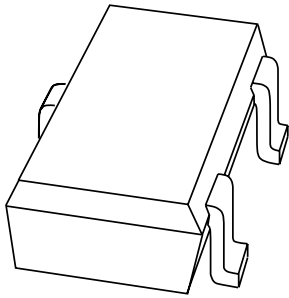


# DATA SHEET



**1PS70SB10; 1PS70SB14;  
1PS70SB15; 1PS70SB16**  
Schottky barrier (double) diodes

# Schottky barrier (double) diodes

## 1PS70SB10; 1PS70SB14; 1PS70SB15; 1PS70SB16

### 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

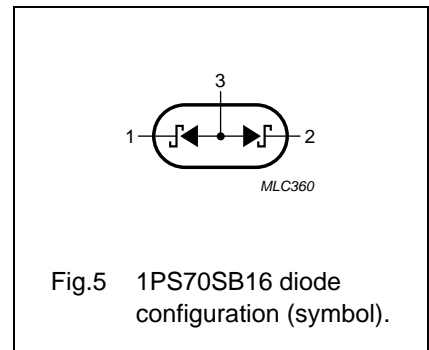
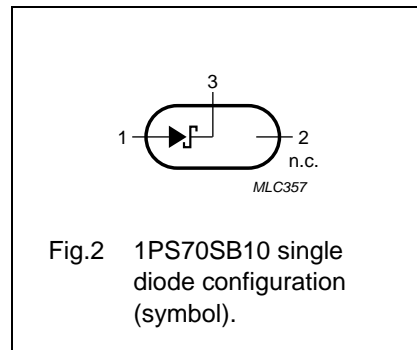
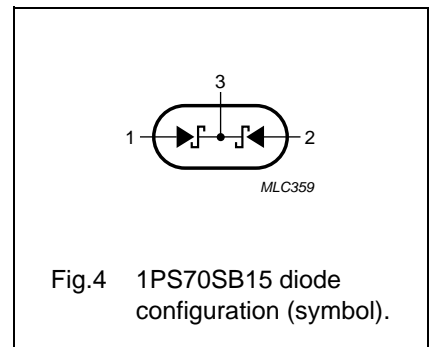
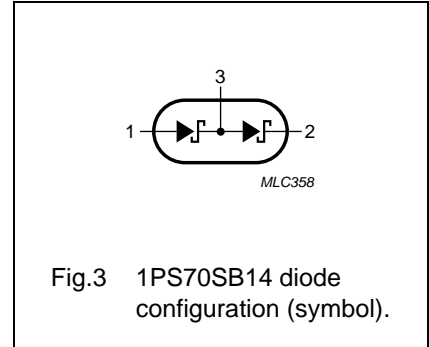
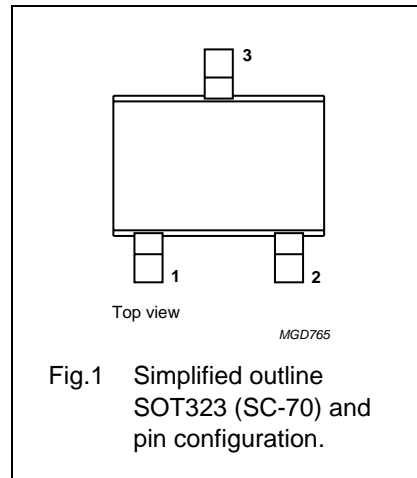
TYPE NUMBER	MARKING CODE <sup>(1)</sup>
1PS70SB10	7*0
1PS70SB14	7*4
1PS70SB15	7*5
1PS70SB16	7*6

### Note

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

### PINNING

PIN	1PS70SB..			
	10	14	15	16
1	a <sub>1</sub>	a <sub>1</sub>	a <sub>1</sub>	k <sub>1</sub>
2	n.c.	k <sub>2</sub>	a <sub>2</sub>	k <sub>2</sub>
3	k <sub>1</sub>	k <sub>1</sub> , a <sub>2</sub>	k <sub>1</sub> , k <sub>2</sub>	a <sub>1</sub> , a <sub>2</sub>



## Schottky barrier (double) diodes

1PS70SB10; 1PS70SB14;  
1PS70SB15; 1PS70SB16**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
<b>Per diode</b>					
$V_R$	continuous reverse voltage		–	30	V
$I_F$	continuous forward current		–	200	mA
$I_{FRM}$	repetitive peak forward current	$t_p \leq 1$ s; $\delta \leq 0.5$	–	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
$T_j$	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
<b>Per diode</b>				
$V_F$	continuous forward voltage	see Fig.6 $I_F = 0.1$ mA $I_F = 1$ mA $I_F = 10$ mA $I_F = 30$ mA $I_F = 100$ mA	240 320 400 500 800	mV mV mV mV mV
$I_R$	continuous reverse current	$V_R = 25$ V; note 1; see Fig.7	2	$\mu$ A
$C_d$	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

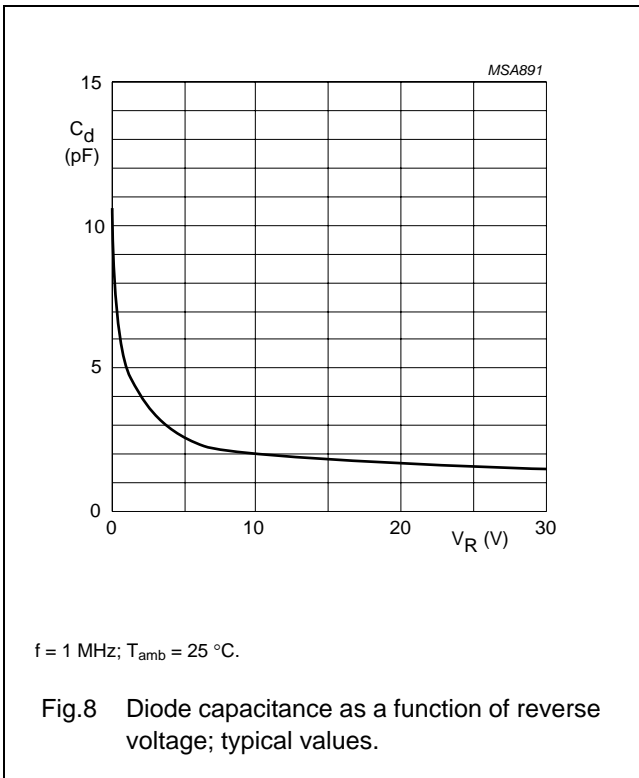
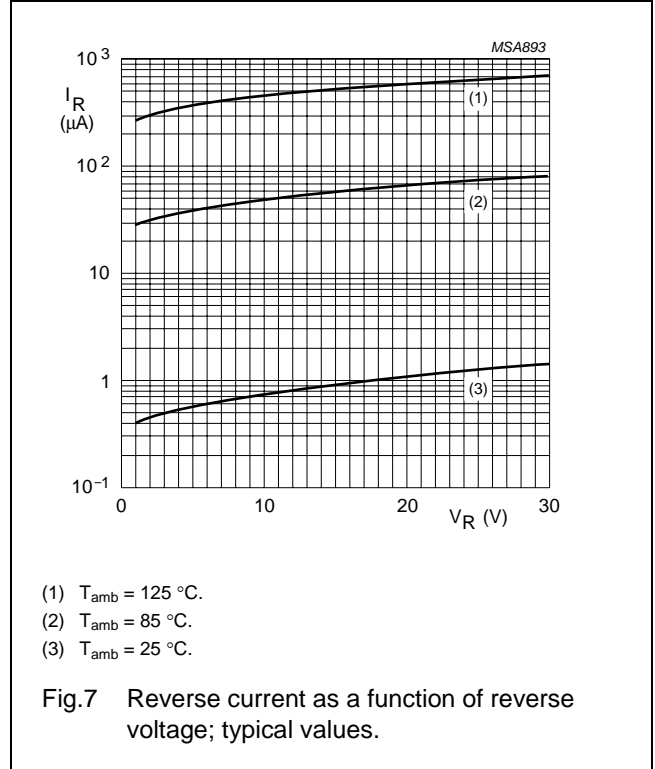
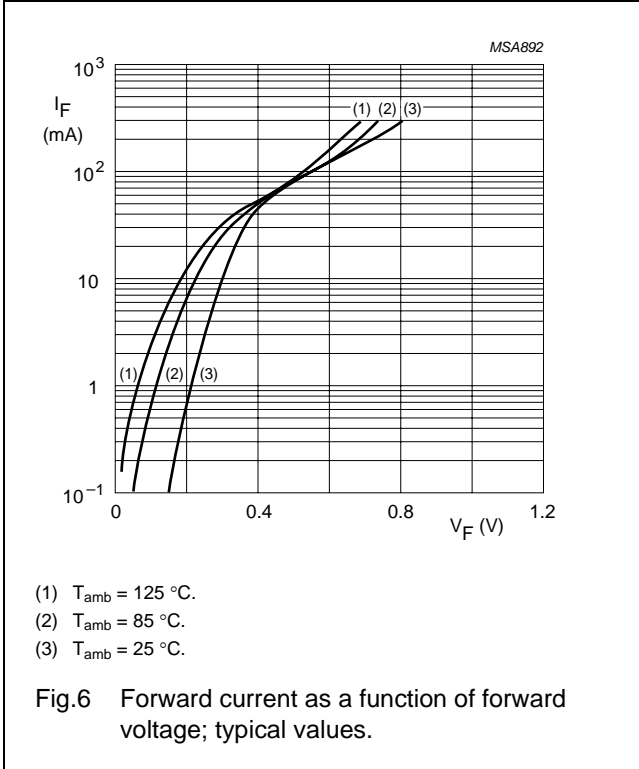
**Note**

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

Schottky barrier (double) diodes

1PS70SB10; 1PS70SB14;  
1PS70SB15; 1PS70SB16

GRAPHICAL DATA



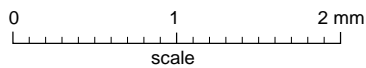
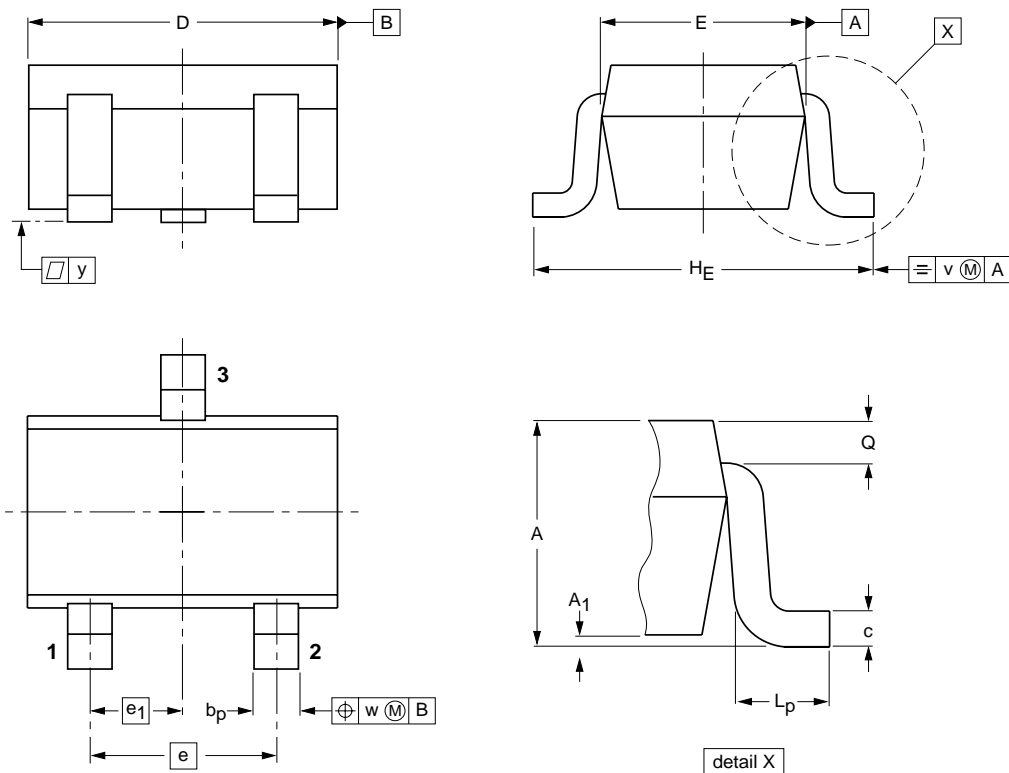
Schottky barrier (double) diodes

1PS70SB10; 1PS70SB14;  
1PS70SB15; 1PS70SB16

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****1PS70SB10; 1PS70SB14;  
1PS70SB15; 1PS70SB16****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.

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