

# 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  $\Omega$ .

## APPLICATIONS

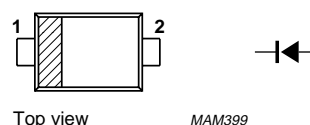
- Low loss band switching in VHF television tuners.
- Surface mount band-switching circuits.

## DESCRIPTION

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

## PINNING

PIN	DESCRIPTION
1	cathode
2	anode



Marking code: 1.

Fig.1 Simplified outline (SOD523; SC-79) and symbol.

## 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	$\mu\text{A}$
$C_d$	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	$\Omega$

## Note

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

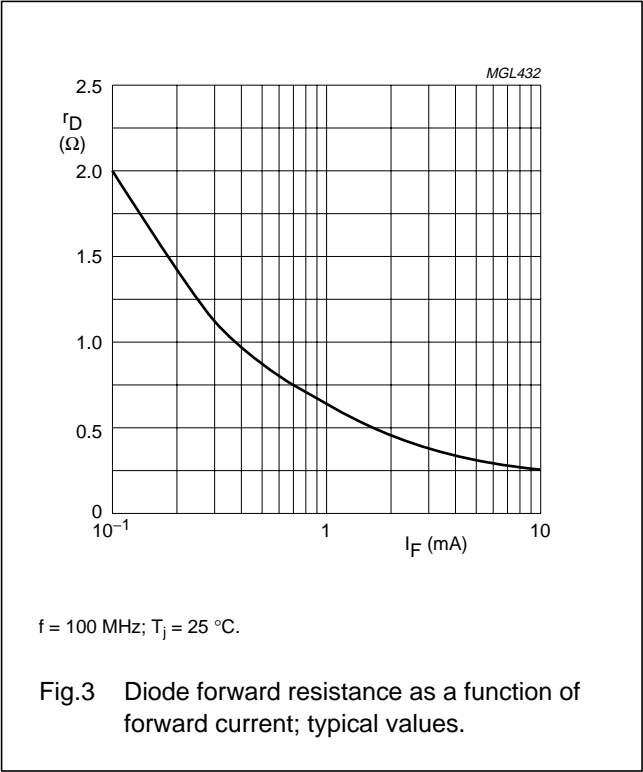
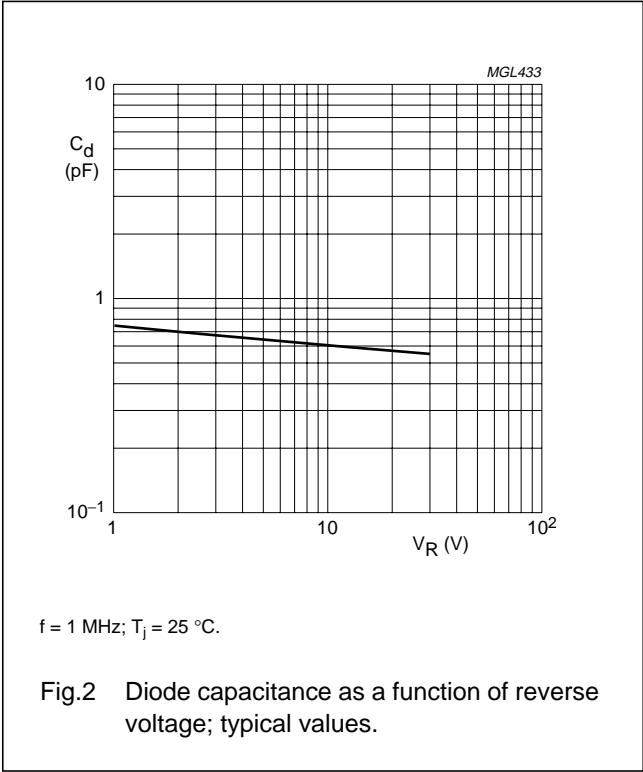
## THERMAL CHARACTERISTICS

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

Band-switching diode

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GRAPHICAL DATA



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PACKAGE OUTLINE

Plastic surface-mounted package; 2 leads

SOD523

0 0.5 1 mm  
scale

**DIMENSIONS (mm are the original dimensions)**

UNIT	A	b <sub>p</sub>	c	D	E	H <sub>E</sub>	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 <sup>[1][2]</sup>	Product status <sup>[3]</sup>	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".

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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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