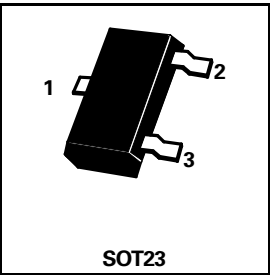
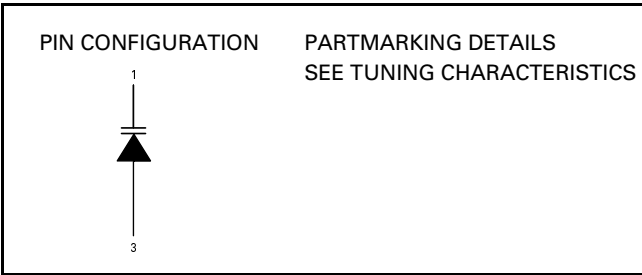


# SOT23 SILICON PLANAR VARIABLE CAPACITANCE DIODES

ISSUE 3 – JANUARY 1996

**FMMV2101  
to  
FMMV2109**



## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                  | SYMBOL         | VALUE       | UNIT        |
|--------------------------------------------|----------------|-------------|-------------|
| Reverse Voltage                            | $V_R$          | 30          | V           |
| Forward Current                            | $I_F$          | 200         | mA          |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | $P_{tot}$      | 330         | mW          |
| Operating and Storage Temperature Range    | $T_j: T_{stg}$ | -55 to +150 | $^{\circ}C$ |

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

| PARAMETER                                 | SYMBOL   | MIN. | TYP. | MAX. | UNIT             | CONDITIONS.                                       |
|-------------------------------------------|----------|------|------|------|------------------|---------------------------------------------------|
| Reverse Breakdown Voltage                 | $V_{BR}$ | 30   |      |      | V                | $I_R = 10\mu A$                                   |
| Reverse current                           | $I_R$    |      |      | 20   | nA               | $V_R = 25V$                                       |
| Series Inductance                         | $L_S$    |      | 3.0  |      | nH               | $f=250MHz$<br>Lead length $\approx 1.5mm$         |
| Diode Capacitance Temperature Coefficient | $T_{CC}$ |      | 280  | 400  | ppm/ $^{\circ}C$ | $V_R = 4V, f=1MHz$<br>Lead length $\approx 1.5mm$ |
| Case Capacitance                          | $C_C$    |      | 0.15 |      | pF               | $f=1MHz$                                          |

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

| Type No. | Nominal Capacitance (pF)<br>$V_R = 4V, f=1MHz$ |      |      | Q – Figure of MERIT<br>$V_R = 4V, f=50MHz$ | Turning Ratio<br>$C_2 / C_{30}$<br>$f=1MHz$ |      | Partmark Detail |
|----------|------------------------------------------------|------|------|--------------------------------------------|---------------------------------------------|------|-----------------|
|          | Min.                                           | Nom. | Max. |                                            | Min.                                        | Max. |                 |
| FMMV2101 | 6.1                                            | 6.8  | 7.5  | 450                                        | 2.5                                         | 3.3  | 6R              |
| FMMV2103 | 9.0                                            | 10.0 | 11.0 | 400                                        | 2.6                                         | 3.3  | 6G              |
| FMMV2104 | 10.8                                           | 12.0 | 13.2 | 400                                        | 2.6                                         | 3.3  | 6H              |
| FMMV2105 | 13.5                                           | 15.0 | 16.5 | 400                                        | 2.6                                         | 3.3  | 6J              |
| FMMV2107 | 19.8                                           | 22.0 | 24.2 | 350                                        | 2.7                                         | 3.3  | 6L              |
| FMMV2108 | 24.3                                           | 27.0 | 29.7 | 300                                        | 2.7                                         | 3.3  | 6M              |
| FMMV2109 | 29.3                                           | 33.0 | 36.3 | 280                                        | 2.7                                         | 3.3  | 6N              |

\* SELECTED DEVICE RANGE OFFERED ONLY