

# DATA SHEET



## **1PS10SB63** Schottky barrier diode

Product specification

2003 Aug 20

# Schottky barrier diode

# 1PS10SB63

## FEATURES

- Very low diode capacitance
- Low forward voltage
- 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.

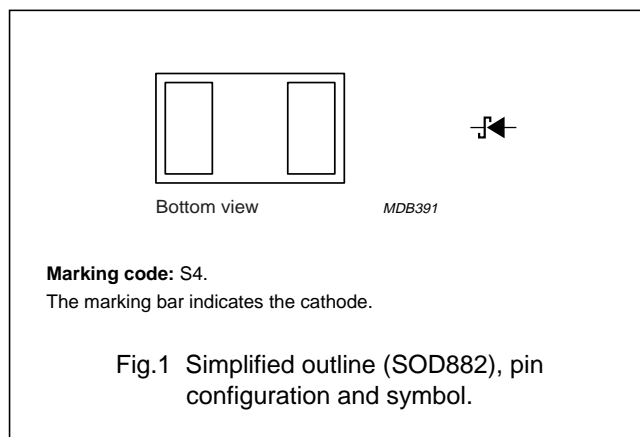
## APPLICATIONS

- Ultra high-speed switching
- High frequency detection
- Zero bias detection
- 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	CONDITIONS	MIN.	MAX.	UNIT
V <sub>R</sub>	continuous reverse voltage		–	5	V
I <sub>F</sub>	continuous forward current		–	20	mA
I <sub>FRM</sub>	repetitive peak forward current	t <sub>p</sub> ≤ 1 ms; δ = 0.25	–	400	mA
I <sub>FSM</sub>	non-repetitive peak forward current	t <sub>p</sub> = 8.3 ms half sinewave; JEDEC method	–	550	mA
T <sub>stg</sub>	storage temperature		–65	+150	°C
T <sub>j</sub>	junction temperature		–	150	°C

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## 1PS10SB63

**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 $I_F = 0.1\text{ mA}$	160	200	mV
		$I_F = 1\text{ mA}$	240	300	mV
$I_R$	continuous reverse current	see Fig.3 $V_R = 1\text{ V}$	0.4	1	$\mu\text{A}$
		$V_R = 5\text{ V}$ ; note 1	–	50	$\mu\text{A}$
$C_d$	diode capacitance	$V_R = 0\text{ V}$ ; $f = 1\text{ MHz}$ ; see Fig.4	0.35	0.5	pF
$L_S$	series inductance		0.6	–	nH

**Note**

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

**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.

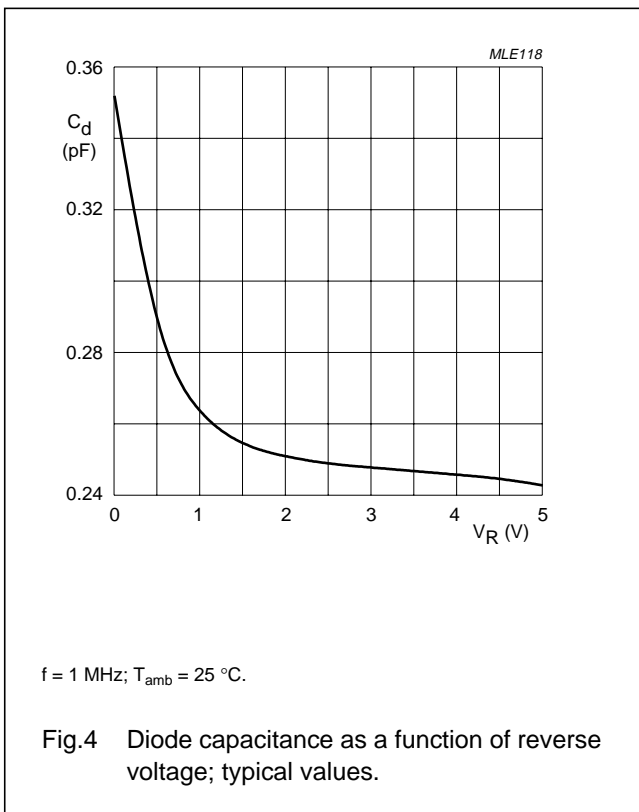
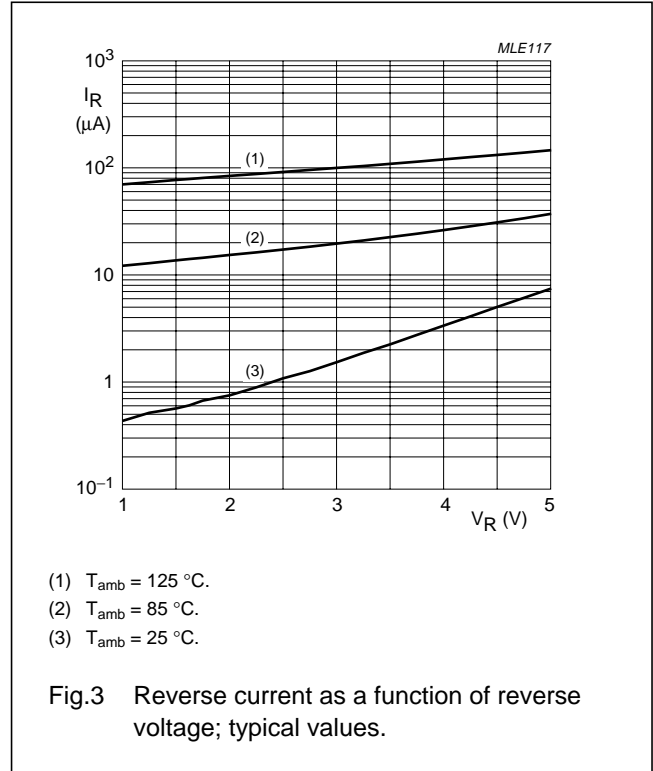
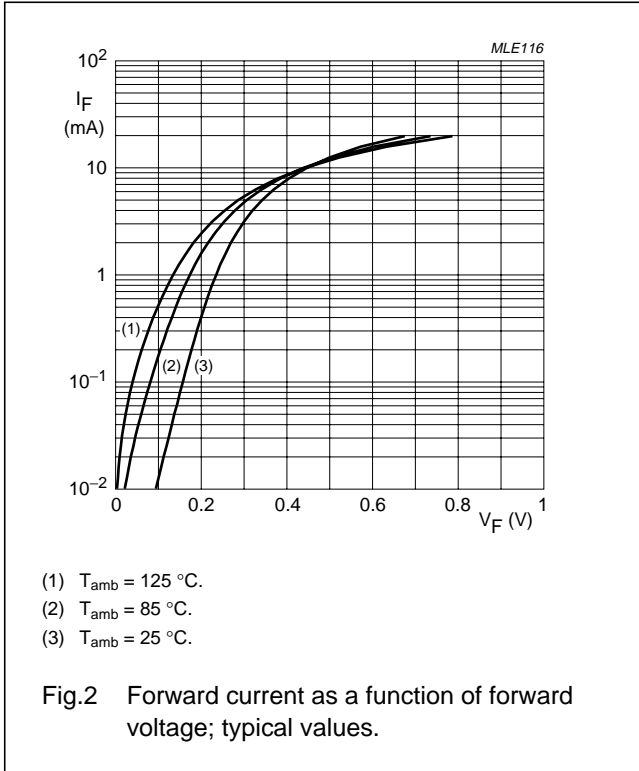
**Soldering**

Reflow soldering is the only recommended soldering method.

Schottky barrier diode

1PS10SB63

GRAPHICAL DATA



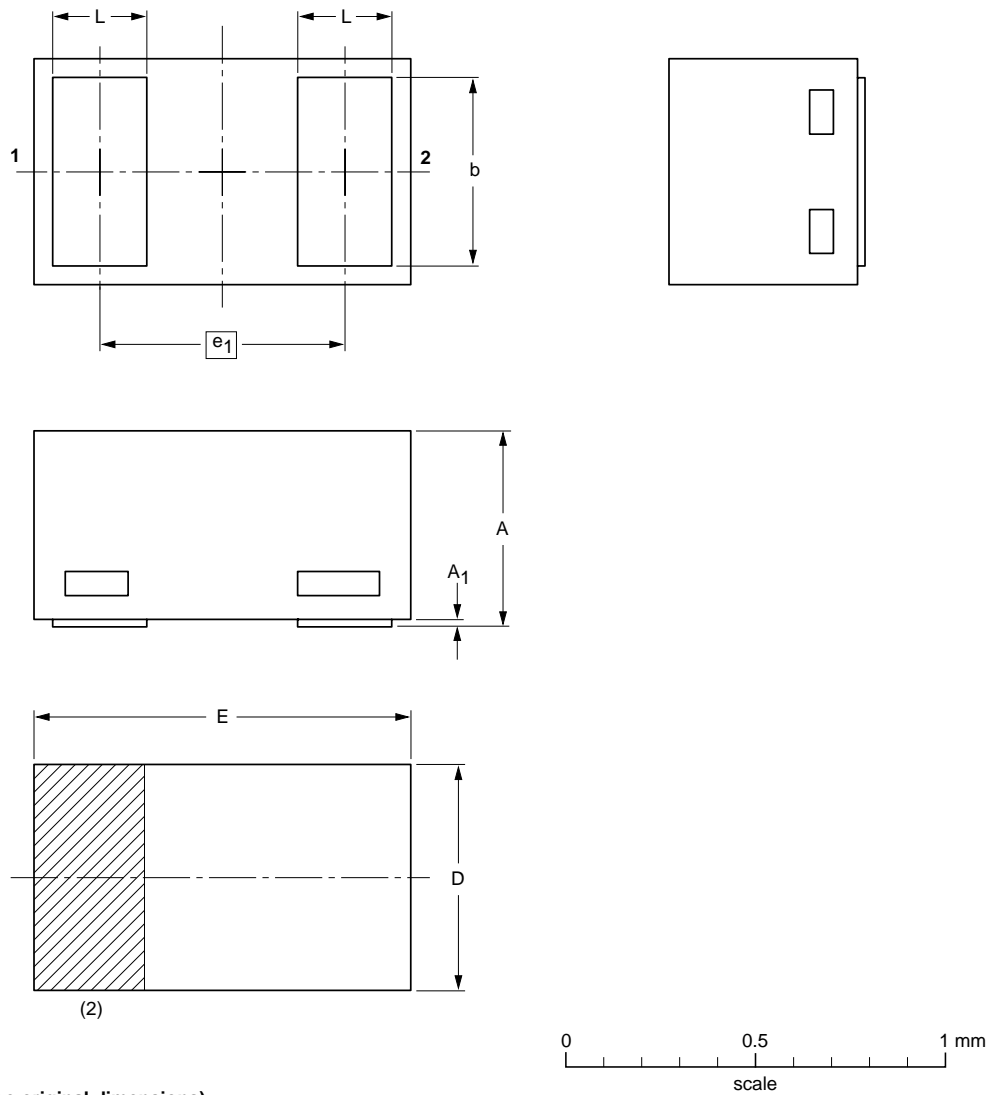
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1PS10SB63

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

- Including plating thickness
- The marking bar indicates the cathode

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

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## DATA SHEET STATUS

LEVEL	DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)(3)</sup>	DEFINITION
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