

DATA SHEET



BB156

Low-voltage variable capacitance
diode

Product specification
Supersedes data of 1998 Aug 17

2004 Mar 01

Low-voltage variable capacitance diode

BB156

FEATURES

- Excellent linearity
- Very small plastic SMD package
- C7.5: 4.8 pF; ratio 3.3
- Very low series resistance.

APPLICATIONS

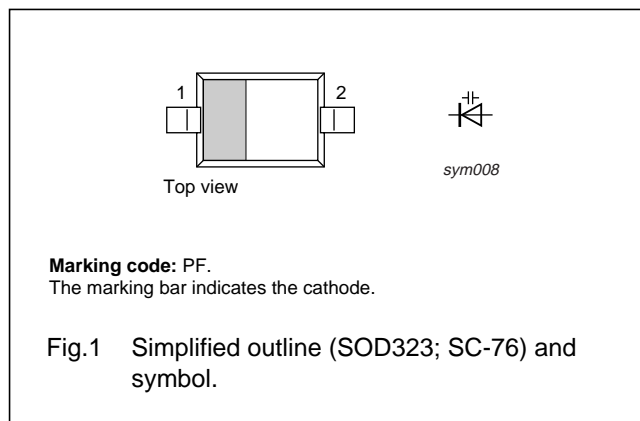
- Voltage controlled oscillators (VCO).

DESCRIPTION

The BB156 is a planar technology variable capacitance diode, in a SOD323 very small plastic SMD package.

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BB156	–	plastic surface mounted package; 2 leads	SOD323

LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V_R	continuous reverse voltage	–	10	V
I_F	continuous forward current	–	20	mA
T_{stg}	storage temperature	–55	+150	°C
T_j	operating junction temperature	–55	+125	°C

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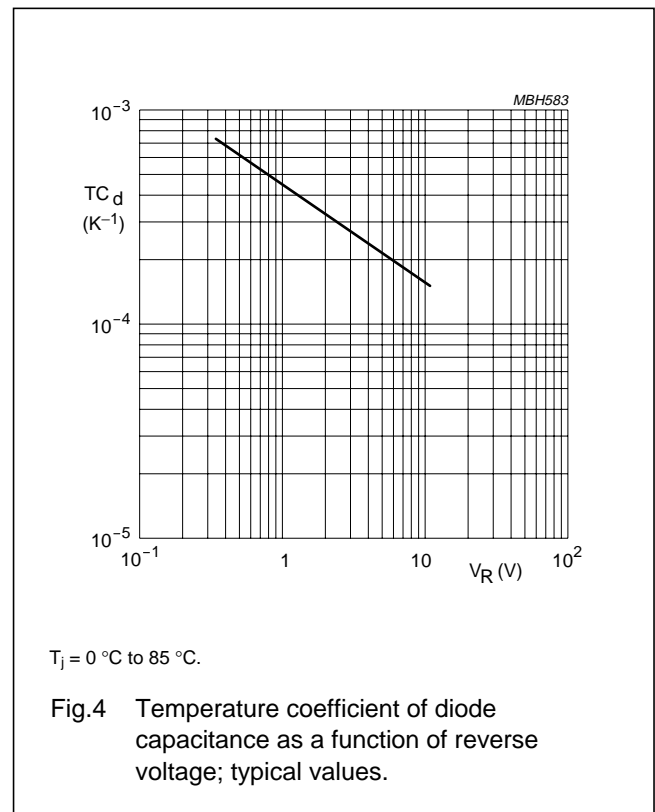
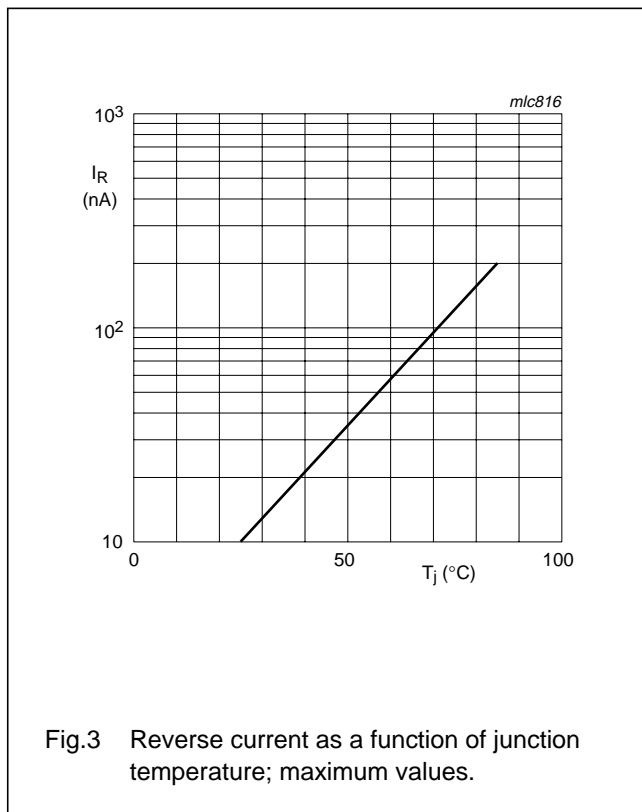
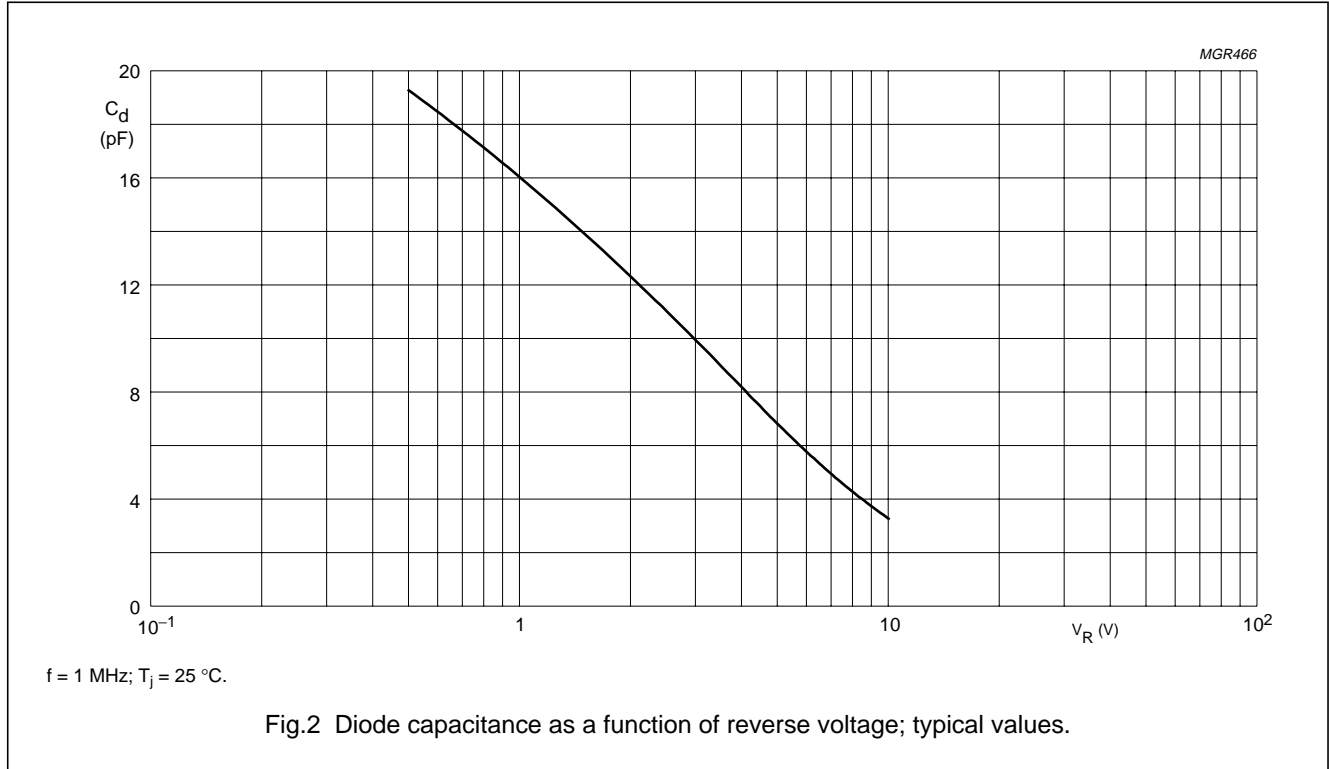
ELECTRICAL CHARACTERISTICS $T_j = 25\text{ °C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_R	reverse current	$V_R = 10\text{ V}$; see Fig.3	–	–	10	nA
		$V_R = 10\text{ V}$; $T_j = 85\text{ °C}$; see Fig.3	–	–	200	nA
r_s	diode series resistance	$f = 470\text{ MHz}$; $C_d = 9\text{ pF}$	–	0.4	0.7	Ω
C_d	diode capacitance	$f = 1\text{ MHz}$; see Figs 2 and 4				
		$V_R = 1\text{ V}$	14.4	16	17.6	pF
		$V_R = 4\text{ V}$	7.6	8.6	9.6	pF
		$V_R = 7.5\text{ V}$	4.2	4.8	5.4	pF
$\frac{C_{d(1\text{ V})}}{C_{d(7.5\text{ V})}}$	capacitance ratio	$f = 1\text{ MHz}$	2.7	3.3	3.9	

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GRAPHICAL DATA



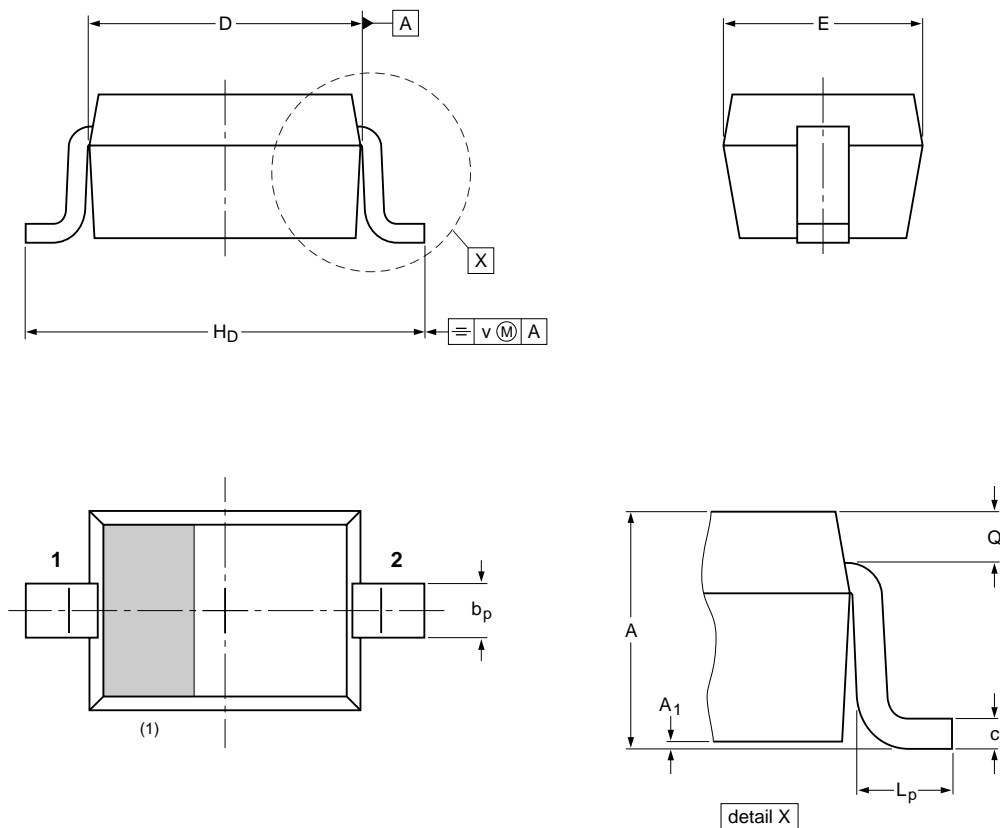
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	H _D	L _p	Q	v
mm	1.1 0.8	0.05	0.40 0.25	0.25 0.10	1.8 1.6	1.35 1.15	2.7 2.3	0.45 0.15	0.25 0.15	0.2

Note

1. The marking bar indicates the cathode

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA		
SOD323			SC-76		-99-09-13- 03-12-17

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DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	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.
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DEFINITIONS

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