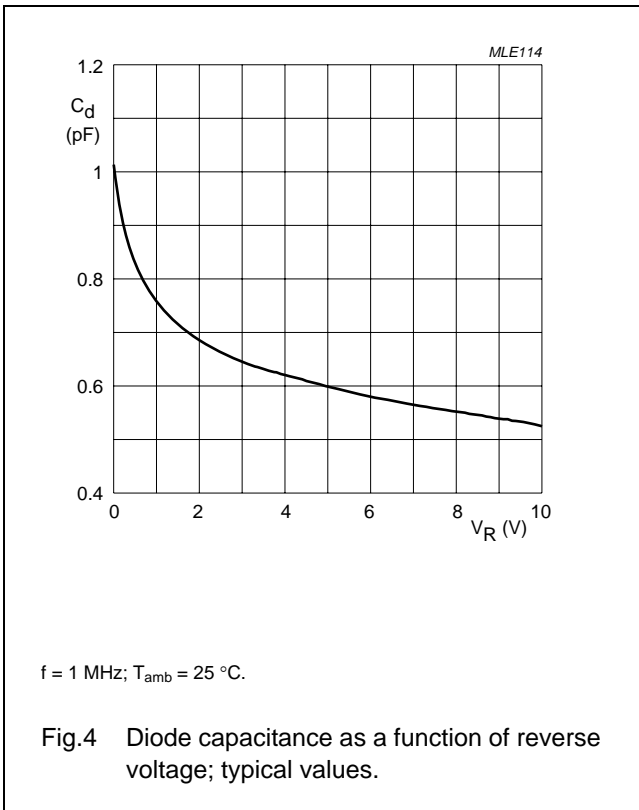
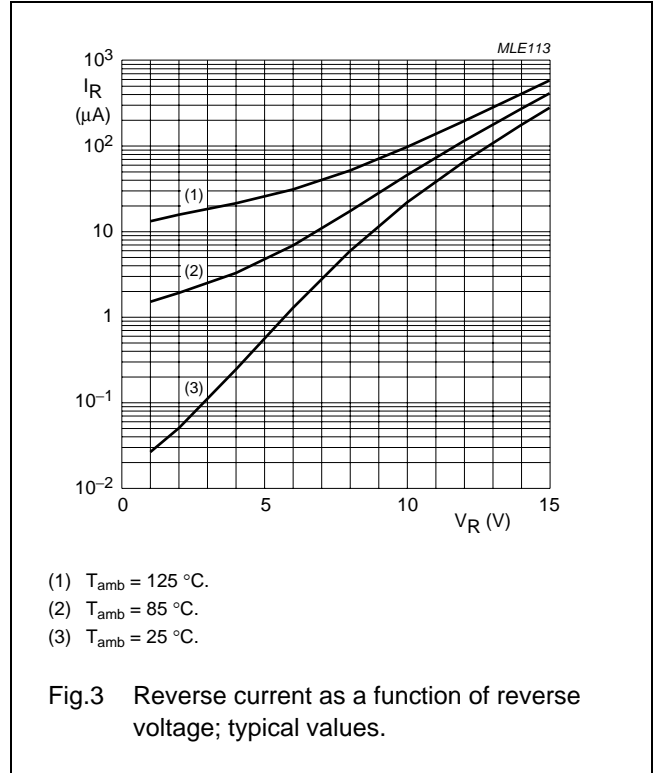
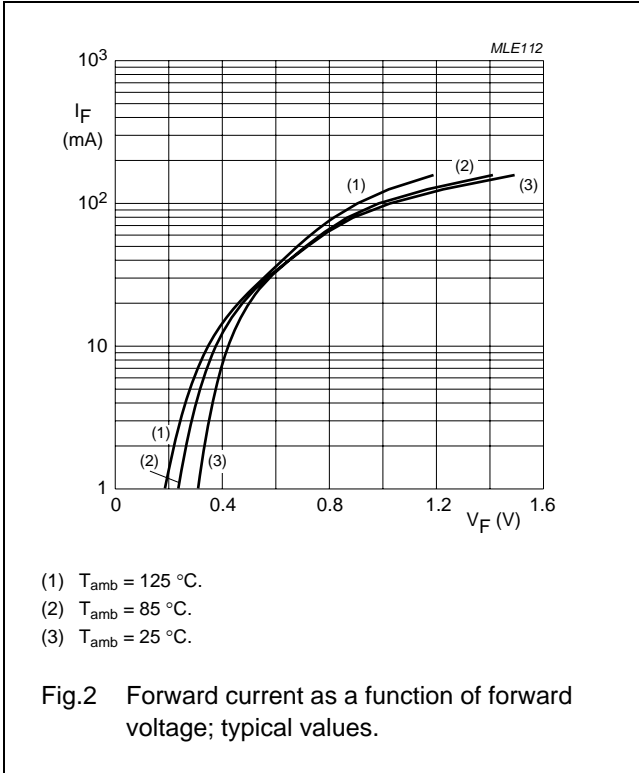
**Soldering**

Reflow soldering is the only recommended soldering method.

Schottky barrier diode

1PS10SB82

GRAPHICAL DATA



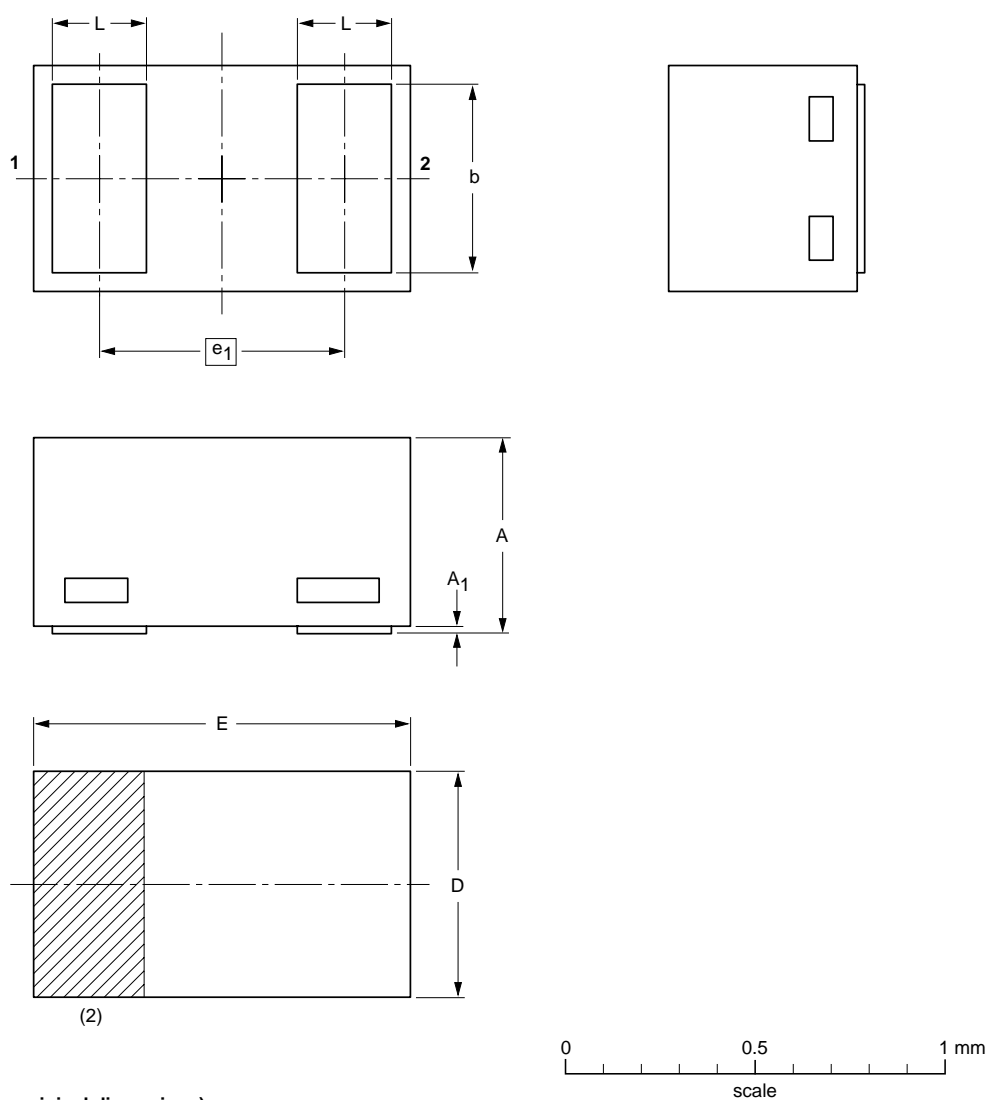
# Schottky barrier diode

# 1PS10SB82

## 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 <sup>(1)</sup>	A <sub>1</sub> max.	b	D	E	e <sub>1</sub>	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**

- 1. Including plating thickness
- 2. The marking bar indicates the cathode

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

# Schottky barrier diode

1PS10SB82

## DATA SHEET STATUS

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

### Notes

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## **Contact information**

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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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