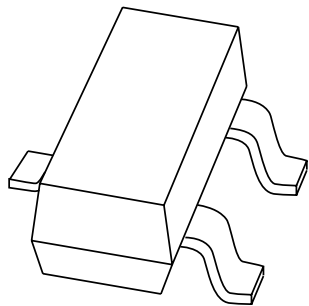


DATA SHEET



BB201

Low-voltage variable capacitance
double diode

Product specification

2001 Oct 12

Low-voltage variable capacitance double diode

BB201

FEATURES

- Excellent linearity
- C1: 95 pF; C7.5: 27.6 pF
- C1 to C7.5 ratio: min. 3.1
- Very low series resistance
- Small plastic SMD package.

APPLICATIONS

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

DESCRIPTION

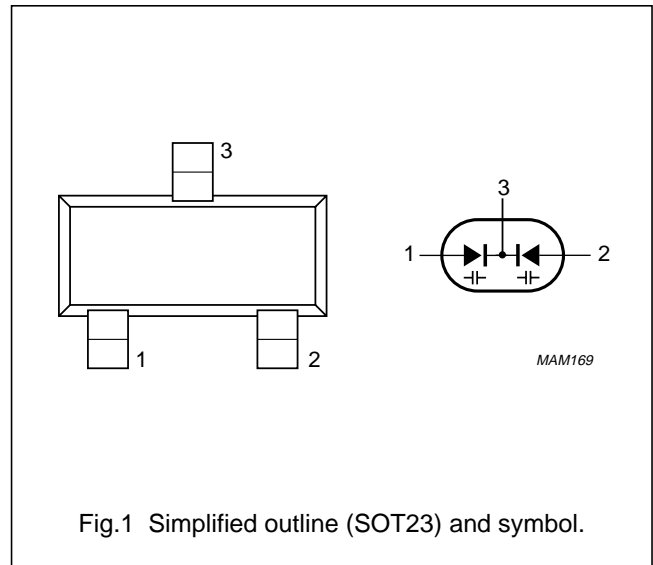
The BB201 is a variable capacitance double diode with a common cathode, fabricated in silicon planar technology and encapsulated in the SOT23 small plastic SMD package.

MARKING

TYPE NUMBER	MARKING CODE
BB201	SCp

PINNING

PIN	DESCRIPTION
1	anode (a ₁)
2	anode (a ₂)
3	common cathode



LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
Per diode				
V _R	continuous reverse voltage	–	15	V
I _F	continuous forward current	–	20	mA
T _{stg}	storage temperature range	–55	+125	°C
T _j	operating junction temperature	–55	+125	°C

Low-voltage variable capacitance double diode

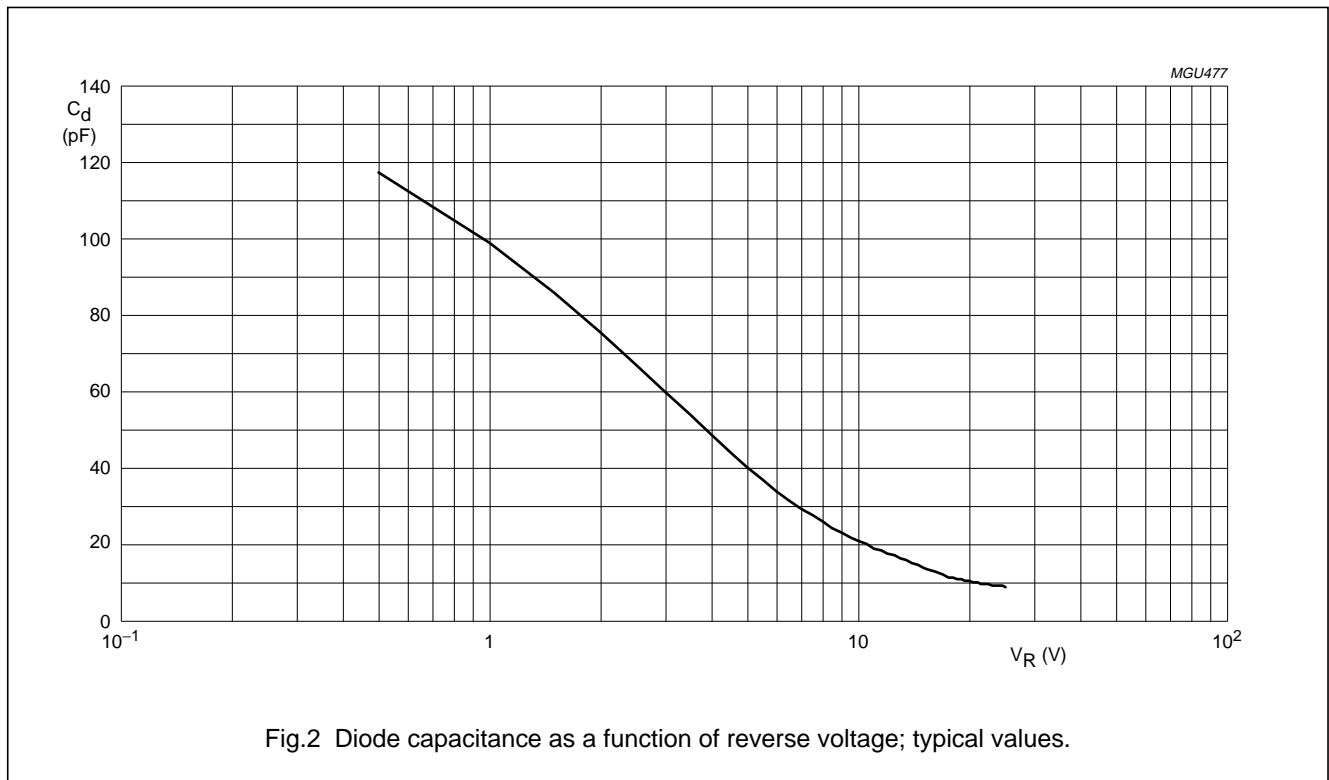
BB201

CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

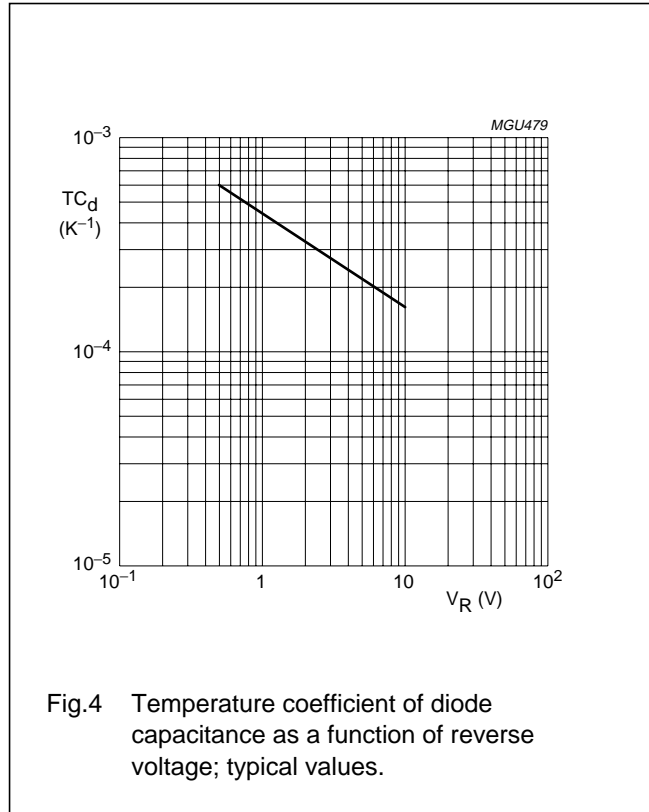
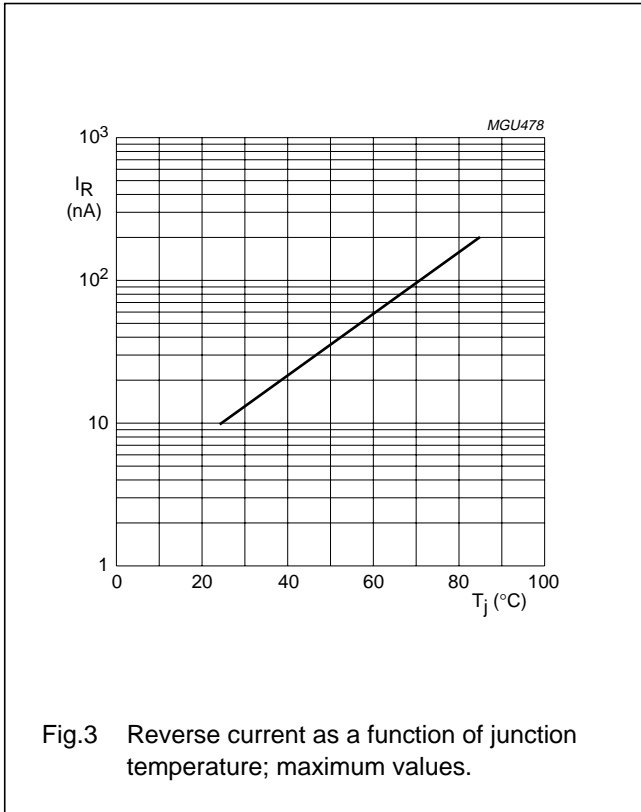
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Per diode						
I _R	reverse current	V _R = 15 V	–	–	10	nA
		V _R = 15 V; T _j = 85 °C	–	–	200	nA
r _S	diode series resistance	f = 100 MHz; V _R = 3 V	–	0.25	0.5	Ω
C _d	diode capacitance	V _R = 1 V; f = 1 MHz	89	95	102	pF
		V _R = 3 V; f = 1 MHz	–	60	–	pF
		V _R = 7.5 V; f = 1 MHz	25.5	27.6	29.7	pF
		V _R = 8 V; f = 1 MHz	–	25.5	–	pF
$\frac{C_{d(1V)}}{C_{d(7.5V)}}$	capacitance ratio	f = 1 MHz	3.1	–	3.8	

GRAPHICAL DATA



Low-voltage variable capacitance double diode

BB201



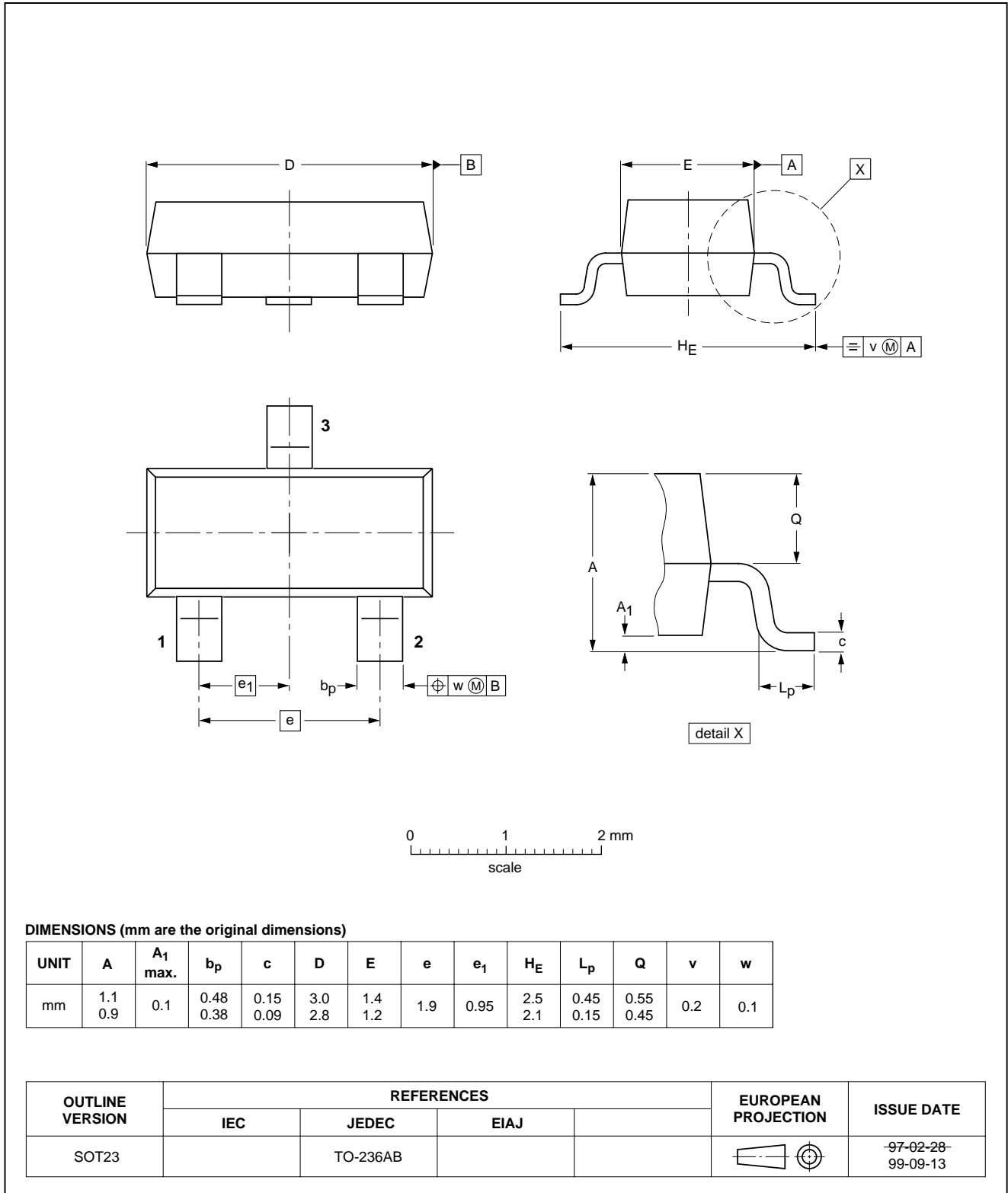
Low-voltage variable capacitance double diode

BB201

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



Low-voltage variable capacitance double diode

BB201

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.
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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.

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Low-voltage variable capacitance double diode

BB201

NOTES

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Printed in The Netherlands

613514/01/pp8

Date of release: 2001 Oct 12

Document order number: 9397 750 08684

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