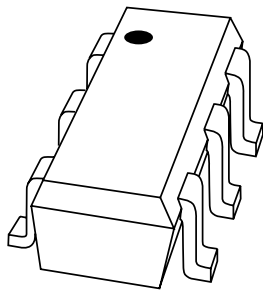


# DATA SHEET



## **1PS88SB48** Schottky barrier diodes

Product specification  
Supersedes data of 1999 Apr 26

2002 Nov 07

# Schottky barrier diodes

# 1PS88SB48

### FEATURES

- Ultra fast switching speed
- Low forward voltage
- Small SMD package
- Guard ring protected
- Low capacitance.

### APPLICATIONS

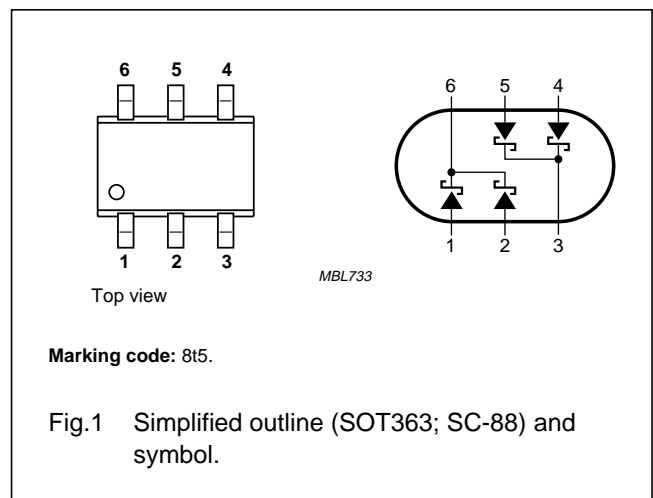
- High speed switching
- Circuit protection
- Voltage clamping.

### DESCRIPTION

The 1PS88SB48 consists of two dual Schottky barrier diodes with common cathodes, fabricated in planar technology and encapsulated in the small SOT363 SMD plastic package.

### PINNING

PIN	DESCRIPTION
1	anode (a1)
2	anode (a2)
3	common cathode (k1)
4	anode (a3)
5	anode (a4)
6	common cathode (k2)



### LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
<b>Per diode</b>					
$V_R$	continuous reverse voltage		–	40	V
$I_F$	continuous forward current		–	120	mA
$I_{FRM}$	repetitive peak forward current	$t_p \leq 1 \text{ s}; \delta \leq 0.5$	–	120	mA
$I_{FSM}$	non-repetitive peak forward current	$t_p < 10 \text{ ms}$	–	200	mA
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	150	°C
$T_{amb}$	operating ambient temperature		–65	+150	°C

## Schottky barrier diodes

## 1PS88SB48

**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
<b>Per diode</b>				
$V_F$	continuous forward voltage	see Fig.2		
		$I_F = 1\text{ mA}$	380	mV
		$I_F = 10\text{ mA}$	500	mV
		$I_F = 40\text{ mA}$	1	V
$I_R$	continuous reverse current	$V_R = 30\text{ V}$ ; note 1; see Fig.3	1	$\mu\text{A}$
		$V_R = 40\text{ V}$ ; note 1; see Fig.3	10	$\mu\text{A}$
$C_d$	diode capacitance	$V_R = 0$ ; $f = 1\text{ MHz}$ ; see Fig.5	5	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	416	K/W

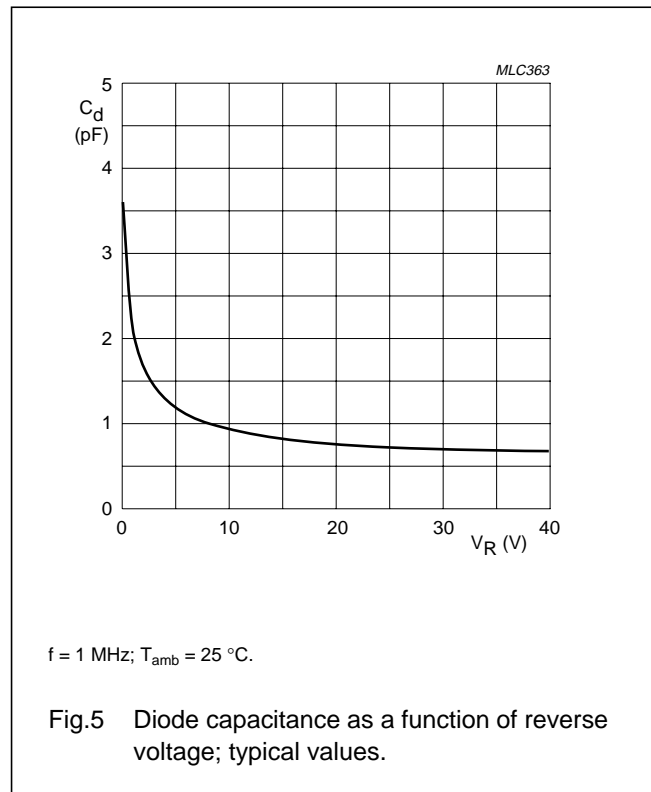
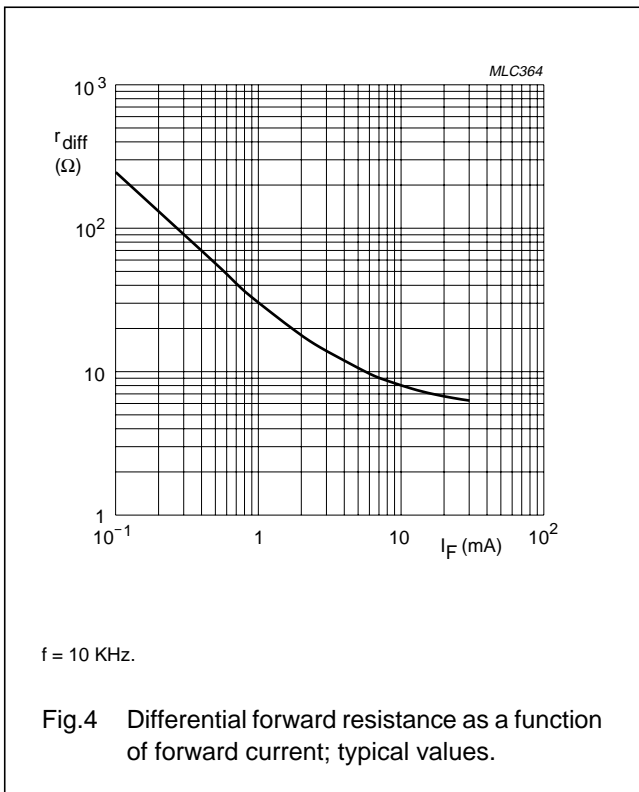
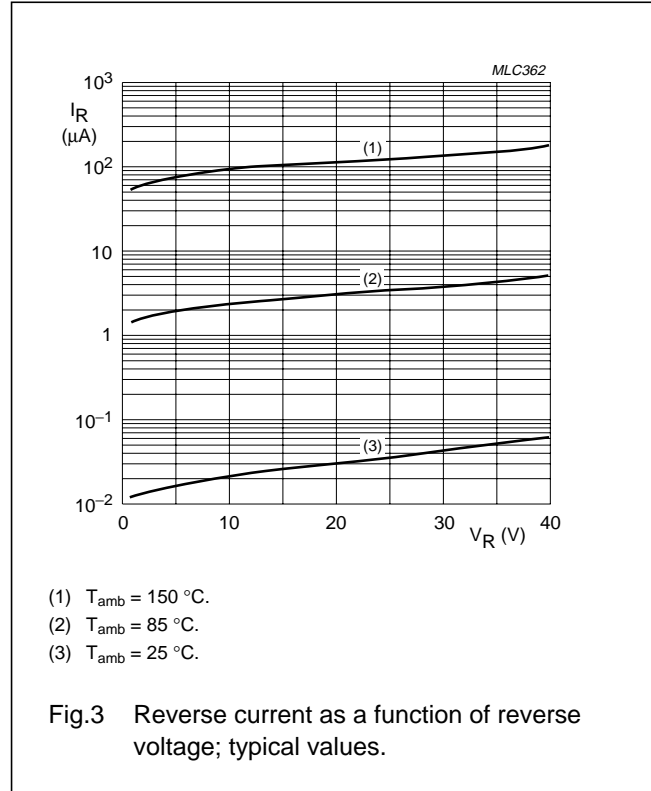
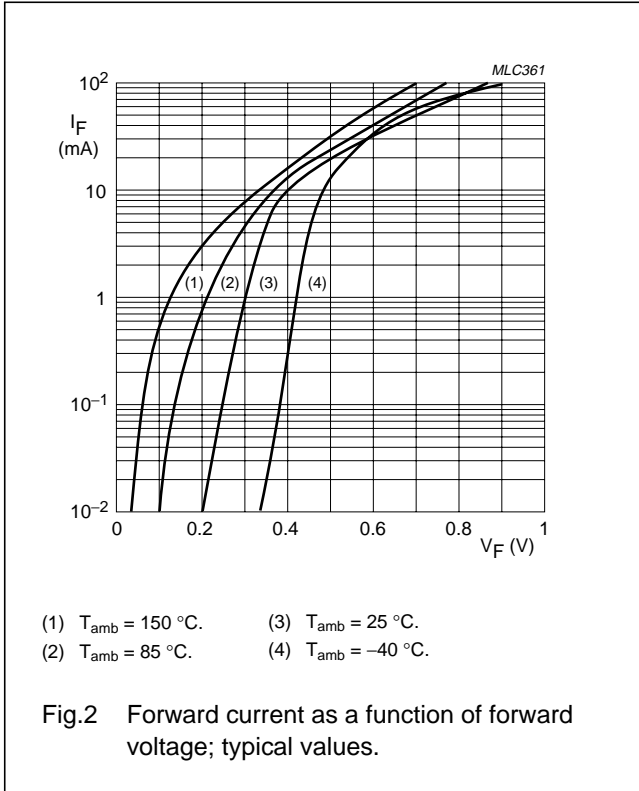
**Note**

1. Refer to SOT363 (SC-88) standard mounting conditions.

Schottky barrier diodes

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GRAPHICAL DATA



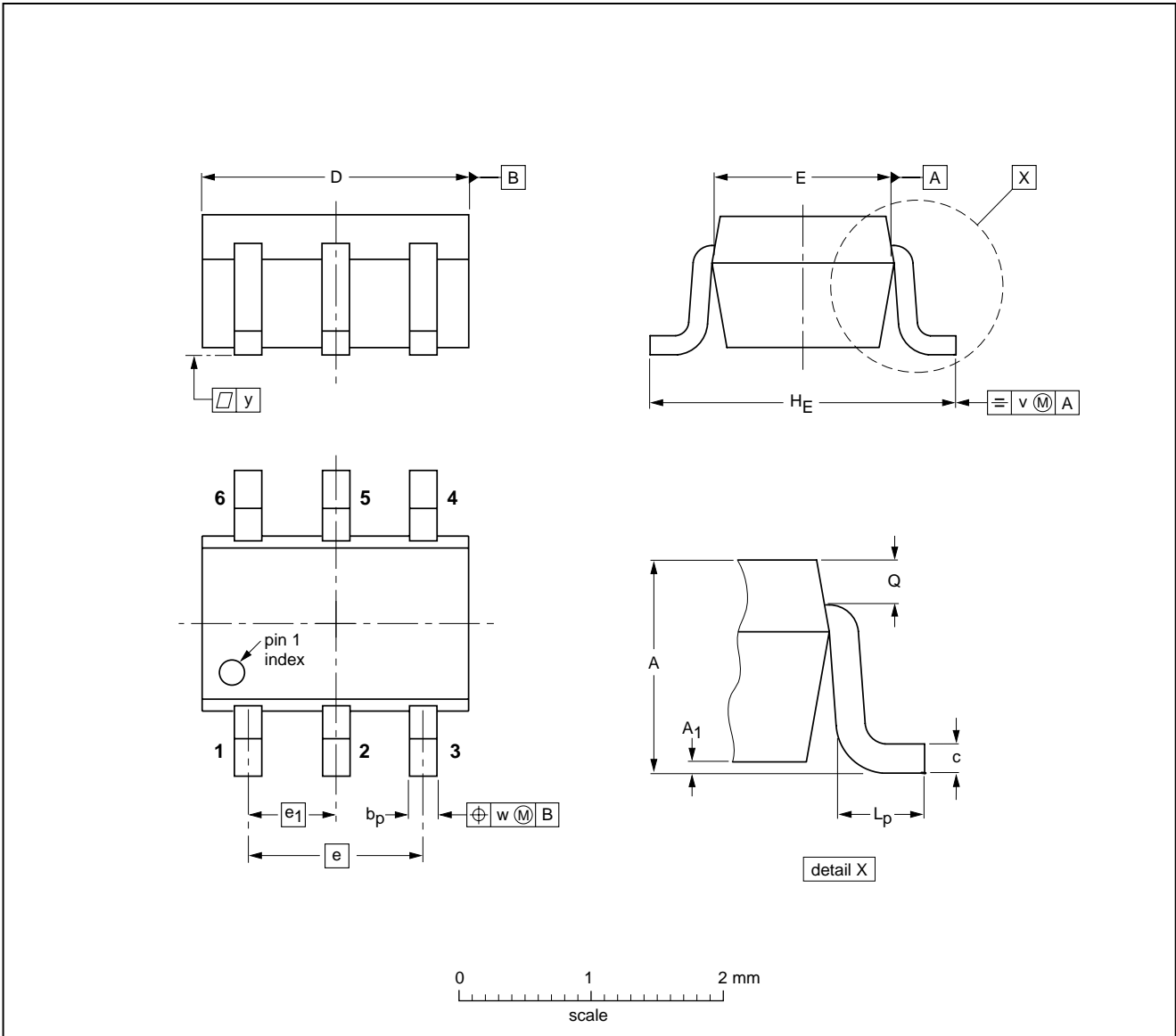
Schottky barrier diodes

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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT363



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT363			SC-88			97-02-28

## Schottky barrier diodes

## 1PS88SB48

## DATA SHEET STATUS

LEVEL	DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)(3)</sup>	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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Schottky barrier diodes

1PS88SB48

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**NOTES**

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