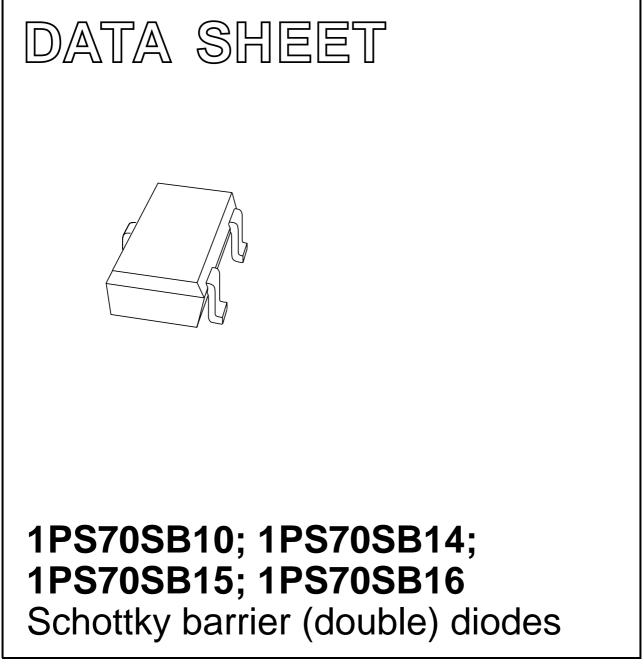
DISCRETE SEMICONDUCTORS



Product data sheet

1999 Apr 26



FEATURES

- · Low forward voltage
- · Guard ring protected
- Very small plastic SMD package.

APPLICATIONS

- Ultra high-speed switching
- · Voltage clamping
- Protection circuits
- Blocking diodes.

DESCRIPTION

Planar Schottky barrier diodes encapsulated in a SOT323 very small plastic SMD package. Single diodes and double diodes with different pinning are available.

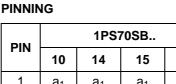
MARKING

TYPE NUMBER	MARKING CODE ⁽¹⁾
1PS70SB10	7*0
1PS70SB14	7*4
1PS70SB15	7*5
1PS70SB16	7*6

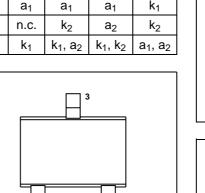
Note

1999 Apr 26

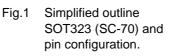
- 1. * = -: Made in Hong Kong.
 - * = t: Made in Malaysia.



	10	14	15	16
1	a ₁	a ₁	a ₁	k ₁
2	n.c.	k ₂	a ₂	k ₂
3	k ₁	k ₁ , a ₂	k_1, k_2	a ₁ , a ₂



MGD765



1

Top view

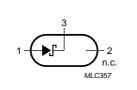
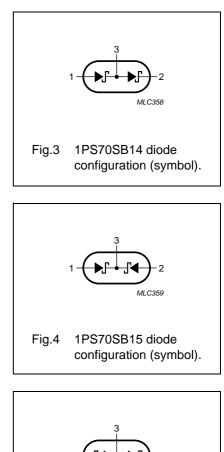


Fig.2 1PS70SB10 single diode configuration (symbol).



MLC360

1PS70SB16 diode

configuration (symbol).

Fig.5

1PS70SB10; 1PS70SB14;

1PS70SB15; 1PS70SB16

2

1PS70SB10; 1PS70SB14; 1PS70SB15; 1PS70SB16

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per diode					
V _R	continuous reverse voltage		_	30	V
I _F	continuous forward current		-	200	mA
I _{FRM}	repetitive peak forward current	$t_p \le 1 \text{ s}; \ \delta \le 0.5$	-	300	mA
I _{FSM}	non-repetitive peak forward current	t _p < 10 ms	-	600	mA
P _{tot}	total power dissipation (per package)	T _{amb} < 25 °C	-	200	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		-	125	°C
T _{amb}	operating ambient temperature		-65	+125	°C

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
Per diode				
V _F	continuous forward voltage	see Fig.6		
		I _F = 0.1 mA	240	mV
		$I_F = 1 \text{ mA}$	320	mV
		I _F = 10 mA	400	mV
		I _F = 30 mA	500	mV
		I _F = 100 mA	800	mV
I _R	continuous reverse current	V _R = 25 V; note 1; see Fig.7	2	μA
C _d	diode capacitance	V _R = 1 V; f = 1 MHz; see Fig.8	10	pF

Note

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

THERMAL CHARACTERISTICS

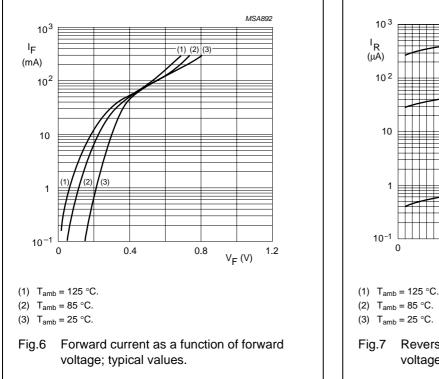
SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	note 1	625	K/W

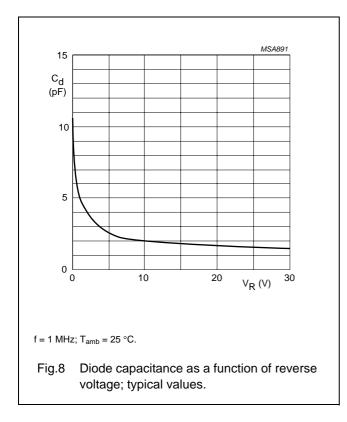
Note

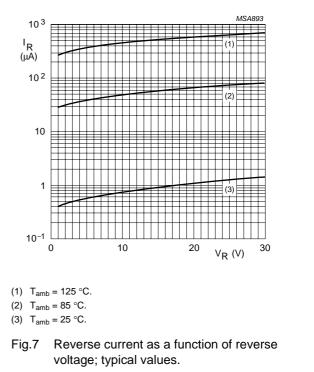
1. Refer to SOT323 (SC70) standard mounting conditions.

1PS70SB10; 1PS70SB14; 1PS70SB15; 1PS70SB16

GRAPHICAL DATA





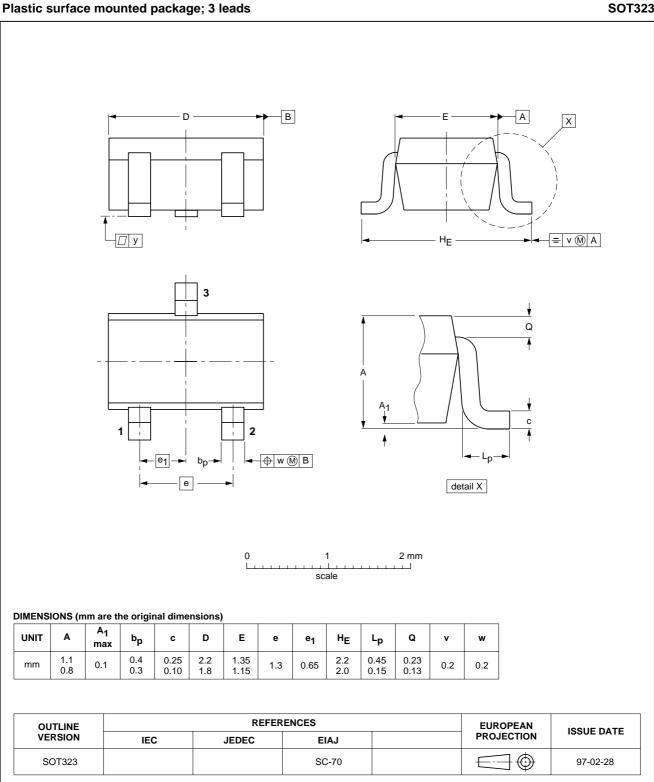


1PS70SB10; 1PS70SB14;

1PS70SB15; 1PS70SB16

Schottky barrier (double) diodes

PACKAGE OUTLINE



SOT323

1PS70SB10; 1PS70SB14; 1PS70SB15; 1PS70SB16

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.

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- 1. Please consult the most recently issued document before initiating or completing a design.
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This data sheet was changed to reflect the new company name NXP Semiconductors. No changes were made to the content, except for the legal definitions and disclaimers.

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