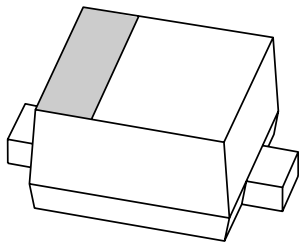


DATA SHEET



BA891 Band-switching diode

Product specification
Supersedes data of 1998 Aug 31

2002 Jan 25

Band-switching diode

BA891

FEATURES

- Ultra small plastic SMD package
- Low diode capacitance: max. 1.05 pF
- Low diode forward resistance: max. 0.7 Ω
- Small inductance.

APPLICATIONS

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

DESCRIPTION

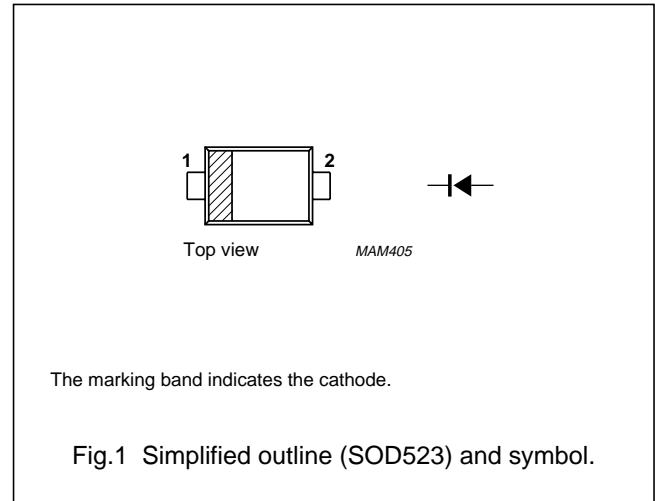
The BA891 is a planar high performance band-switching diode in the ultra small SOD523 SMD plastic package.

MARKING

TYPE NUMBER	MARKING CODE
BA891	7

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	$T_s = 90\text{ }^\circ\text{C}$	–	715	mW
T_{stg}	storage temperature		–65	+150	$^\circ\text{C}$
T_j	junction temperature		–65	+150	$^\circ\text{C}$

Band-switching diode

BA891

THERMAL CHARACTERISTICS

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

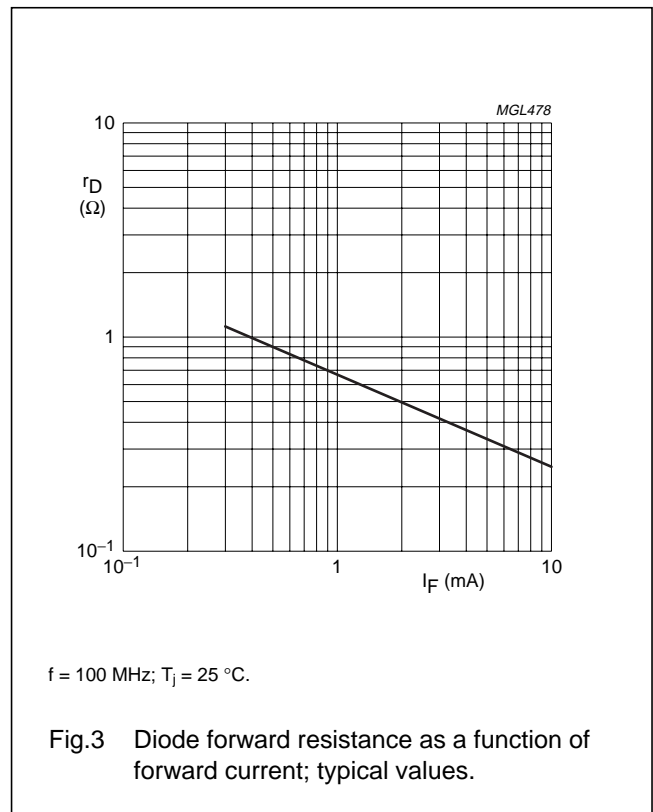
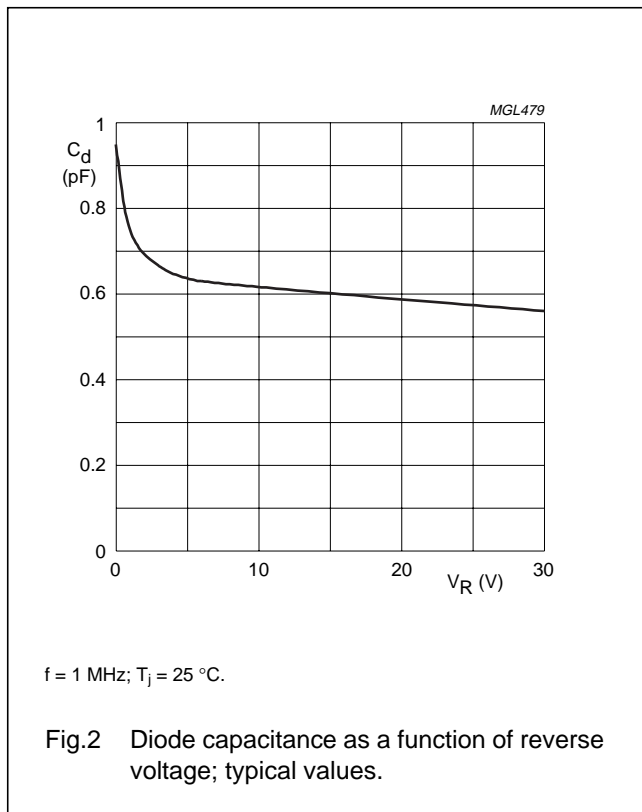
CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	forward voltage	$I_F = 10\text{ mA}$	–	1	V
I_R	reverse current	$V_R = 30\text{ V}$	–	20	nA
C_d	diode capacitance	$f = 1\text{ MHz}$; note 1; see Fig.2 $V_R = 1\text{ V}$ $V_R = 3\text{ V}$	0.8 0.65	1.05 0.9	pF pF
r_D	diode forward resistance	$f = 100\text{ MHz}$; note 1; see Fig.3 $I_F = 3\text{ mA}$ $I_F = 10\text{ mA}$	0.42 0.28	0.7 0.5	Ω Ω
L_S	series inductance		0.6	–	nH

Note

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



Band-switching diode

BA891

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

Band-switching diode

BA891

DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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.
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.
Product data	Production	This data sheet contains data from the product specification. Philips Semiconductors reserves the right to make changes at any time in order to improve the design, manufacturing and supply. Changes will be communicated according to the Customer Product/Process Change Notification (CPCN) procedure SNW-SQ-650A.

Notes

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2. The product status of the device(s) described in this data sheet may have changed since this data sheet was published. The latest information is available on the Internet at URL <http://www.semiconductors.philips.com>.

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Band-switching diode

BA891

NOTES

Band-switching diode

BA891

NOTES

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