DISCRETE SEMICONDUCTORS

DATA SHEET



BB145B Low-voltage variable capacitance diode

Product specification Supersedes data of 2002 Nov 18 2004 Mar 29



Low-voltage variable capacitance diode

BB145B

FEATURES

- Ultra small plastic SMD package
- C4: 2.75 pF; ratio: 2.4
- · Low series resistance.

APPLICATIONS

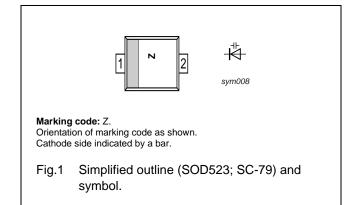
• Voltage controlled oscillators (VCO).

DESCRIPTION

The BB145B is a planar technology variable capacitance diode in a SOD523 (SC-79) package.

PINNING

PIN	DESCRIPTION	
1	cathode	
2	anode	



ORDERING INFORMATION

TYPE NUMBER		PACKAGE		
	NAME	DESCRIPTION	VERSION	
BB145B – I		plastic surface mounted package; 2 leads	SOD523	

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		_	6	٧
V_{RM}	peak reverse voltage	in series with a 10 kΩ resistor	_	8	V
I _F	continuous forward current		_	20	mA
T _{stg}	storage temperature		-55	+150	°C
Tj	operating junction temperature		-55	+150	°C

ELECTRICAL CHARACTERISTICS

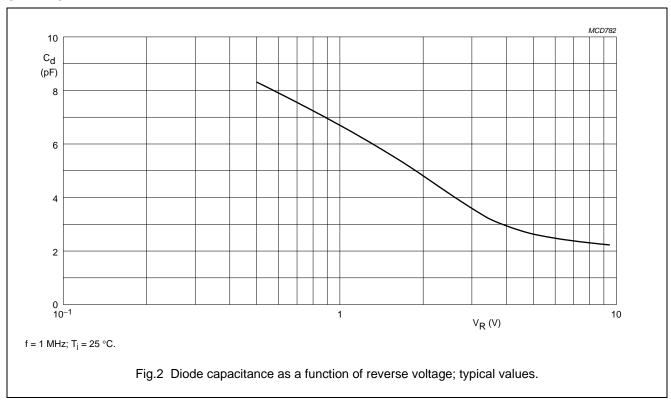
 $T_i = 25$ °C unless otherwise specified.

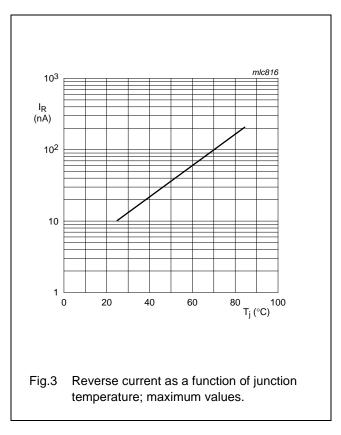
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _R	reverse current	V _R = 6 V; see Fig.3	_	10	nA
		$V_R = 6 \text{ V}; T_j = 85 ^{\circ}\text{C}; \text{ see Fig.3}$	_	200	nA
r _s	diode series resistance	f = 470 MHz; V _R = 1 V	_	0.6	Ω
C _d	diode capacitance	V _R = 1 V; f = 1 MHz; see Figs 2 and 4	6.4	7.2	pF
		$V_R = 4 \text{ V}$; f = 1 MHz; see Figs 2 and 4	2.55	2.95	pF
$C_{d(1V)}$	capacitance ratio	f = 1 MHz	2.2	_	
$\frac{C_{d(1V)}}{C_{d(4V)}}$					

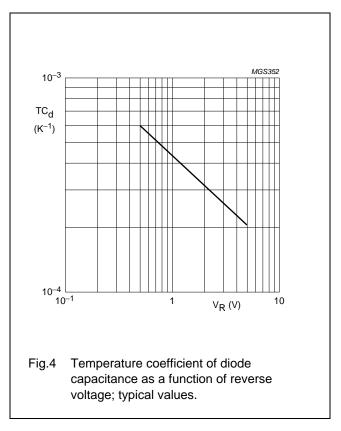
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GRAPHICAL DATA







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PACKAGE OUTLINE

VERSION

SOD523

IEC

JEDEC

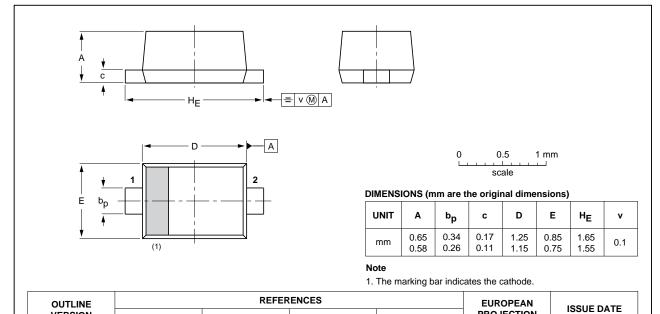


SOD523

PROJECTION

02-12-13

06-03-16



JEITA

SC-79

2004 Mar 29

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DATA SHEET STATUS

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

Notes

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- 2. 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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Customer notification

This data sheet was changed to reflect the new company name NXP Semiconductors, including new legal definitions and disclaimers. No changes were made to the technical content, except for package outline drawings which were updated to the latest version.

Contact information

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Printed in The Netherlands R77/03/pp7 Date of release: 2004 Mar 29