

Product data sheet

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NXP Semiconductors



Product specification

Low-voltage variable capacitance diode

BB202

FEATURES

- Very steep C/V curve
- C0.2: 30.5 pF; C2.3: 9.5 pF
- C0.2 to C2.3 ratio: min. 2.5
- Very low series resistance
- Ultra small SMD plastic package.

APPLICATIONS

- Electronic tuning in FM radio
- Voltage Controlled Oscillators (VCO).

DESCRIPTION

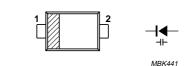
The BB202 is a variable capacitance diode, fabricated in planar technology, and encapsulated in the SOD523 ultra small SMD plastic package.

MARKING

TYPE NUMBER	MARKING CODE		
BB202	L2		

PINNING

PIN	DESCRIPTION		
1	cathode		
2	anode		



The marking bar indicates the cathode.

Fig.1 Simplified outline (SOD523) and symbol.

LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V _R	continuous reverse voltage	-	6	V
IF	continuous forward current	-	10	mA
T _{stg}	storage temperature	-55	+85	°C
Tj	operating junction temperature	-55	+85	°C

ELECTRICAL CHARACTERISTICS

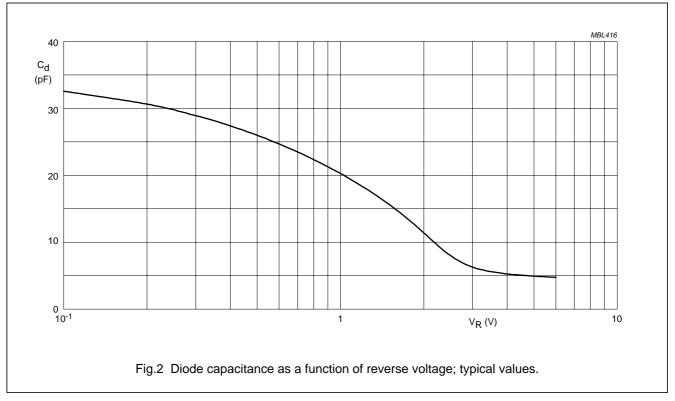
 $T_i = 25 \ ^{\circ}C$ unless otherwise specified.

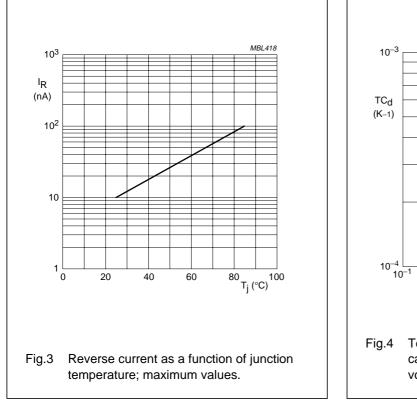
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I _R	reverse current	V _R = 6 V; see Fig.3	-	-	10	nA
		V _R = 6 V; T _j = 85 °C; see Fig 3	_	-	100	nA
r _s	diode series resistance	f = 100 MHz; C = 30 pF	-	0.35	0.6	Ω
C _d	diode capacitance	V _R = 0.2; f = 1 MHz; see Fig.2 and Fig.4	28.2	-	33.5	pF
		$V_R = 2.3$; f = 1 MHz; see Fig.2 and Fig.4	7.2	-	11.2	pF
$\frac{C_{d(0.2V)}}{C_{d(2.3V)}}$	capacitance ratio	f = 1 MHz	2.5	_	-	

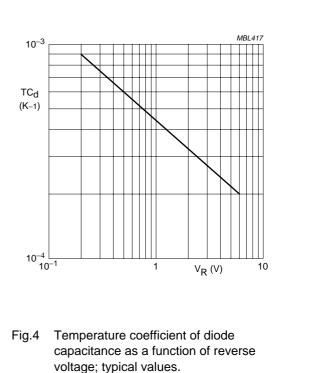
BB202

Low-voltage variable capacitance diode

GRAPHICAL DATA



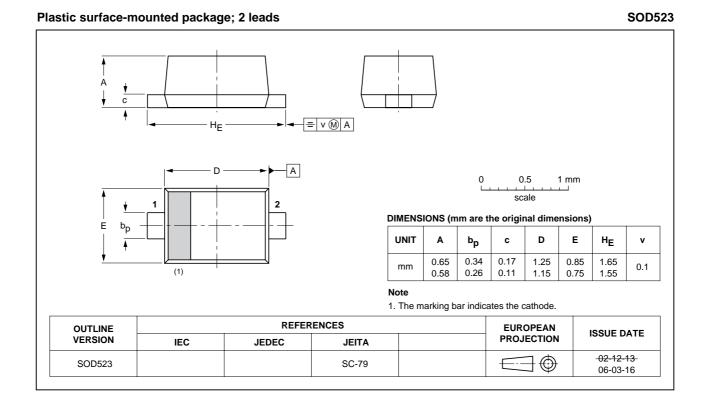




Product specification

Low-voltage variable capacitance diode

PACKAGE OUTLINE



Rev. 02 - 3 January 2008

BB202

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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Low-voltage variable capacitance diode

Revision history

Revision history					
Document ID	Release date	Data sheet status	Change notice	Supersedes	
BB202_N_2	20080103	Product data sheet	-	BB202_1	
Modifications: • Package outline drawing on page 4 changed					
BB202_1 (9397 750 09195)	20020218	Product specification	-	-	

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Date of release: 3 January 2008 Document identifier: BB202_N_2

