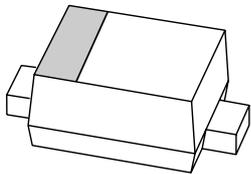


# DATA SHEET



## **BA277-01** Band-switching diode

Product specification  
Supersedes data of 2001 Sep 07

2002 Oct 29

# Band-switching diode

**BA277-01**

## 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

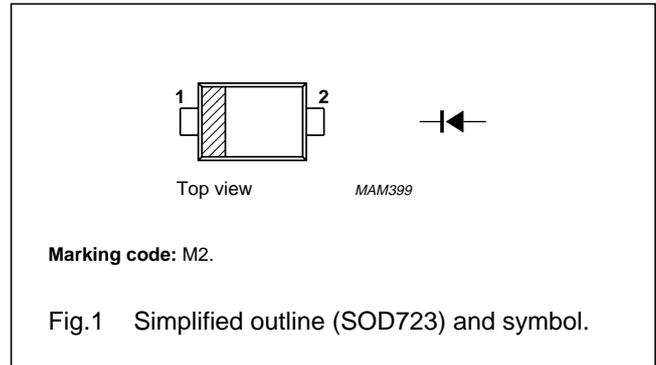
- Low loss band switching in VHF television tuners
- Surface mount band-switching circuits.

## DESCRIPTION

Planar high performance band-switching diode in a small SOD723 SMD plastic package.

## PINNING

PIN	DESCRIPTION
1	cathode
2	anode



## LIMITING VALUES

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

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	$T_s = 90\text{ }^\circ\text{C}$	–	315	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	$f = 1\text{ MHz}; V_R = 6\text{ V};$ 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.

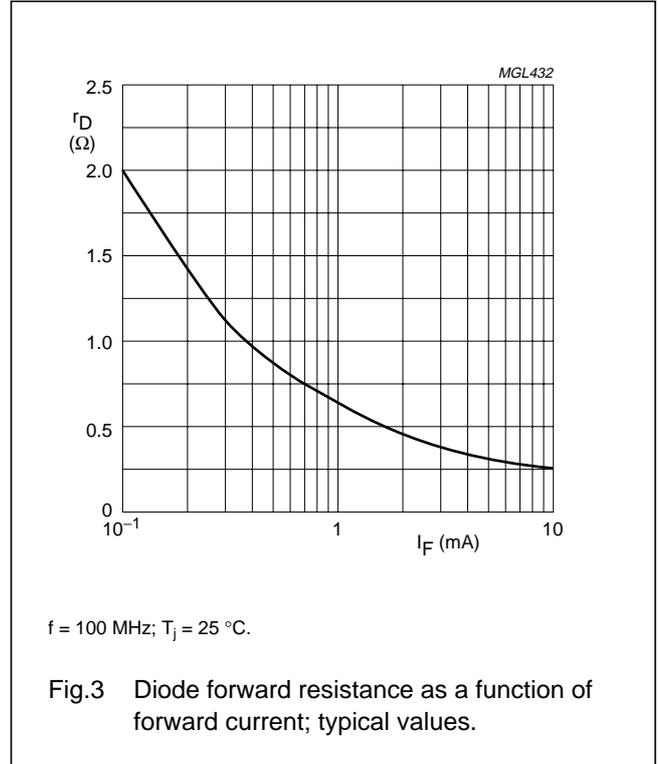
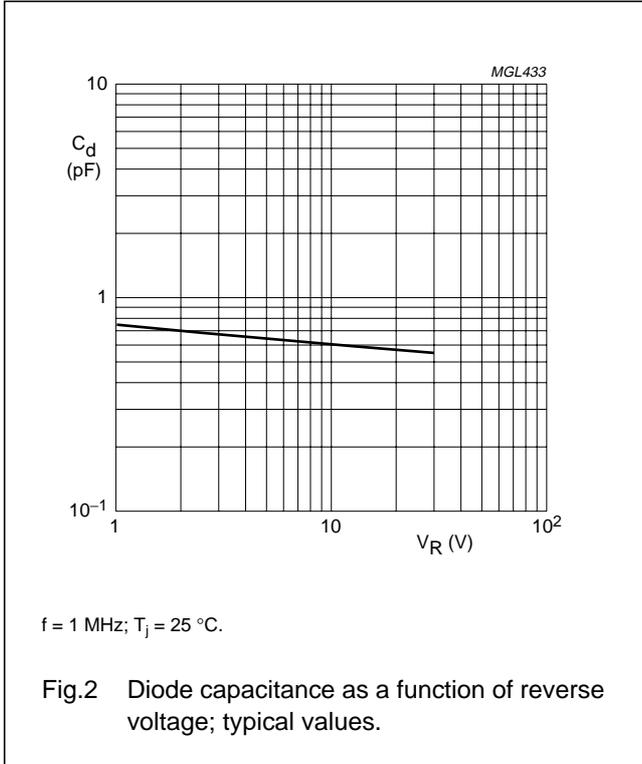
## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-s}$	thermal resistance from junction to soldering-point	190	K/W

Band-switching diode

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GRAPHICAL DATA



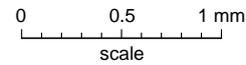
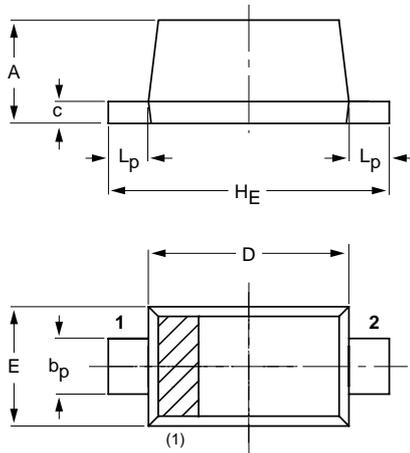
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD723



DIMENSIONS (mm are the original dimensions)

UNIT	A	bp	c	D	E	HE	Lp
mm	0.55	0.32	0.15	1.05	0.65	1.45	0.27
	0.49	0.25	0.08	0.95	0.55	1.35	0.13

Note

1. The marking bar indicates the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOD723						02-07-05

## Band-switching diode

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## DATA SHEET STATUS

LEVEL	DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)(3)</sup>	DEFINITION
I	Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
II	Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
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3. For data sheets describing multiple type numbers, the highest-level product status determines the data sheet status.

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**Limiting values definition** — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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Band-switching diode

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**NOTES**

Band-switching diode

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**NOTES**

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