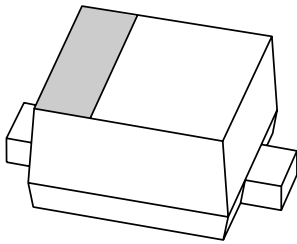


DATA SHEET



1PS79SB31 Schottky barrier diode

Product specification

2002 Jan 11

Schottky barrier diode

1PS79SB31

FEATURES

- Very low forward voltage
- Guard ring protected
- Ultra small SMD package.

APPLICATIONS

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Low current rectification
- Low power consumption applications (e.g. hand-held devices).

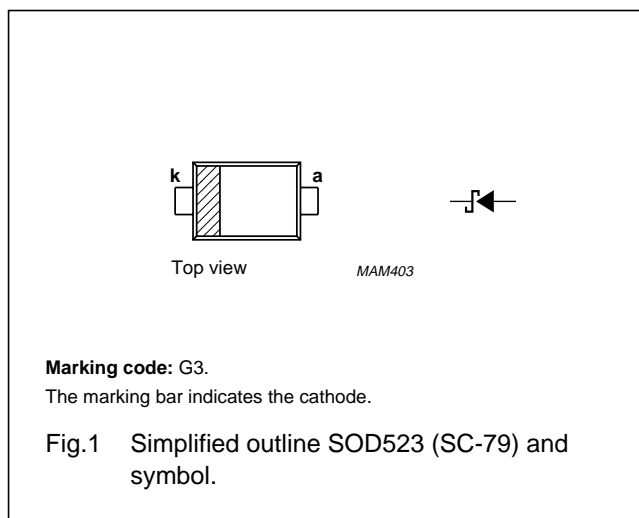
DESCRIPTION

Planar Schottky barrier diode in a SOD523 (SC-79) ultra small SMD plastic package.

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	30	V
I_F	continuous forward current		–	200	mA
I_{FRM}	repetitive peak forward current	$t_p \leq 1 \text{ s}; \delta \leq 0.5$	–	300	mA
I_{FSM}	non-repetitive peak forward current	$t = 8.3 \text{ ms}$ half sine wave; JEDEC method	–	1 000	mA
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	125	°C
T_{amb}	operating ambient temperature		–65	+125	°C



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ELECTRICAL CHARACTERISTICS $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	forward voltage	see Fig.2;			
		$I_F = 0.1\text{ mA}$	130	190	mV
		$I_F = 1\text{ mA}$	190	250	mV
		$I_F = 10\text{ mA}$	255	300	mV
		$I_F = 100\text{ mA}$	355	410	mV
		$I_F = 200\text{ mA}$	420	500	mV
I_R	continuous reverse current	$V_R = 10\text{ V}$; note 1; see Fig.3	2.5	30	μA
C_d	diode capacitance	$V_R = 1\text{ V}$; $f = 1\text{ MHz}$; see Fig.4	20	25	pF

Note

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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	450	K/W

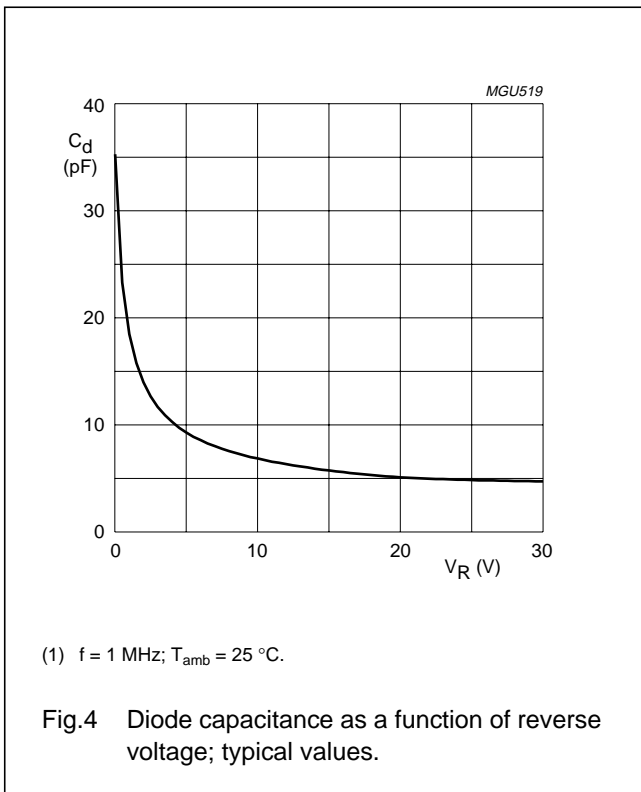
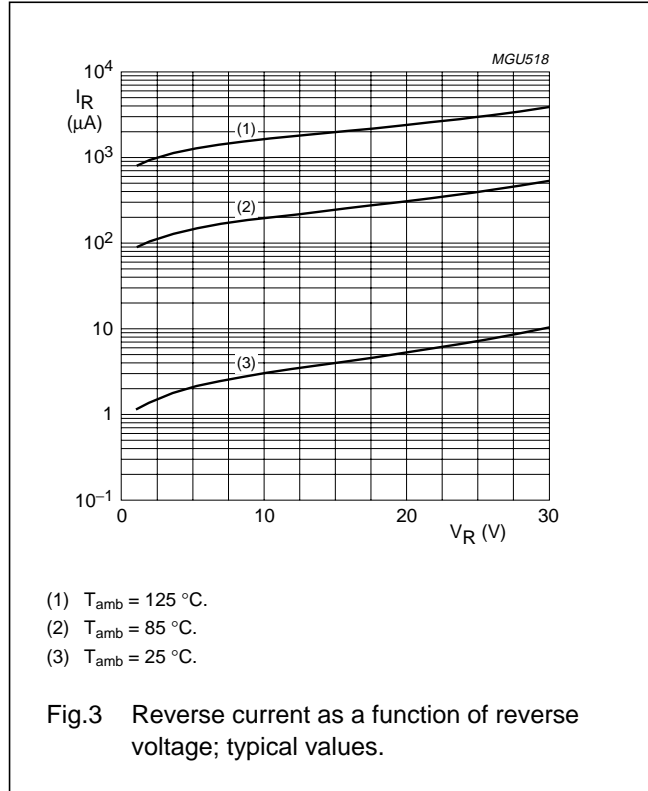
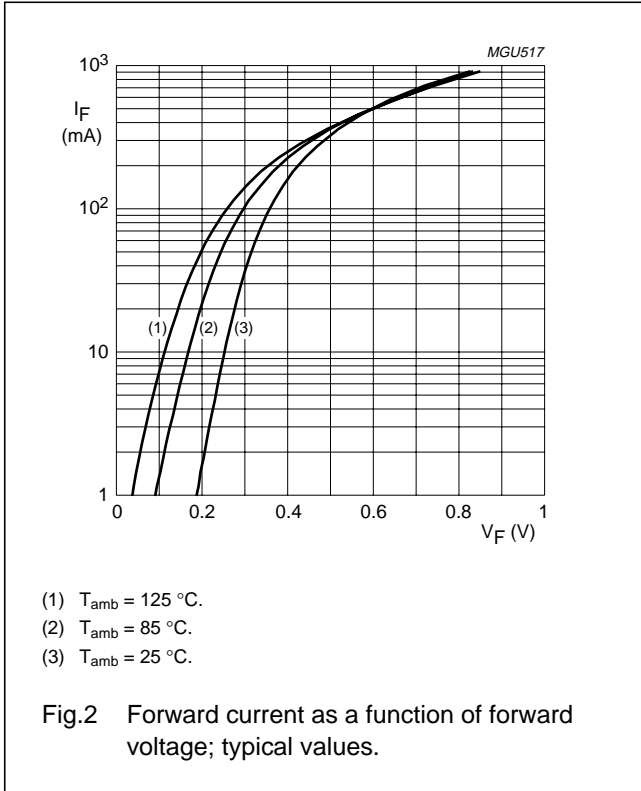
Note

1. Refer to SC-79 (SOD523) standard mounting conditions.

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GRAPHICAL DATA



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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD523

DIMENSIONS (mm are the original dimensions)

UNIT	A	bp	c	D	E	HE	v
mm	0.7 0.5	0.35 0.25	0.2 0.1	1.3 1.1	0.9 0.7	1.7 1.5	0.15

Note
1. The marking bar indicates the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOD523			SC-79			98-11-25

Schottky barrier diode

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DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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NOTES

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