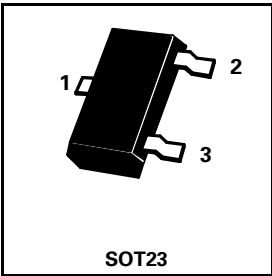
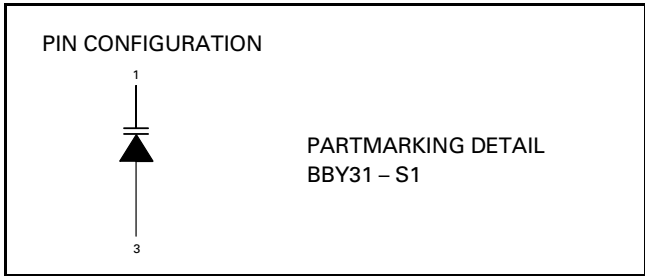


SOT23 SILICON PLANAR VARIABLE CAPACITANCE DIODE

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BBY31



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|----------------|-------------|--------------------|
| Power Dissipation at $T_{amb}=25^{\circ}\text{C}$ | P_{tot} | 330 | mW |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------|----------|------|------|-----------|---------------------|--|
| Reverse Breakdown Voltage | V_{BR} | 28.0 | | | V | $I_R = 10\mu\text{A}$ |
| Reverse current | I_R | | | 10 1.0 | nA μA | $V_R = 28\text{V}$ $V_R = 28\text{V}, T_{amb} = 85^{\circ}\text{C}$ |

TUNING CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$).

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|-------------------|-------------|------|--------------|------|----------------|---|
| Diode Capacitance | C_d | 1.8 | 17.5 11.5 | 2.8 | pF pF pF | $V_R = 1\text{V}, f=1\text{MHz}$ $V_R = 3\text{V}, f=1\text{MHz}$ $V_R = 25\text{V}, f=1\text{MHz}$ |
| Capacitance Ratio | C_d / C_d | | 5.0 | | | $V_R = 3\text{V}/25\text{V}, f=1\text{MHz}$ |
| Series Resistance | r_d | | | 1.2 | Ω | $f=470\text{MHz}$ at the value of V_R at which $C_d=9\text{pF}$ |

Spice parameter data is available upon request for this device