

SOT23 SILICON PLANAR VARIABLE CAPACITANCE DIODE

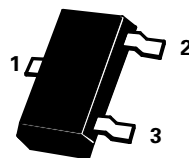
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FMMV109

PIN CONFIGURATION



PARTMARKING DETAIL
FMMV109 – 4A



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} | 30 | | | V | $I_R = 10\mu\text{A}$ |
| Reverse current | I_R | | | 10 | nA | $V_R = 25\text{V}$ |
| Series Inductance | L_S | | 3.0 | | nH | $f=250\text{MHz}$ |
| Diode Capacitance Temperature Coefficient | T_{CC} | | 280 | | ppm/ $^{\circ}\text{C}$ | $V_R = 3\text{V}, f=1\text{MHz}$ |
| Case Capacitance | C_C | | 0.1 | | pF | $f=1\text{MHz}$ |

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

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|-------------------|-------------|------|------|------|------|---|
| Diode Capacitance | C_d | 26 | | 32 | pF | $V_R = 3\text{V}, f=1\text{MHz}$ |
| Capacitance Ratio | C_d / C_d | 5.0 | | 6.5 | | $V_R = 3\text{V}/25\text{V}, f=1\text{MHz}$ |
| Figure of MERIT | Q | 200 | 250 | | | $V_R = 3\text{V}, f=50\text{MHz}$ |

Spice parameter data is available upon request for this device