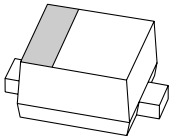

BA277

Band-switching diode

Rev. 02 — 7 January 2008 **Product data sheet**

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NXP Semiconductors

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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

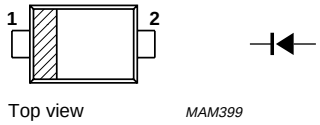
- Low loss band switching in VHF television tuners.
- Surface mount band-switching circuits.

DESCRIPTION

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

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



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 °C	–	715	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–65	+150	°C

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

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

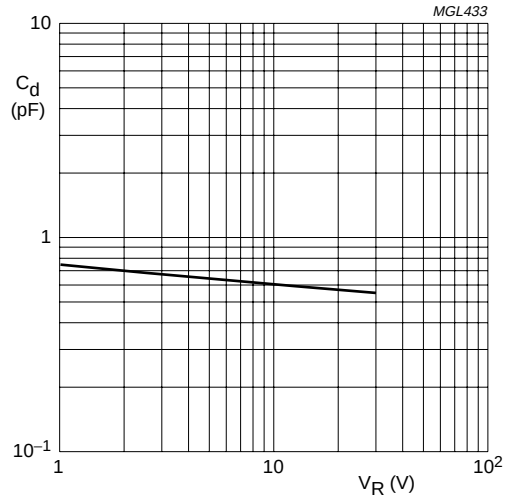
Note

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

THERMAL CHARACTERISTICS

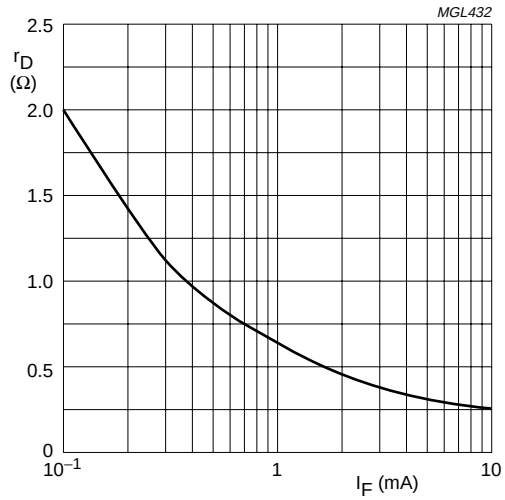
SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}s}$	thermal resistance from junction to soldering-point	85	K/W

GRAPHICAL DATA



f = 1 MHz; T_j = 25 °C.

Fig.2 Diode capacitance as a function of reverse voltage; typical values.

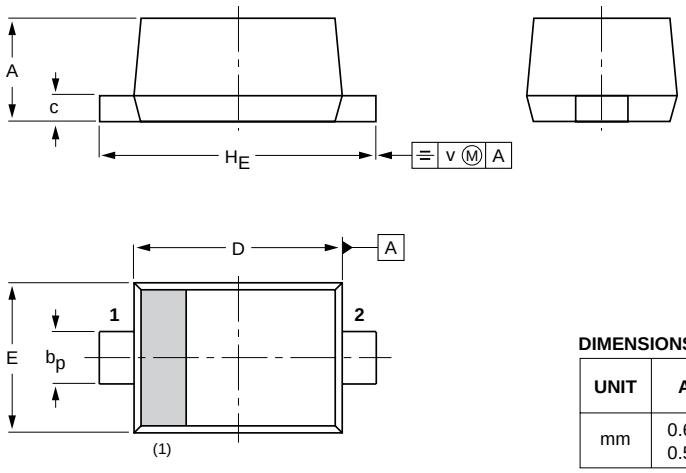


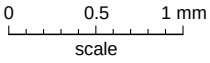
f = 100 MHz; T_j = 25 °C.

Fig.3 Diode forward resistance as a function of forward current; typical values.

PACKAGE OUTLINE

Plastic surface-mounted package; 2 leads **SOD523**





DIMENSIONS (mm are the original dimensions)

UNIT	A	b_p	c	D	E	H_E	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".

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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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Date of release: 7 January 2008
Document identifier: BA277_N_2