



BA277

Band-switching diode

Rev. 02 — 7 January 2008

Product data sheet

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NXP Semiconductors

Band-switching diode

BA277

FEATURES

- Small plastic SMD package
- Continuous reverse voltage: max. 35 V
- Continuous forward current: max. 100 mA
- Low diode capacitance: max. 1.2 pF
- Low diode forward resistance: max. 0.7 Ω .

APPLICATIONS

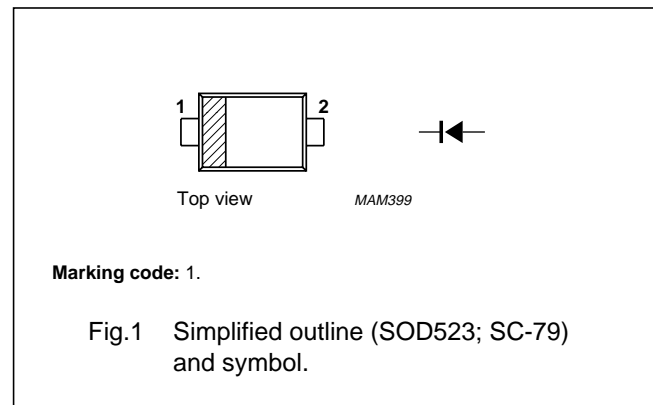
- Low loss band switching in VHF television tuners.
- Surface mount band-switching circuits.

DESCRIPTION

Planar high performance band-switching diode in a small plastic SOD523 (SC-79) SMD package.

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	35	V
I_F	continuous forward current		–	100	mA
P_{tot}	total power dissipation	$T_s = 90\text{ }^\circ\text{C}$	–	715	mW
T_{stg}	storage temperature		–65	+150	$^\circ\text{C}$
T_j	junction temperature		–65	+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

$T_j = 25\text{ }^\circ\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V_F	forward voltage	$I_F = 10\text{ mA}$	1	V
I_R	reverse current	$V_R = 25\text{ V}$	50	nA
		$V_R = 20\text{ V}; T_{amb} = 75\text{ }^\circ\text{C}$	1	μA
C_d	diode capacitance	$f = 1\text{ MHz}; V_R = 6\text{ V};$ note 1; see Fig.2	1.2	pF
r_D	diode forward resistance	$I_F = 2\text{ mA}; f = 100\text{ MHz};$ note 1; see Fig.3	0.7	Ω

Note

1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

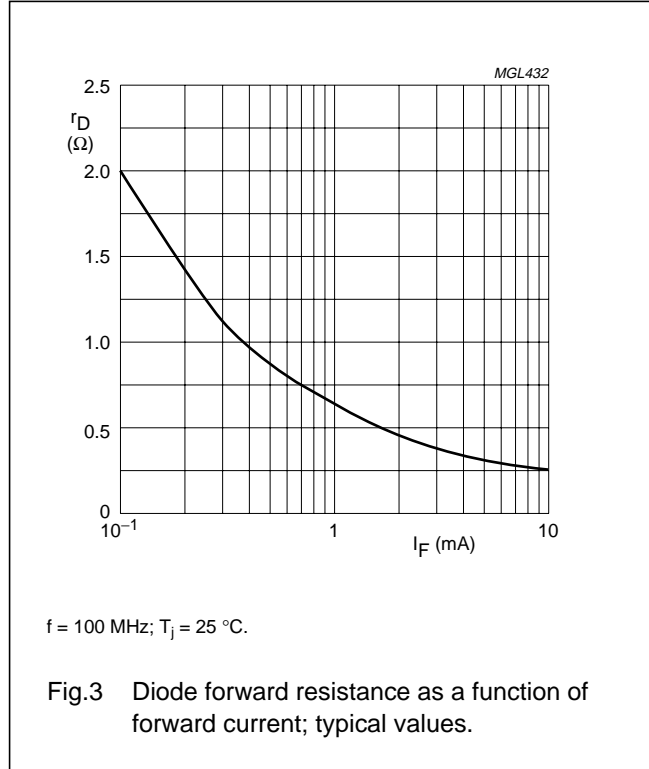
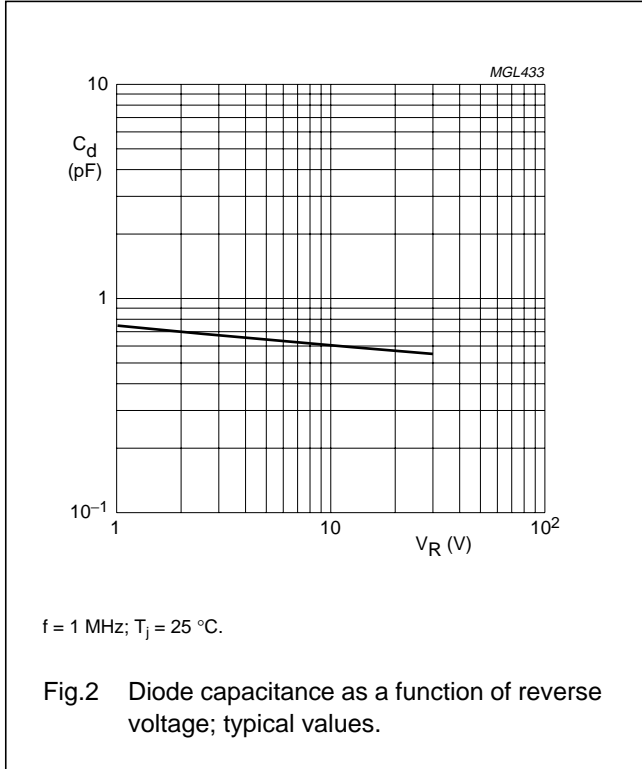
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-s}$	thermal resistance from junction to soldering-point	85	K/W

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GRAPHICAL DATA



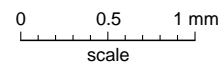
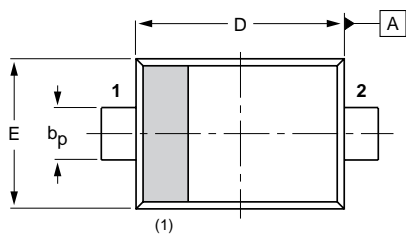
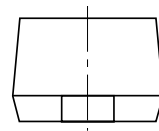
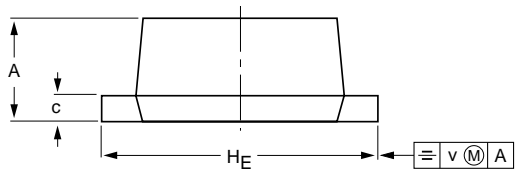
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PACKAGE OUTLINE

Plastic surface-mounted package; 2 leads

SOD523



DIMENSIONS (mm are the original dimensions)

UNIT	A	bp	c	D	E	HE	v
mm	0.65 0.58	0.34 0.26	0.17 0.11	1.25 1.15	0.85 0.75	1.65 1.55	0.1

Note

1. The marking bar indicates the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOD523			SC-79			-02-12-13- 06-03-16

Legal information

Data sheet status

Document status ^{[1][2]}	Product status ^[3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

[1] Please consult the most recently issued document before initiating or completing a design.

[2] The term 'short data sheet' is explained in section "Definitions".

[3] 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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Revision history

Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
BA277_N_2	20080107	Product data sheet	-	BA277_1
Modifications:	• Package outline on page 4 changed			
BA277_1 (9397 750 03793)	19980506	Product specification	-	-

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