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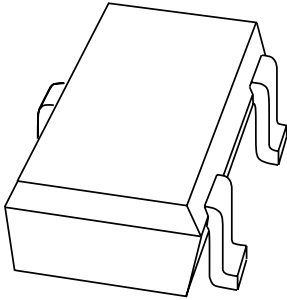
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via [salesaddresses@nexperia.com](mailto:salesaddresses@nexperia.com)). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

# DATA SHEET



**1PS70SB82; 1PS70SB84;  
1PS70SB85; 1PS70SB86**  
Schottky barrier (double) diodes

# Schottky barrier (double) diodes

## 1PS70SB82; 1PS70SB84; 1PS70SB85; 1PS70SB86

### FEATURES

- Low forward voltage
- Very small SMD plastic package
- Low diode capacitance.

### APPLICATIONS

- UHF mixers
- Sampling circuits
- Modulators
- Phase detectors.

### DESCRIPTION

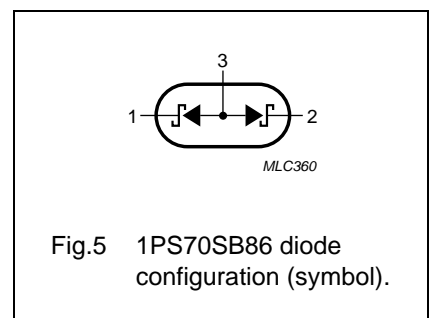
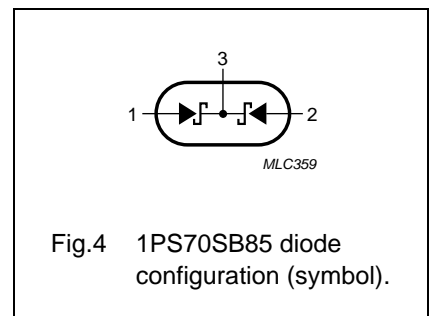
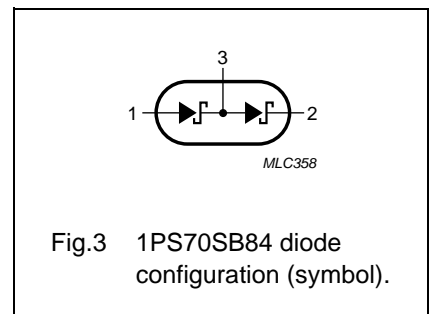
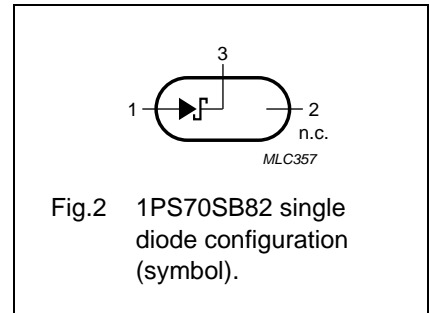
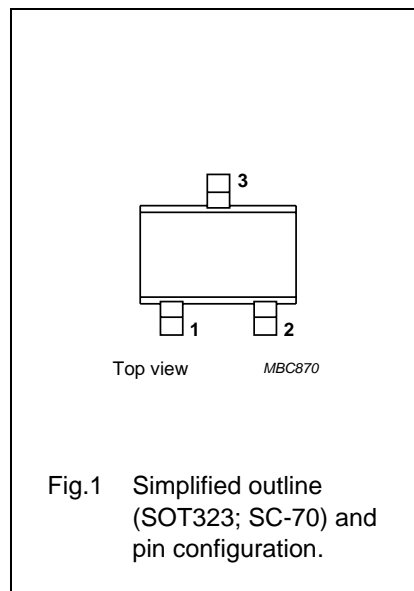
Planar Schottky barrier diodes encapsulated in a SOT323 (SC-70) very small plastic SMD package. Single diodes and double diodes with different pinning are available. ESD sensitive device, observe handling precautions.

### MARKING

TYPE NUMBER	MARKING CODE
1PS70SB82	88
1PS70SB84	87
1PS70SB85	85
1PS70SB86	86

### PINNING

PIN	SYMBOL
<b>1PS70SB82</b>	
1	a
2	n.c.
3	k
<b>1PS70SB84</b>	
1	a <sub>1</sub>
2	k <sub>2</sub>
3	k <sub>1</sub> and a <sub>2</sub>
<b>1PS70SB85</b>	
1	a <sub>1</sub>
2	a <sub>2</sub>
3	k <sub>1</sub> and k <sub>2</sub>
<b>1PS70SB86</b>	
1	k <sub>1</sub>
2	k <sub>2</sub>
3	a <sub>1</sub> and a <sub>2</sub>



## Schottky barrier (double) diodes

1PS70SB82; 1PS70SB84;  
1PS70SB85; 1PS70SB86**LIMITING VALUES**

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
<b>Per diode</b>				
$V_R$	continuous reverse voltage	–	15	V
$I_F$	continuous forward current	–	30	mA
$T_{stg}$	storage temperature	–65	+150	°C
$T_j$	junction temperature	–	125	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	625	K/W

**Note**

1. Refer to (SOT323; SC-70) standard mounting conditions.

**ELECTRICAL CHARACTERISTICS** $T_{amb} = 25\text{ °C}$ ; unless otherwise specified.

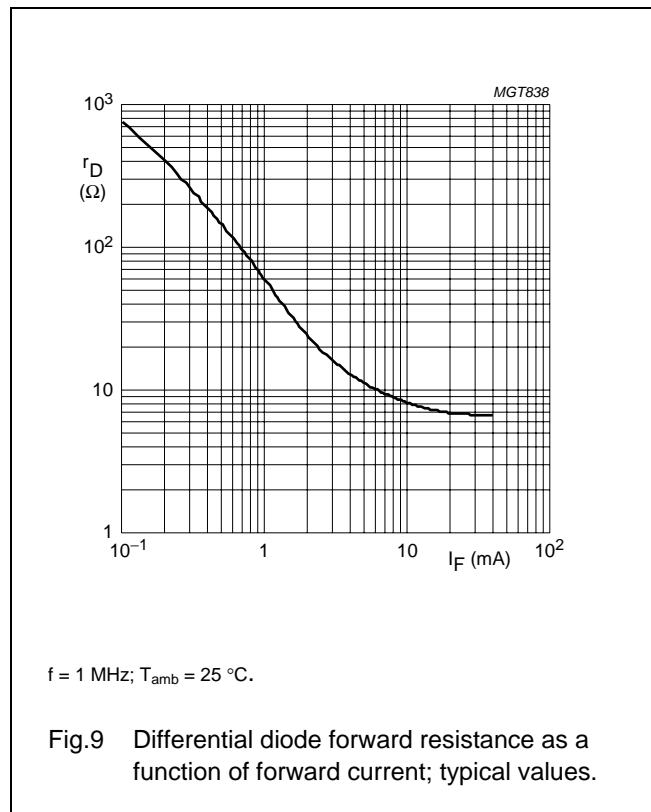
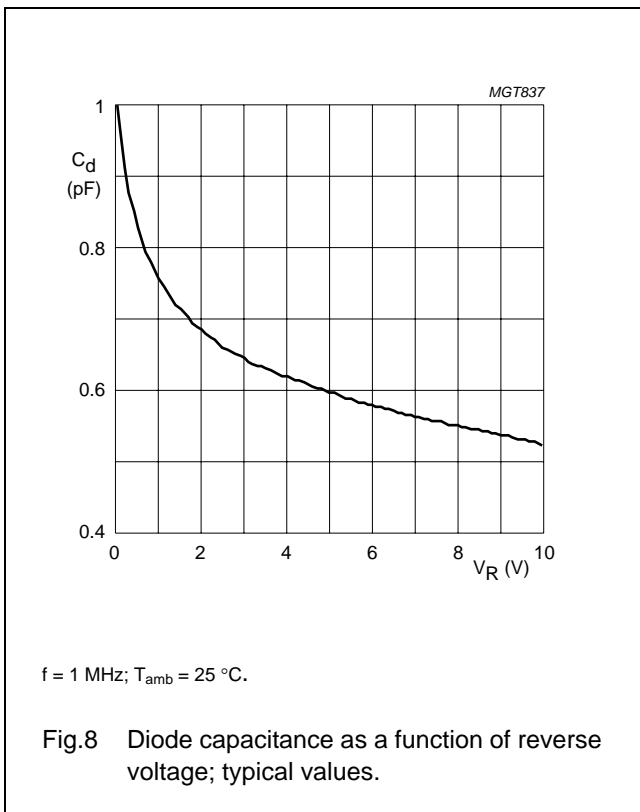
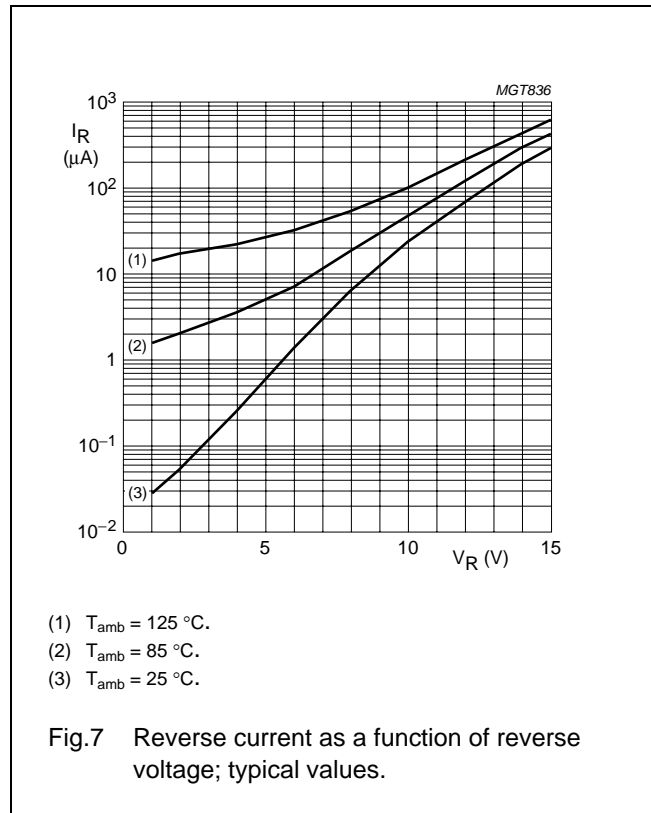
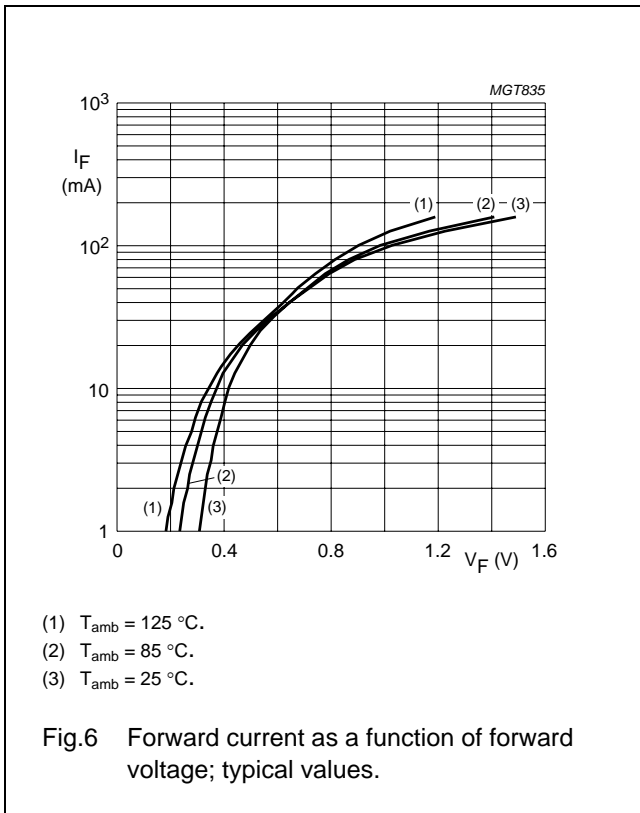
SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
<b>Per diode</b>					
$V_F$	forward voltage	see Fig.6 $I_F = 1\text{ mA}$	–	340	mV
		$I_F = 30\text{ mA}$	–	700	mV
$r_D$	differential diode forward resistance	$f = 1\text{ MHz}$ ; $I_F = 5\text{ mA}$ ; see Fig.9	12	–	$\Omega$
$I_R$	continuous reverse current	$V_R = 1\text{ V}$ ; note 1; see Fig.7	–	0.2	$\mu\text{A}$
$C_d$	diode capacitance	$V_R = 0$ ; $f = 1\text{ MHz}$ ; see Fig.8	1	–	pF

**Note**

1. Pulsed test:  $t_p = 300\ \mu\text{s}$ ;  $\delta = 0.02$ .

Schottky barrier (double) diodes

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1PS70SB85; 1PS70SB86



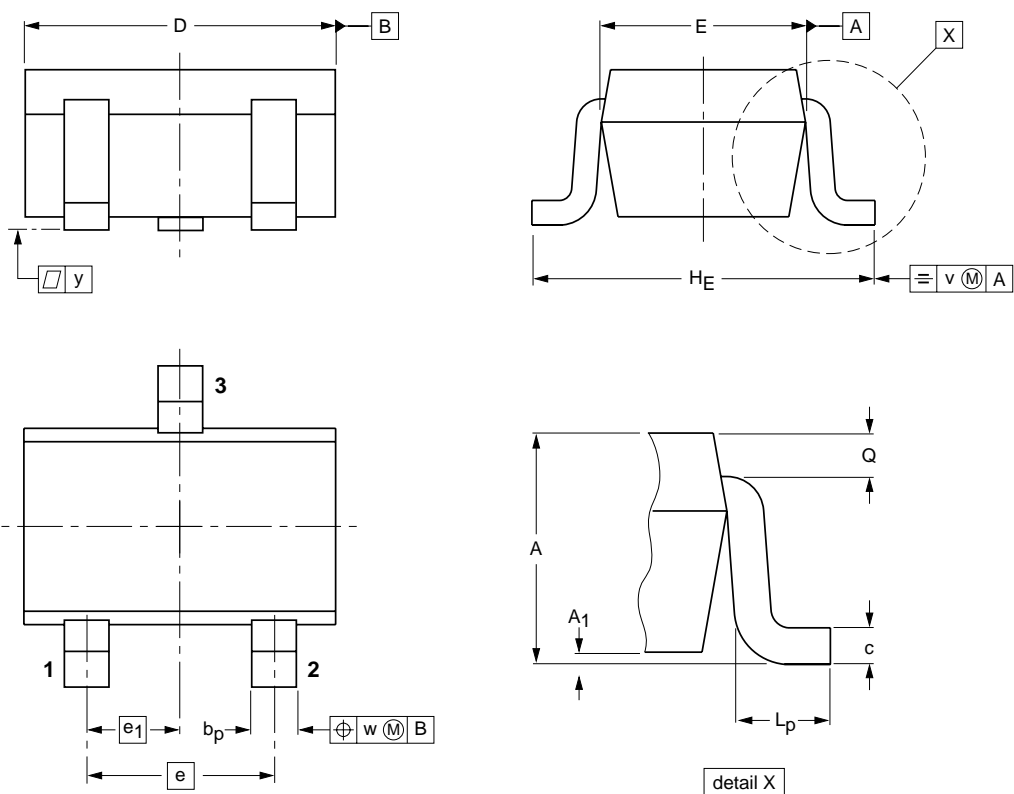
Schottky barrier (double) diodes

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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



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
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT323			SC-70			97-02-28

Schottky barrier (double) diodes

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1PS70SB85; 1PS70SB86

**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**

1. Please consult the most recently issued document before initiating or completing a design.
2. The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL <http://www.nxp.com>.

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# ***NXP Semiconductors***

## **Customer notification**

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## **Contact information**

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

For sales offices addresses send e-mail to: [salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)

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