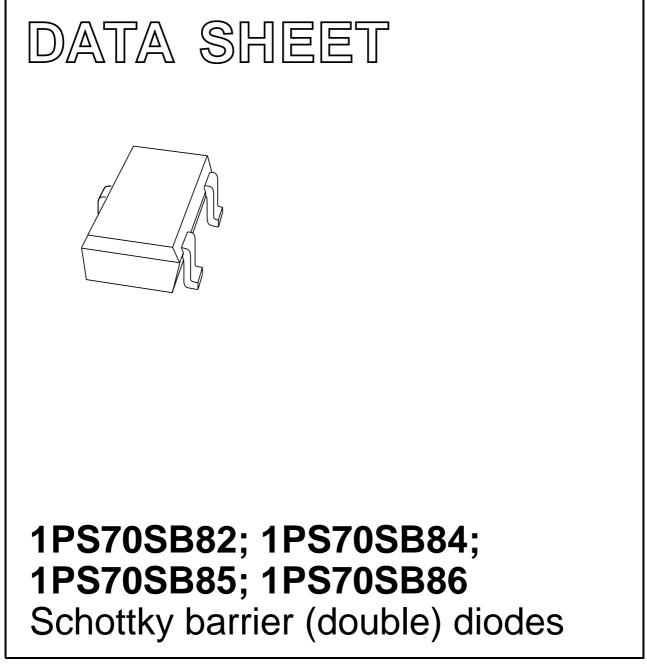
DISCRETE SEMICONDUCTORS



Product data sheet

2001 Jan 18



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		
1PS70SB82	1PS70SB82		
1	а		
2	n.c.		
3	k		
1PS70SB84			
1	a ₁		
2	k ₂		
3	k_1 and a_2		
1PS70SB8	5		
1	a ₁		
2	a ₂		
3	k ₁ and k ₂		
1PS70SB86			
1	k ₁		
2	k ₂		
3	a ₁ and a ₂		

□ 3

Simplified outline (SOT323; SC-70) and

pin configuration.

2

MBC870

1

Top view

Fig.1

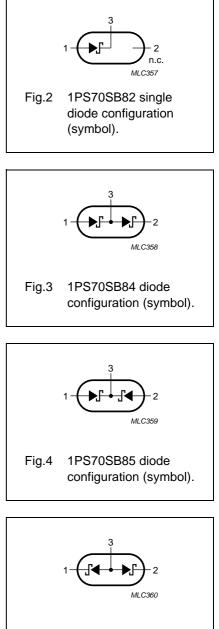


Fig.5 1PS70SB86 diode configuration (symbol).

1PS70SB82; 1PS70SB84; 1PS70SB85; 1PS70SB86

LIMITING VALUES

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

SYMBOL	PARAMETER		MAX.	UNIT	
Per diode	Per diode				
V _R	continuous reverse voltage	_	15	V	
IF	continuous forward current		30	mA	
T _{stg}	storage temperature		+150	°C	
Tj	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

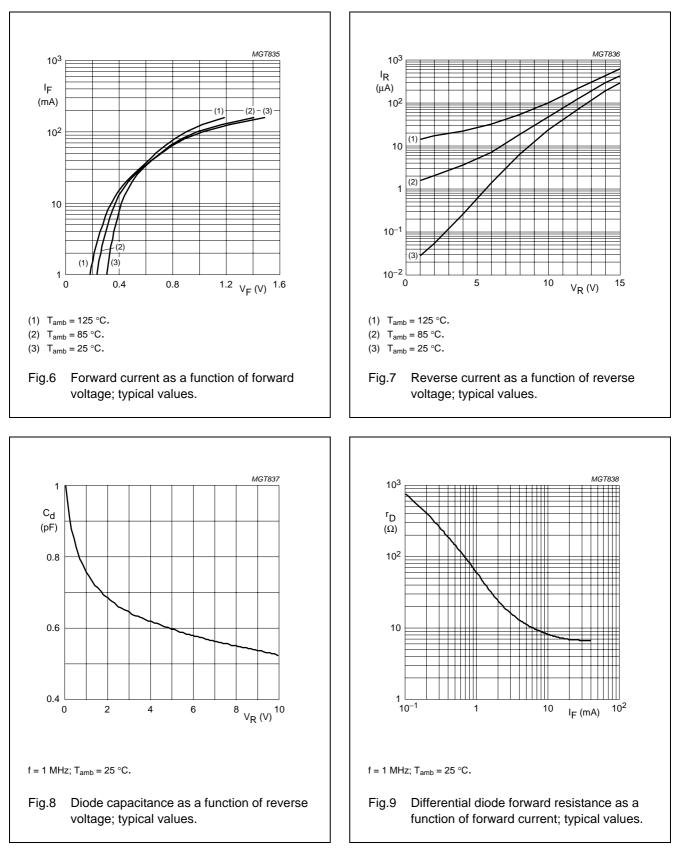
 T_{amb} = 25 °C; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
Per diode					
V _F	forward voltage	see Fig.6			
		I _F = 1 mA	-	340	mV
		I _F = 30 mA	_	700	mV
r _D	differential diode forward resistance	$f = 1 \text{ MHz}; I_F = 5 \text{ mA}; \text{ see Fig.9}$	12	-	Ω
I _R	continuous reverse current	$V_R = 1 V$; note 1; see Fig.7	-	0.2	μA
C _d	diode capacitance	$V_R = 0$; f = 1 MHz; see Fig.8	1	_	pF

Note

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

1PS70SB82; 1PS70SB84; 1PS70SB85; 1PS70SB86

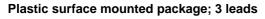


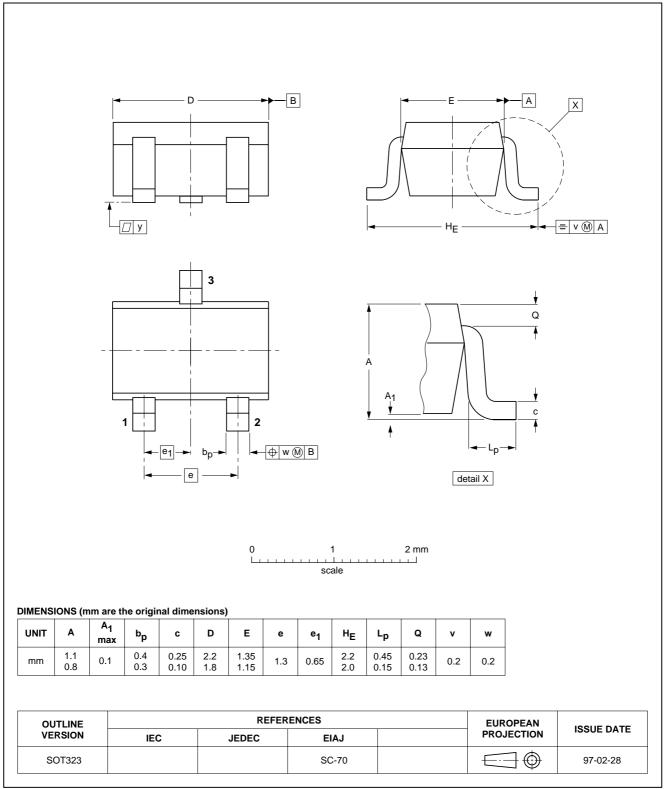
1PS70SB82; 1PS70SB84;

1PS70SB85; 1PS70SB86

Schottky barrier (double) diodes

PACKAGE OUTLINE





1PS70SB82; 1PS70SB84; 1PS70SB85; 1PS70SB86

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

- 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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