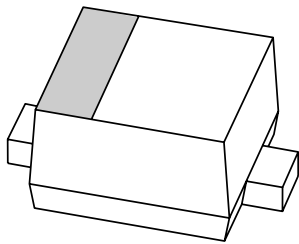


DATA SHEET



BB202

Low-voltage variable capacitance
diode

Product specification

2002 Feb 18

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

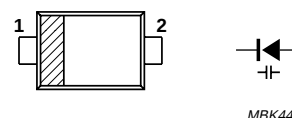
The BB202 is a variable capacitance diode, fabricated in planar technology, and encapsulated in the SOD523 ultra small SMD plastic package.

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
I_F	continuous forward current	–	10	mA
T_{stg}	storage temperature	–55	+85	°C
T_j	operating junction temperature	–55	+85	°C

ELECTRICAL CHARACTERISTICS

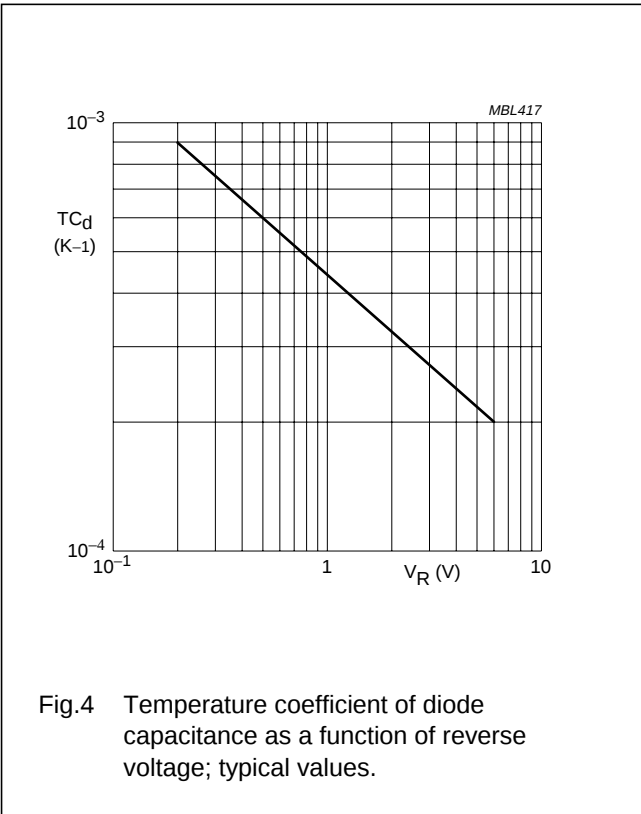
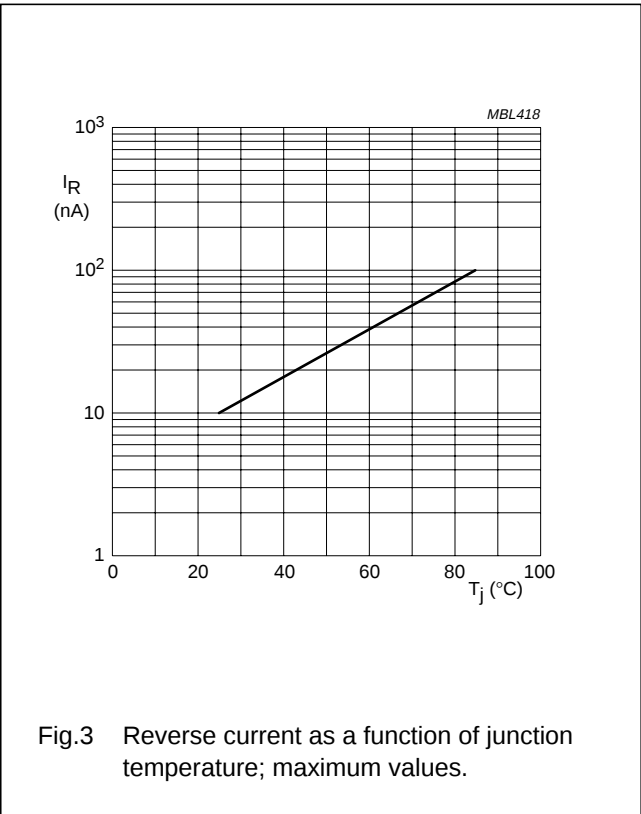
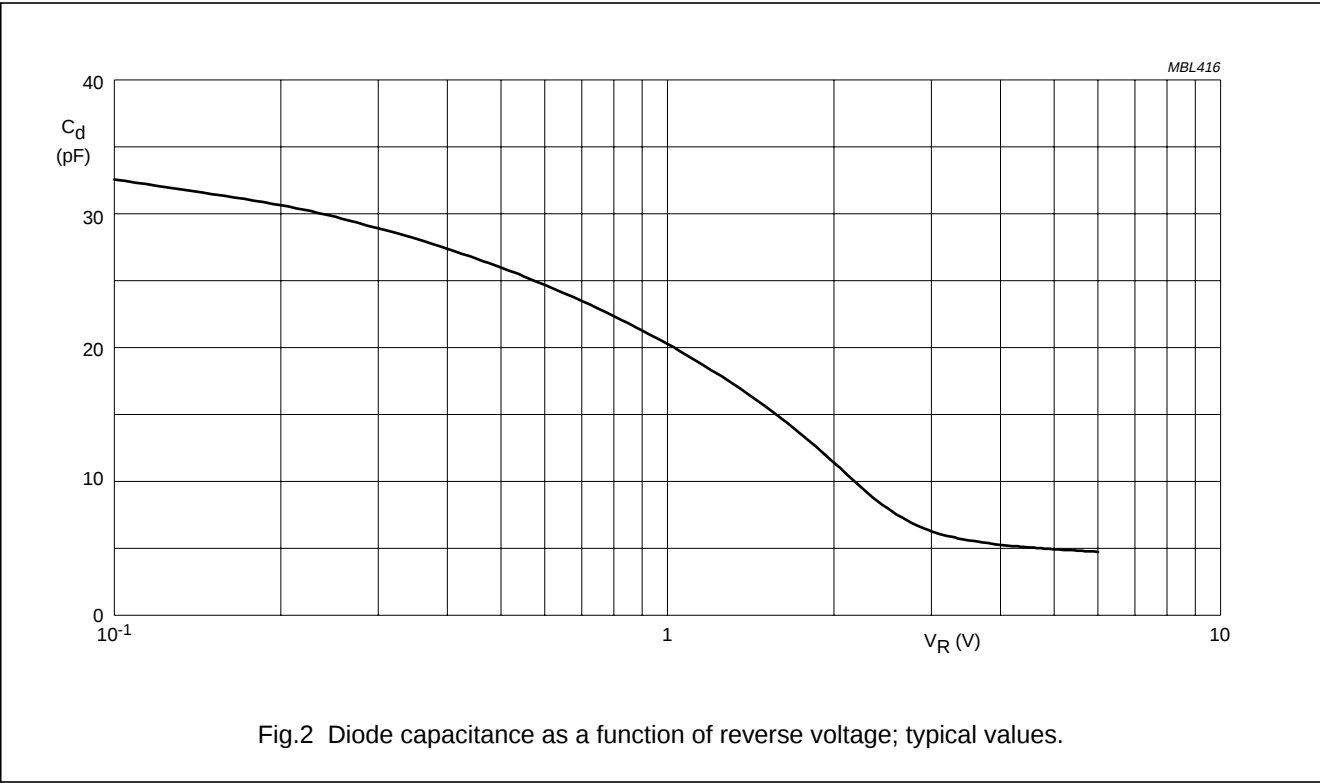
$T_j = 25\text{ °C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_R	reverse current	$V_R = 6\text{ V}$; see Fig.3	–	–	10	nA
		$V_R = 6\text{ V}$; $T_j = 85\text{ °C}$; see Fig.3	–	–	100	nA
r_s	diode series resistance	$f = 100\text{ MHz}$; $C = 30\text{ pF}$	–	0.35	0.6	Ω
C_d	diode capacitance	$V_R = 0.2$; $f = 1\text{ MHz}$; see Fig.2 and Fig.4	28.2	–	33.5	pF
		$V_R = 2.3$; $f = 1\text{ MHz}$; see Fig.2 and Fig.4	7.2	–	11.2	pF
$\frac{C_{d(0.2V)}}{C_{d(2.3V)}}$	capacitance ratio	$f = 1\text{ MHz}$	2.5	–	–	

Low-voltage variable capacitance diode

BB202

GRAPHICAL DATA



Low-voltage variable capacitance diode

BB202

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD523

Technical drawing of the SOD523 package showing top, side, and front views with dimensions A, c, HE, D, E, bp, and marking bar (1).

0 0.5 1 mm
scale

DIMENSIONS (mm are the original dimensions)

UNIT	A	bp	c	D	E	HE	v
mm	0.7	0.35	0.2	1.3	0.9	1.7	0.15
	0.5	0.25	0.1	1.1	0.7	1.5	

Note
1. The marking bar indicates the cathode.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOD523			SC-79			98-11-25

Low-voltage variable capacitance diode

BB202

DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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Low-voltage variable capacitance diode

BB202

NOTES

Low-voltage variable capacitance diode

BB202

NOTES

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