

# SOT23 SILICON PLANAR VARIABLE CAPACITANCE DIODE

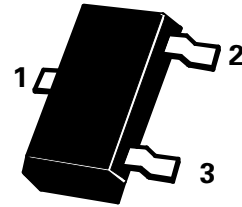
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## BBY40

### PIN CONFIGURATION



PARTMARKING DETAIL  
BBY40 – S2



SOT23

### 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<br>1.0 | nA<br>$\mu\text{A}$ | $V_R = 28\text{V}$<br>$V_R = 28\text{V}, T_{amb} = 60^{\circ}\text{C}$ |

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

| PARAMETER         | SYMBOL      | MIN.        | TYP. | MAX.        | UNIT     | CONDITIONS.   |
|-------------------|-------------|-------------|------|-------------|----------|---|
| Diode Capacitance | $C_d$       | 26.0<br>4.3 |      | 32.0<br>6.0 | pF<br>pF | $V_R = 3\text{V}, f=1\text{MHz}$<br>$V_R = 25\text{V}, f=1\text{MHz}$ |
| Capacitance Ratio | $C_d / C_d$ | 5.0         |      | 6.5         |          | $V_R = 3\text{V}/25\text{V}, f=1\text{MHz}$                           |
| Series Resistance | $r_d$       |             | 0.4  | 0.6         | $\Omega$ | $f=200\text{MHz}$ at the value of $V_R$ at which $C_d=25\text{pF}$    |

Spice parameter data is available upon request for this device

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## TYPICAL CHARACTERISTICS

