



**THE DATASHEET OF
1PS10SB82,315**



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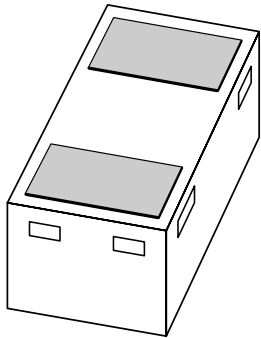
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via salesaddresses@nexperia.com). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

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 mm² (approx. 10% of SOT23)
- Power dissipation comparable to SOT23.

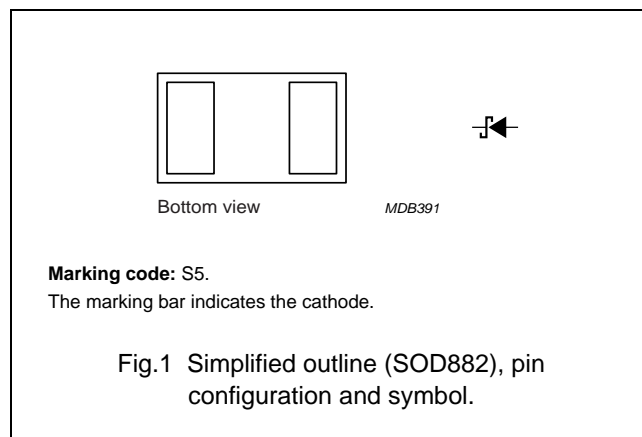
APPLICATIONS

- 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 |

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 | – | 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.

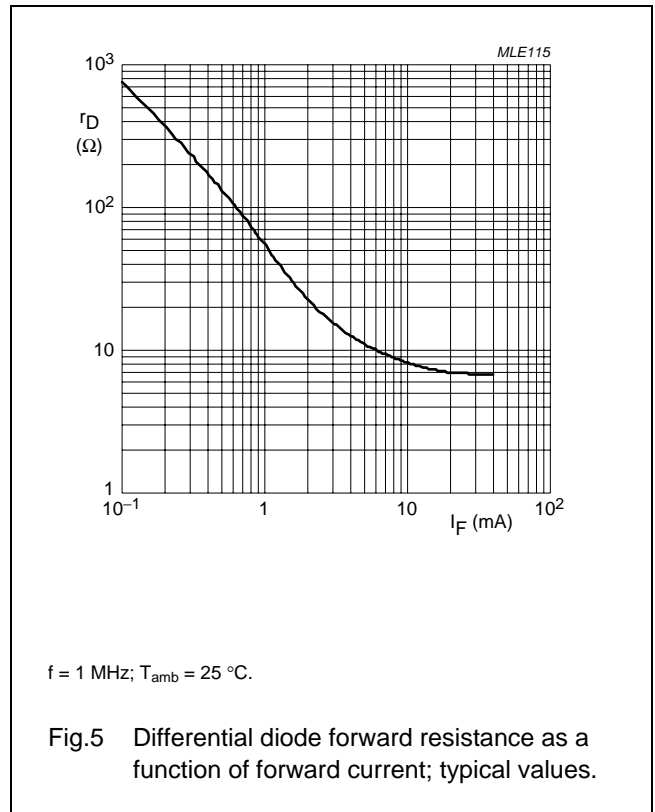
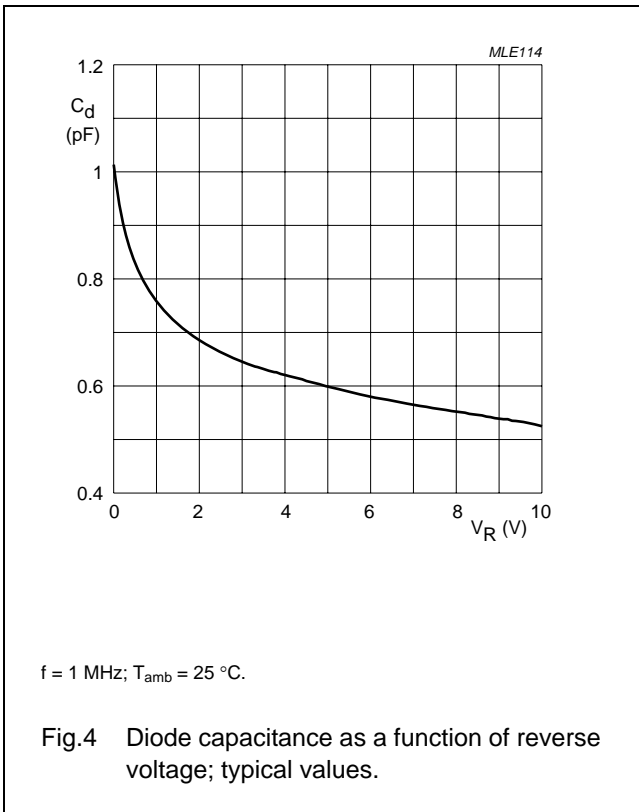
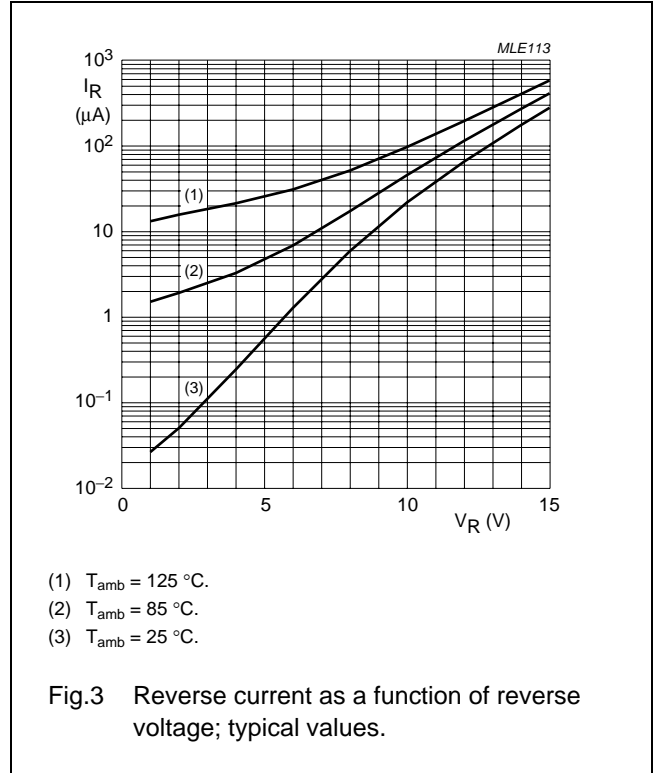
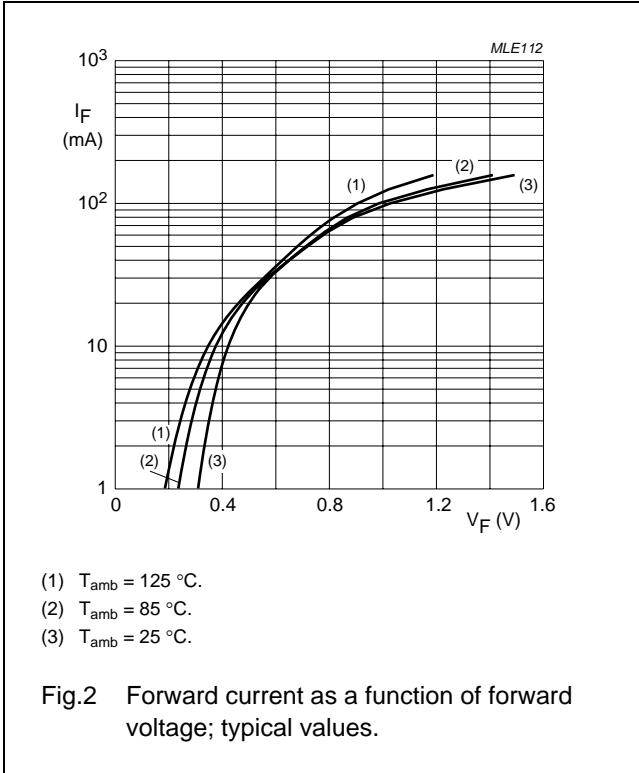
Soldering

Reflow soldering is the only recommended soldering method.

Schottky barrier diode

1PS10SB82

GRAPHICAL DATA



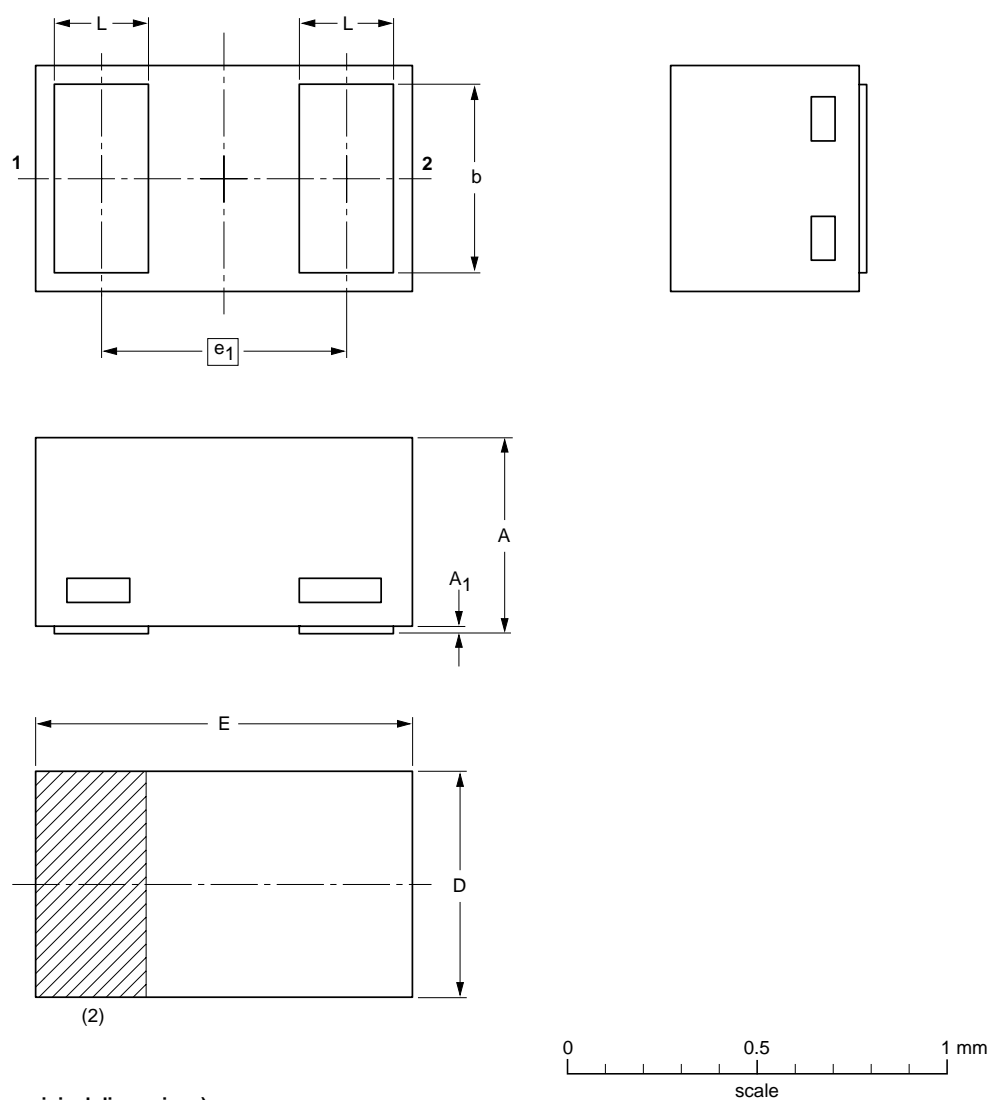
Schottky barrier diode

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 ⁽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 |

Schottky barrier diode

1PS10SB82

DATA SHEET STATUS

| DOCUMENT STATUS ⁽¹⁾ | PRODUCT STATUS ⁽²⁾ | 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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NXP Semiconductors

Customer notification

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Contact information

For additional information please visit: **<http://www.nxp.com>**

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