

BB179

UHF VARIABLE CAPACITANCE DIODE

FEATURES

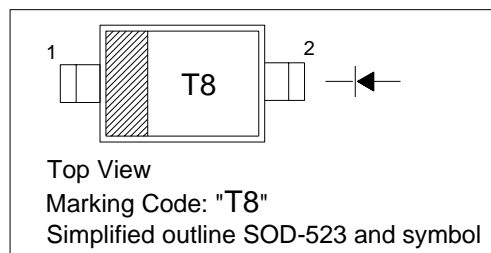
- Excellent linearity
- Excellent matching to 2% DMA
- Ultra small plastic SMD package
- Low series resistance

APPLICATIONS

- Electronic tuning in VHF television tuners
- Voltage controlled oscillators (VCO)

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |

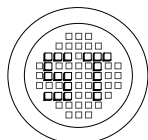


Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|--|-----------|-------------|------------------|
| Continuous Reverse Voltage | V_R | 30 | V |
| Peak Reverse Voltage (In Series with a 10 K Ω Resistor) | V_{RM} | 35 | V |
| Continuous Forward Current | I_F | 20 | mA |
| Operating Junction Temperature Range | T_j | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_a = 25\text{ }^\circ\text{C}$)

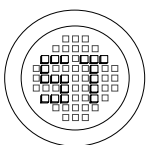
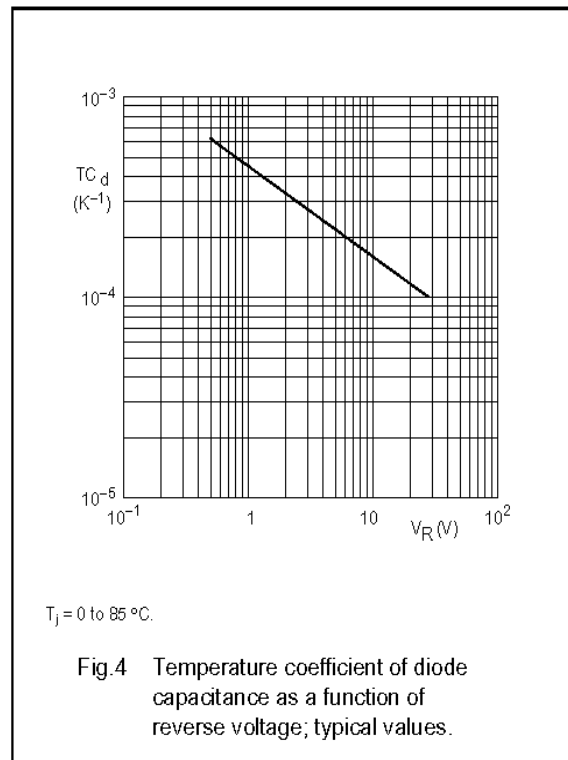
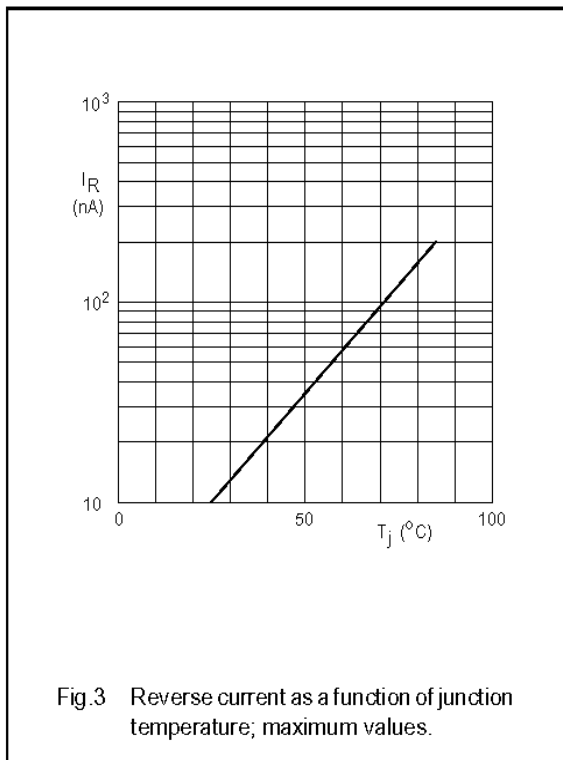
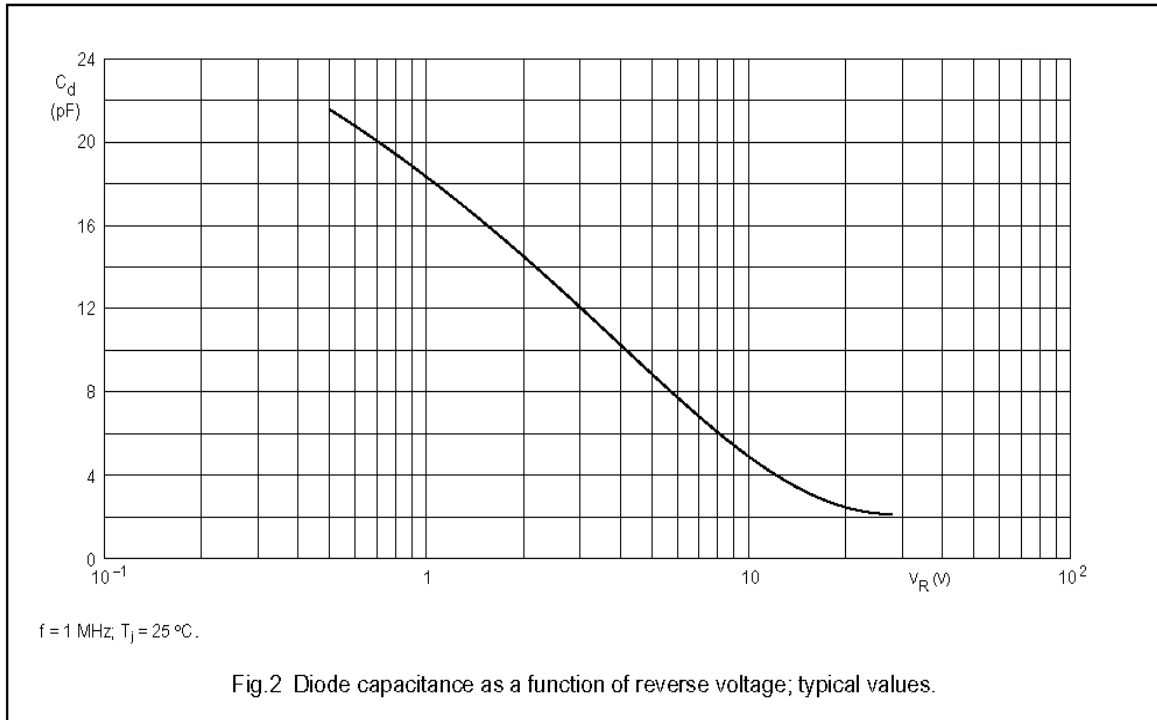
| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|--|-------------------------|----------------|------|----------------|----------|
| Reverse Current at $V_R = 30\text{ V}$ at $V_R = 30\text{ V}$, $T_j = 85\text{ }^\circ\text{C}$ | I_R | - | - | 10 200 | nA |
| Diode Capacitance at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$ at $V_R = 28\text{ V}$, $f = 1\text{ MHz}$ | C_d | 18.22 1.951 | - | 21.26 2.225 | pF |
| Capacitance Ratio at $f = 1\text{ MHz}$ | $C_{d(1V)}/C_{d(2V)}$ | - | 1.27 | - | - |
| Capacitance Ratio at $f = 1\text{ MHz}$ | $C_{d(1V)}/C_{d(28V)}$ | 8.45 | - | 10.9 | - |
| Capacitance Ratio at $f = 1\text{ MHz}$ | $C_{d(25V)}/C_{d(28V)}$ | - | 1.05 | - | - |
| Capacitance Matching at $V_R = 1\text{ V}$ to 28 V ; in a sequence of 15 diodes (gliding) | $\Delta C_d/C_d$ | - | - | 2 | % |
| Series Resistance at $f = 470\text{ MHz}$, V_R is the value at which $C_d = 9\text{ pF}$ | r_s | - | 0.6 | 0.75 | Ω |



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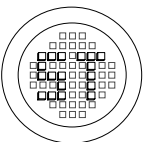
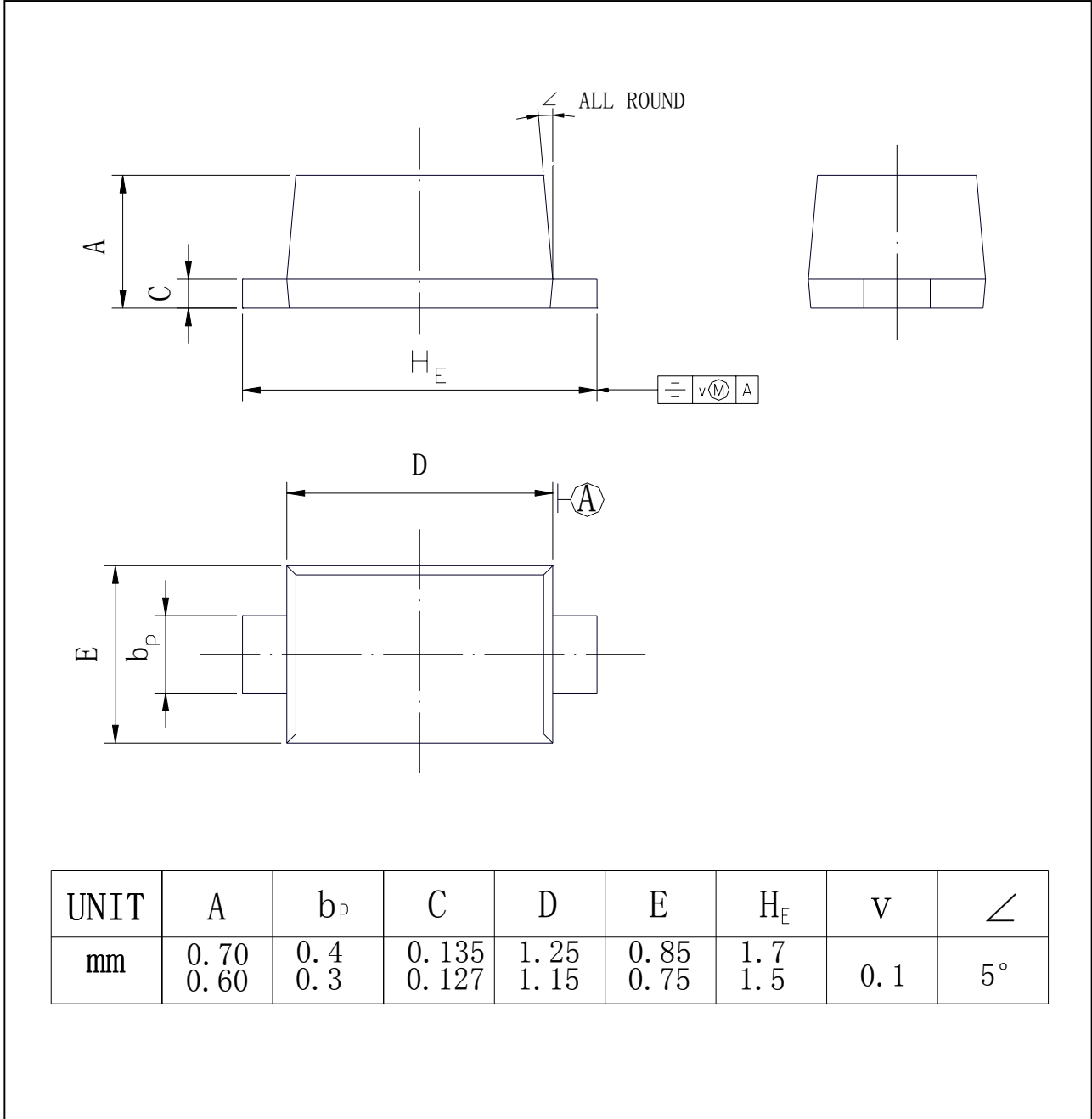
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



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