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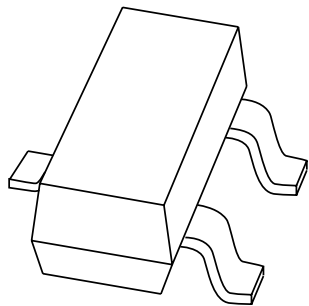
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DATA SHEET



BB200

Low-voltage variable capacitance
double diode

Product specification

2001 Oct 12

Low-voltage variable capacitance double diode

BB200

FEATURES

- Very steep C/V curve
- C1: 70 pF; C4.5: 13.4 pF
- C1 to C5 ratio: min. 5
- Low series resistance
- Small plastic SMD package.

APPLICATIONS

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

DESCRIPTION

The BB200 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 |
|-------------|--------------|
| BB200 | SBp |

PINNING

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

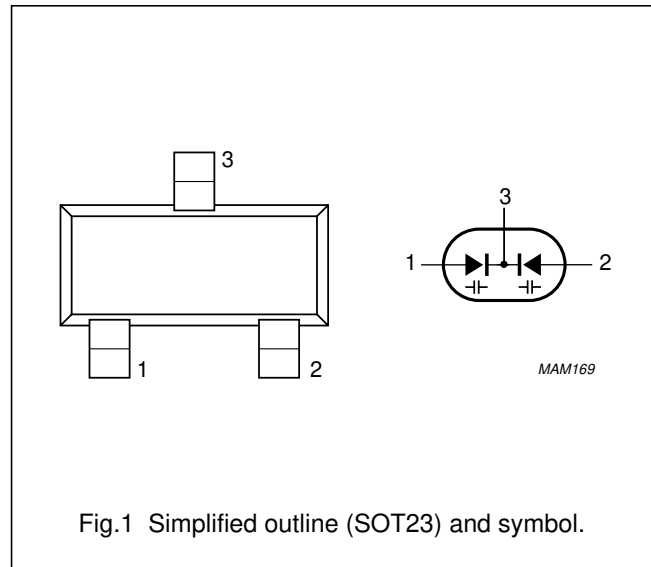


Fig.1 Simplified outline (SOT23) and symbol.

LIMITING VALUES

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

| SYMBOL | PARAMETER | MIN. | MAX. | UNIT |
|------------------|--------------------------------|------|------|------|
| Per diode | | | | |
| V _R | continuous reverse voltage | – | 18 | V |
| I _F | continuous forward current | – | 50 | mA |
| T _{stg} | storage temperature range | –55 | +150 | °C |
| T _j | operating junction temperature | –55 | +85 | °C |

CHARACTERISTICS

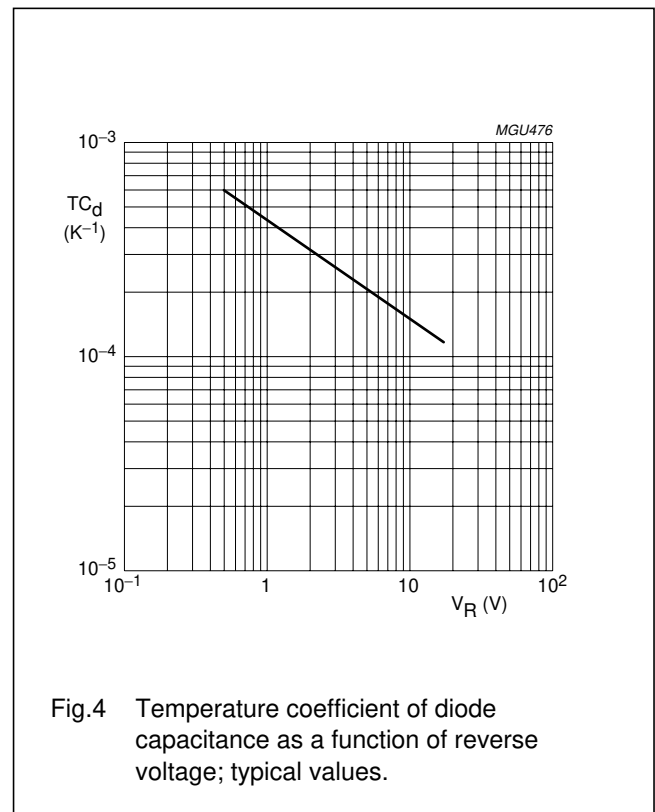
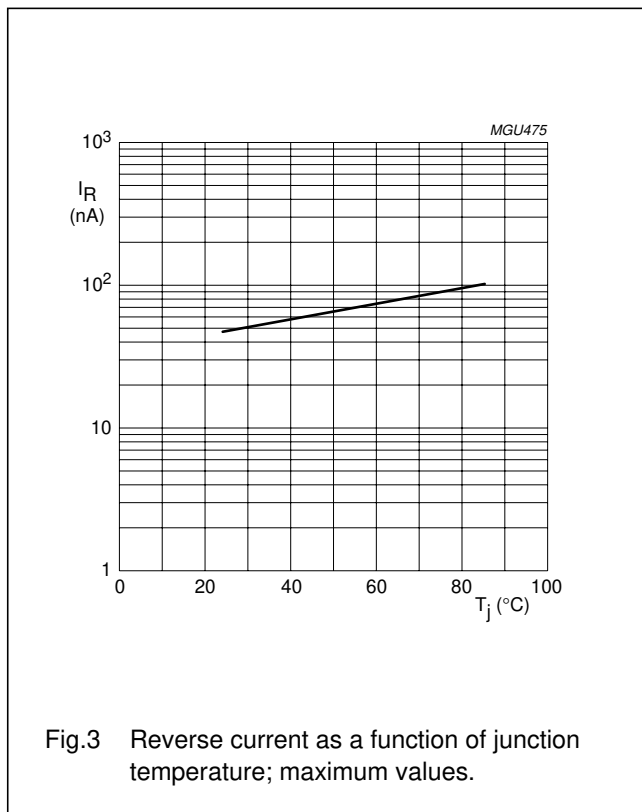
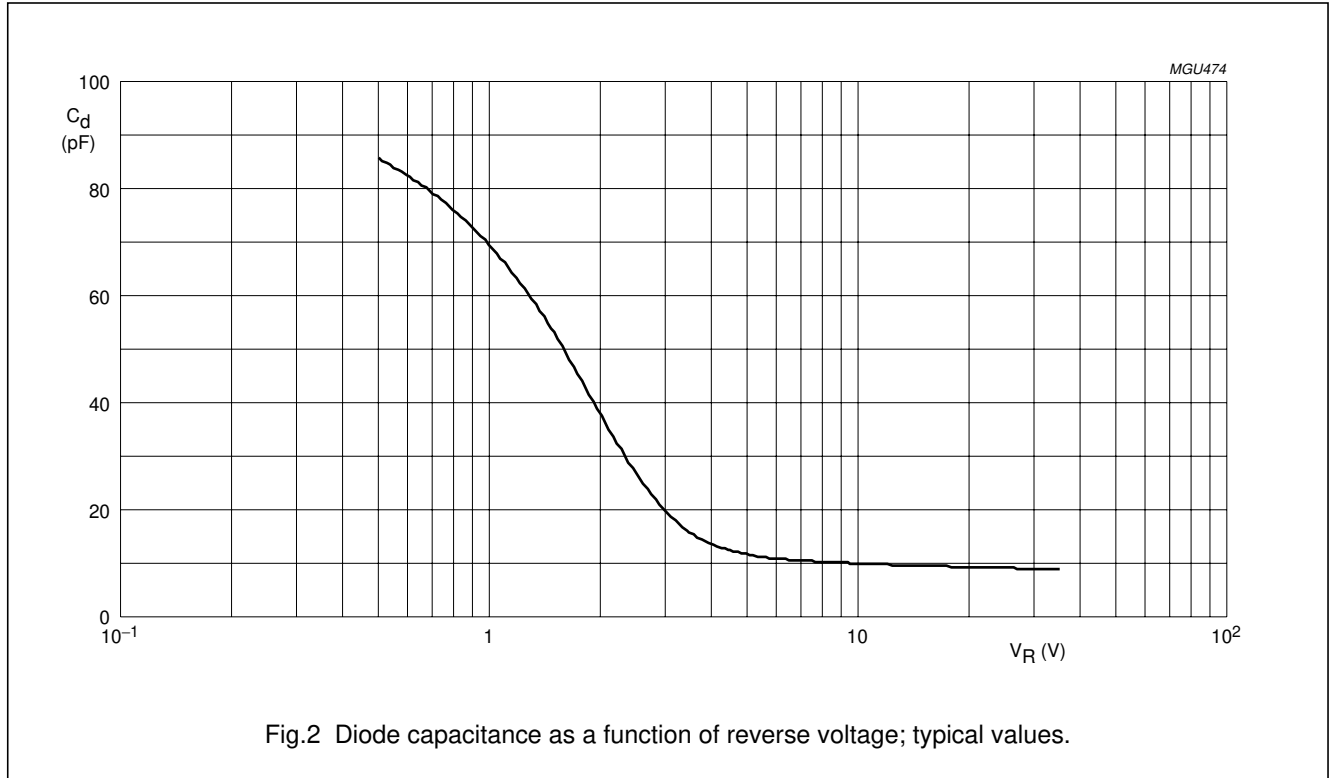
T_j = 25 °C unless otherwise specified.

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|-------------------------------|-------------------------|-------------------------------------|------|------|------|------|
| Per diode | | | | | | |
| I _R | reverse current | V _R = 10 V | – | – | 50 | nA |
| r _s | diode series resistance | f = 100 MHz; V _R = 1.5 V | – | 0.43 | 0.6 | Ω |
| C _d | diode capacitance | V _R = 1 V; f = 1 MHz | 65.8 | 70 | 74.2 | pF |
| | | V _R = 4.5 V; f = 1 MHz | 12 | 13.4 | 14.8 | pF |
| $\frac{C_{d(1V)}}{C_{d(5V)}}$ | capacitance ratio | f = 1 MHz | 5 | – | – | |

Low-voltage variable capacitance double diode

BB200

GRAPHICAL DATA



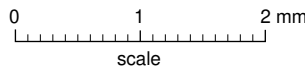
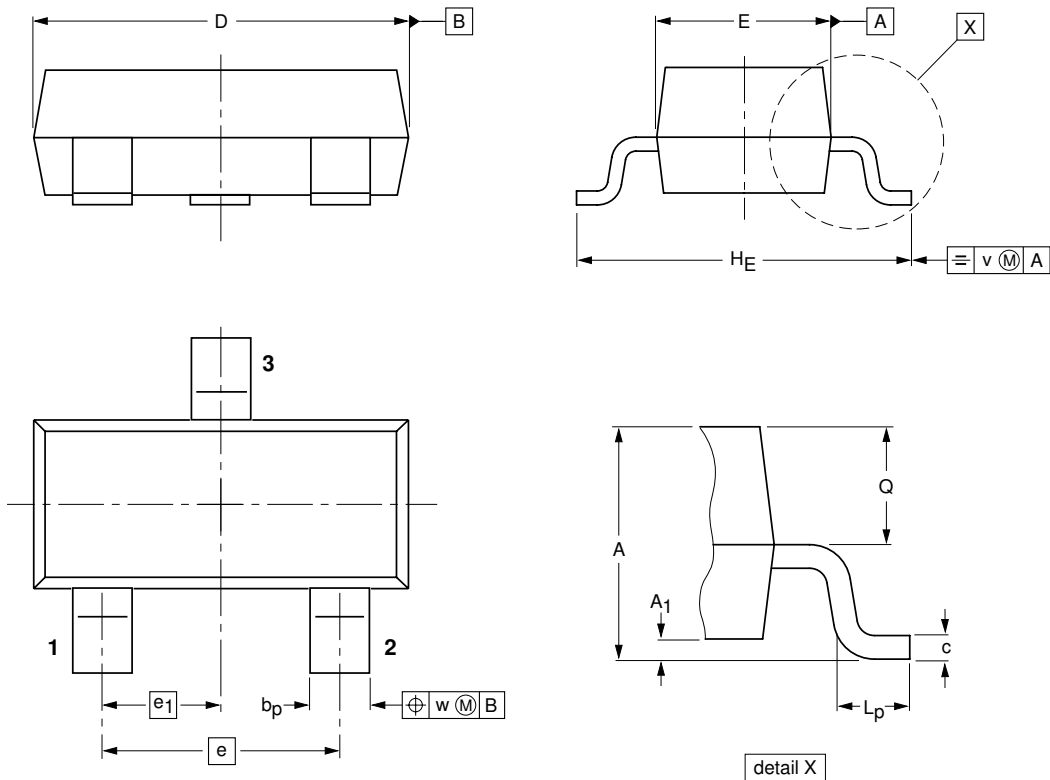
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PACKAGE OUTLINE

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 |

Low-voltage variable capacitance double diode

BB200

DATA SHEET STATUS

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

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NOTES

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