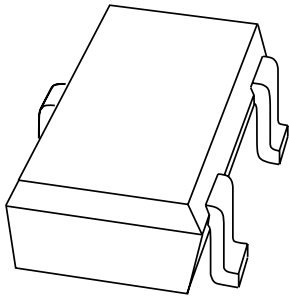


DATA SHEET



**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 ⁽¹⁾
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 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

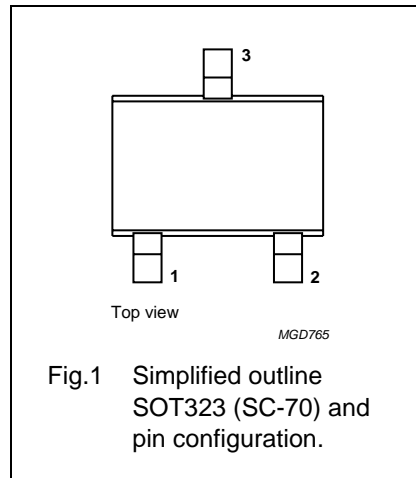


Fig.1 Simplified outline SOT323 (SC-70) and pin configuration.

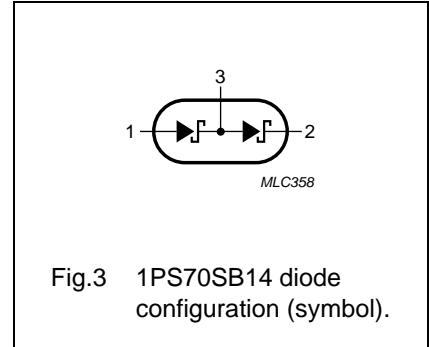


Fig.3 1PS70SB14 diode configuration (symbol).

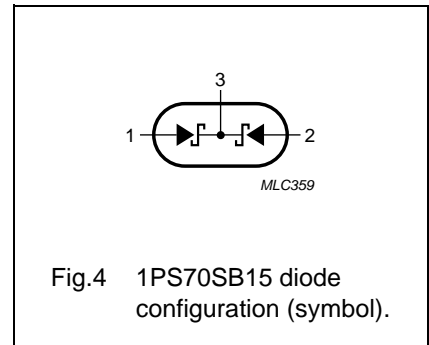


Fig.4 1PS70SB15 diode configuration (symbol).

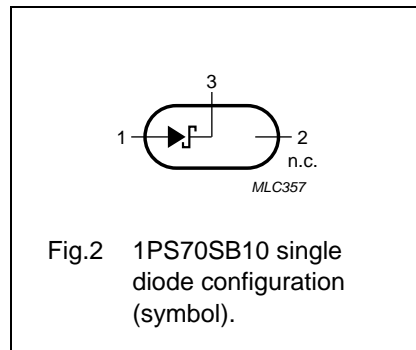


Fig.2 1PS70SB10 single diode configuration (symbol).

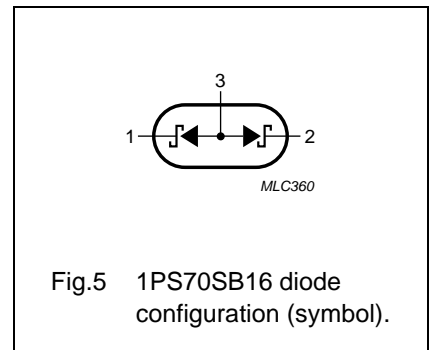


Fig.5 1PS70SB16 diode configuration (symbol).

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
Per diode					
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
Per diode				
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	μ A
C_d	diode capacitance	$V_R = 1$ V; $f = 1$ MHz; see Fig.8	10	pF

Note

1. Pulse test: $t_p = 300$ μ 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

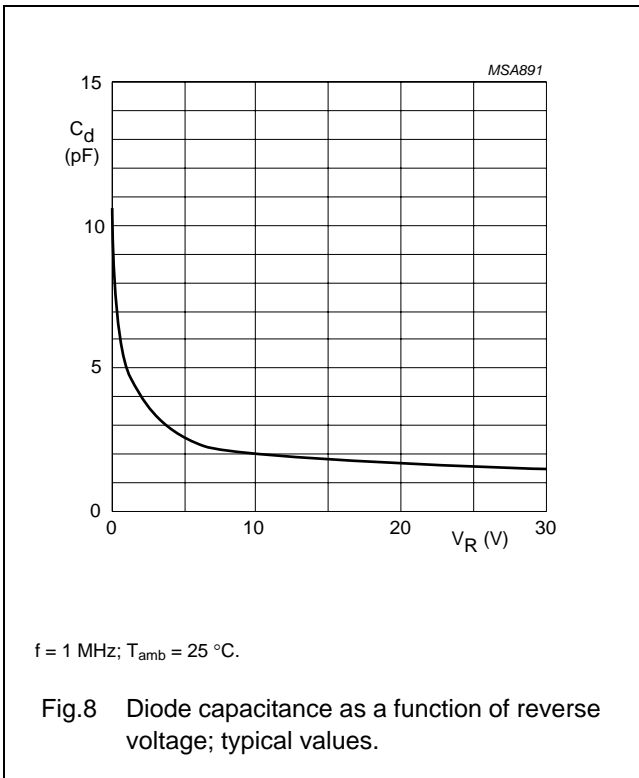
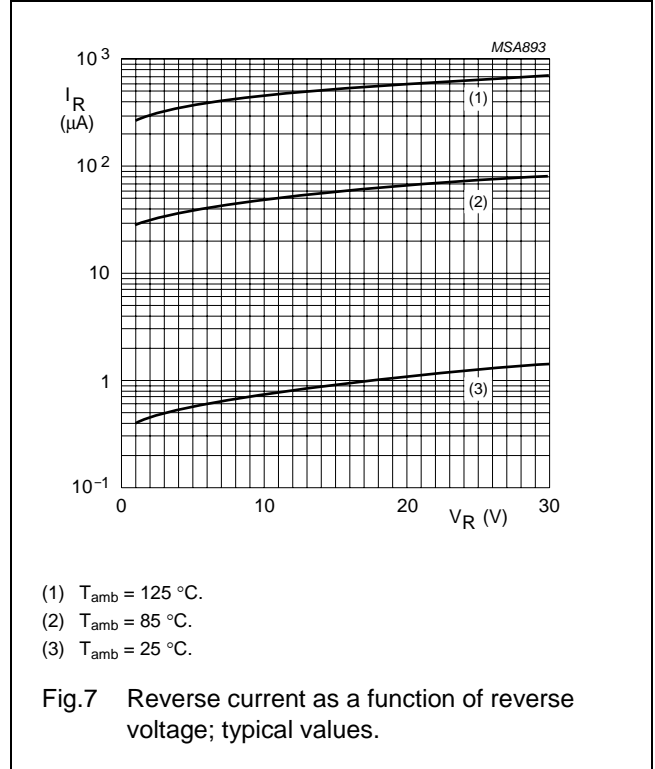
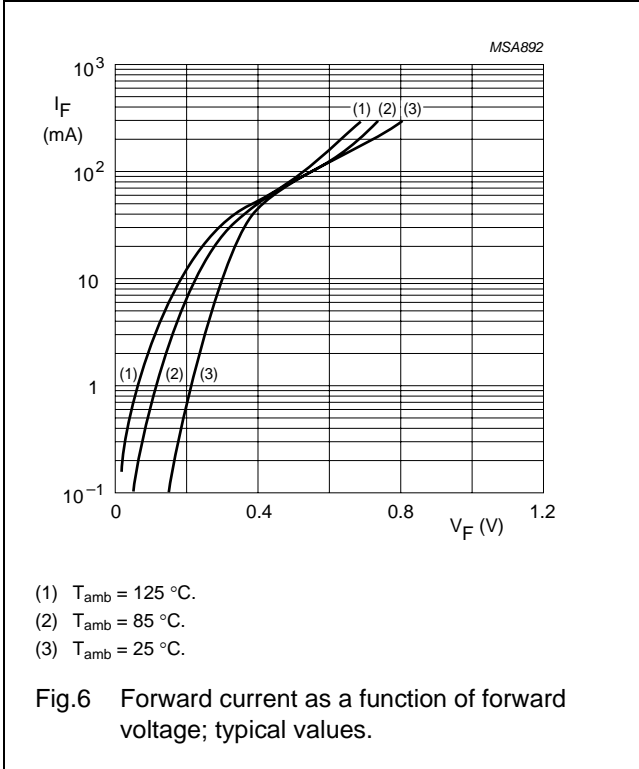
Note

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

Schottky barrier (double) diodes

1PS70SB10; 1PS70SB14;
1PS70SB15; 1PS70SB16

GRAPHICAL DATA



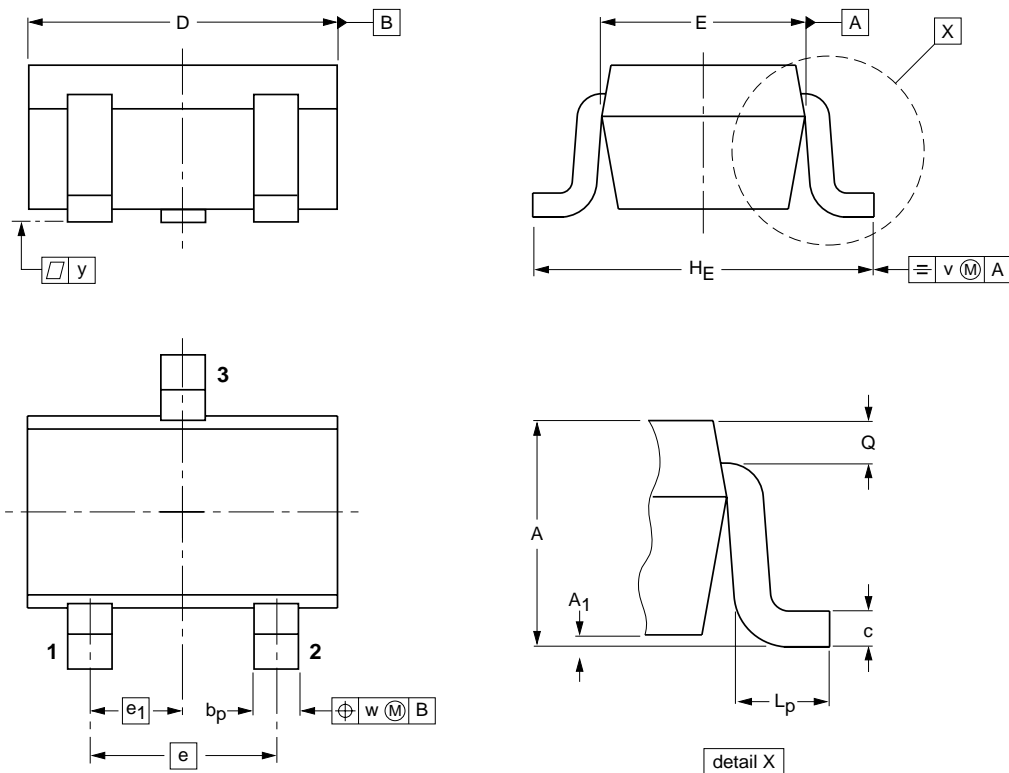
Schottky barrier (double) diodes

1PS70SB10; 1PS70SB14;
1PS70SB15; 1PS70SB16

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	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 ⁽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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Printed in The Netherlands

115002/00/01/pp7

Date of release: 1999 Apr 26

Document order number: 9397 750 05266

