

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

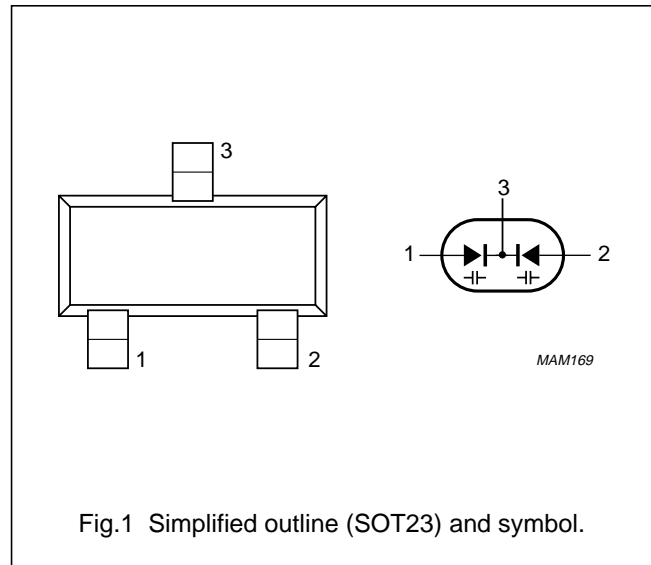
The BB201 is a variable capacitance double diode with a common cathode, fabricated in silicon planar technology and encapsulated in the SOT23 small plastic SMD package.

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

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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

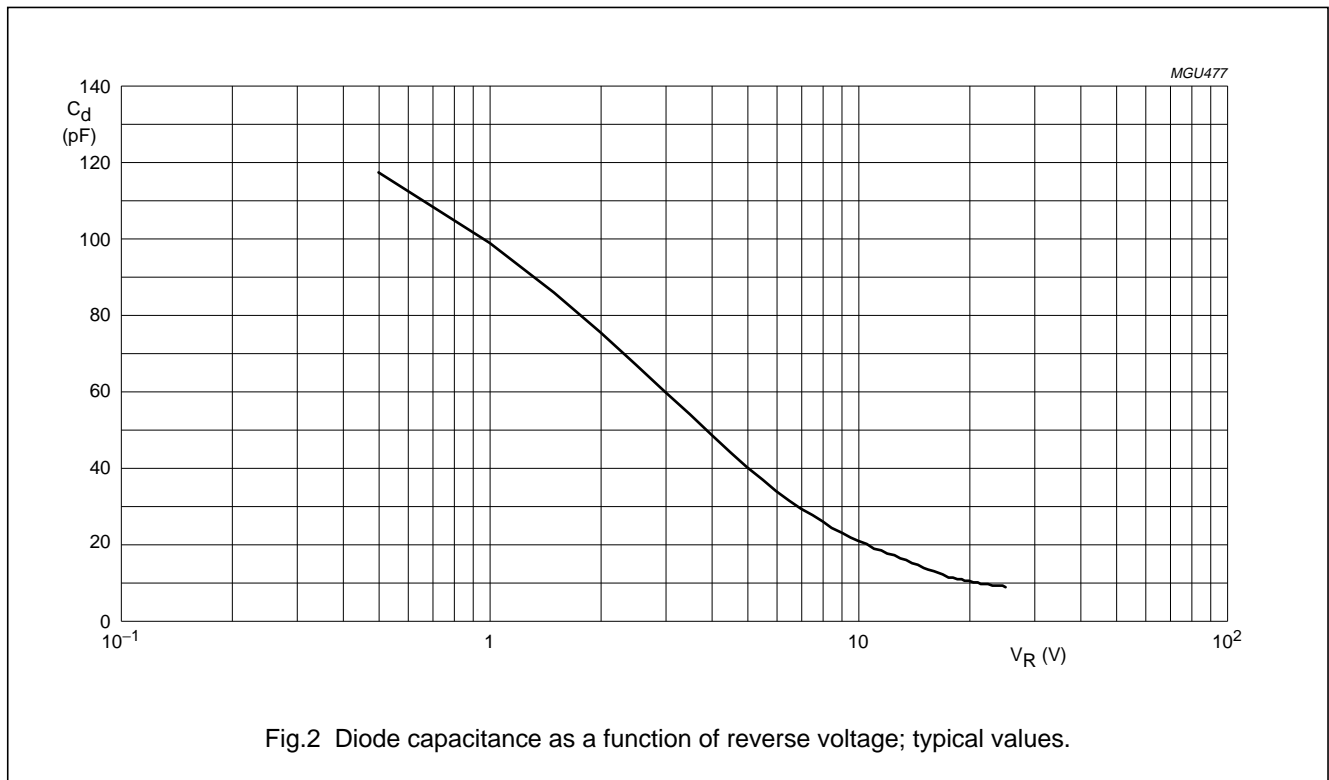
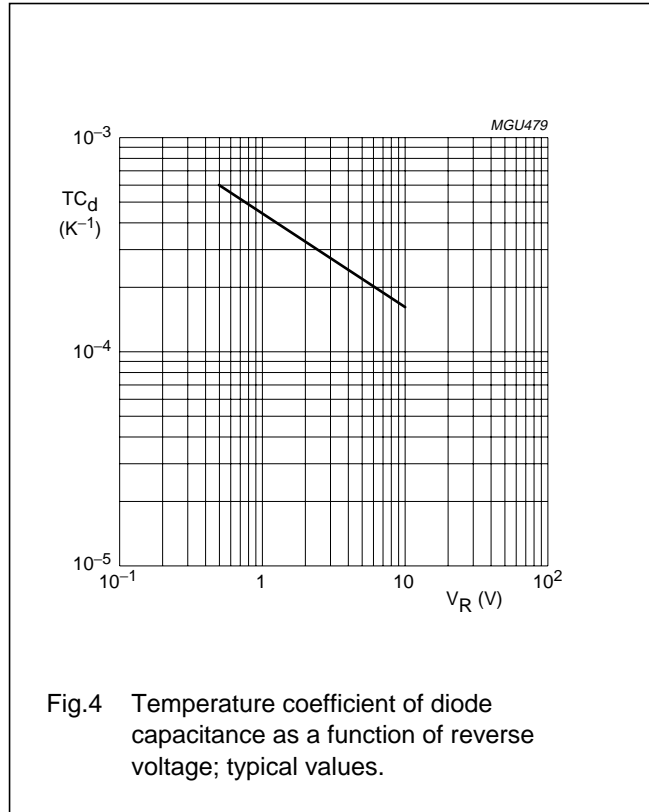
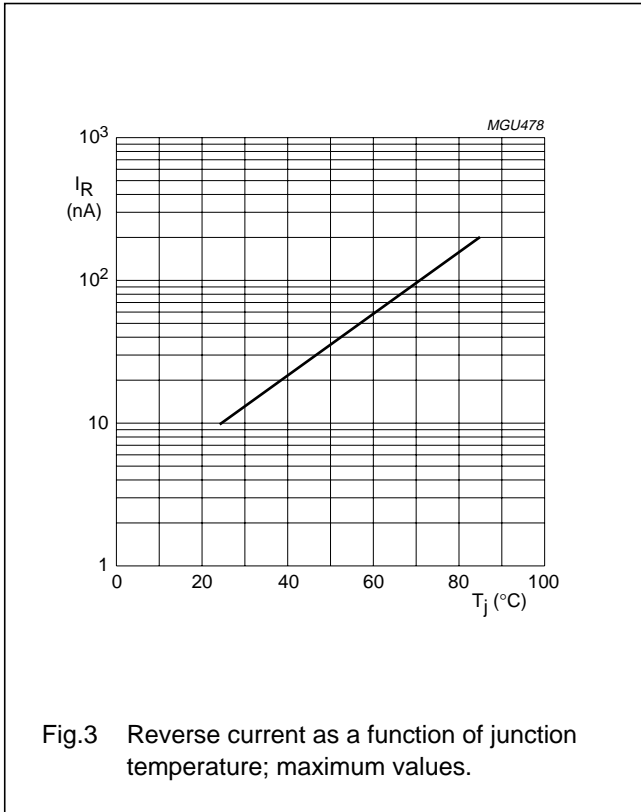


Fig.2 Diode capacitance as a function of reverse voltage; typical values.

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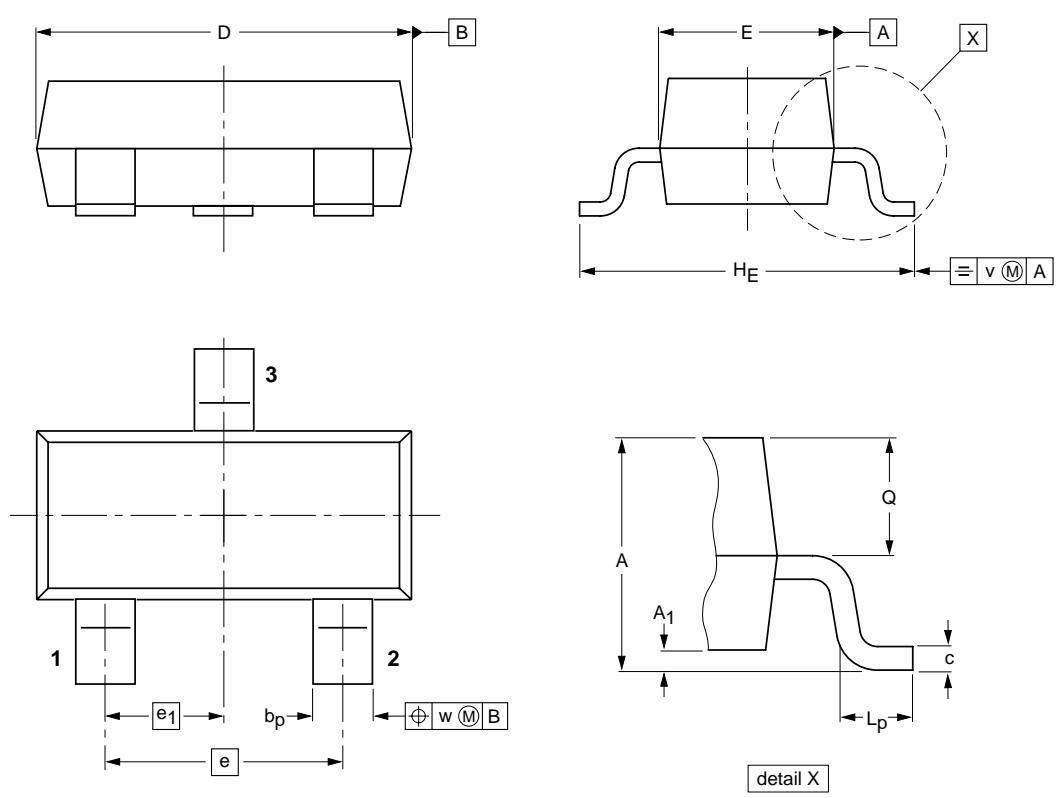
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PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23		TO-236AB				97-02-28- 99-09-13

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DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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NOTES

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