

MMSD4448 Small Signal Diode



SOD123
Color Band Denotes Cathode
Top Marking: 10

Absolute Maximum Ratings * T_a = 25°C unless otherwise noted

| Symbol | Parameter | Value | Unit |
|--------------------|--|-------------|--------|
| V _{RRM} | Maximum Repetitive Reverse Voltage | 100 | V |
| I _{F(AV)} | Average Rectified Forward Current | 200 | mA |
| I _{FSM} | Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second Pulse Width = 1.0 microsecond | 1.0 2.0 | A A |
| T _{STG} | Storage Temperature Range | -55 to +150 | °C |
| T _J | Operating Junction Temperature | 150 | °C |

 $^{^{\}star}$ These ratings are limiting values above which the serviceability of the diode may be impaired.

Thermal Characteristics

| Symbol | Parameter | Value | Unit |
|-----------------|---|-------|------|
| P_{D} | Power Dissipation | 400 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 312 | °C/W |

Electrical Characteristics $T_C = 25$ °C unless otherwise noted

| Symbol | Parameter | Conditions | Min. | Max. | Units |
|----------------------|-------------------------------|--|-----------|-----------------|----------------|
| V _R | Breakdown Voltage | $I_R = 5.0 \mu A$ $I_R = 100 \mu A$ | 75 100 | | V |
| V _F | Forward Voltage | I _F = 5mA I _F = 100mA | 0.62 | 0.72 1.0 | V V |
| I _R | Reverse Leakage | V _R = 20V V _R = 20V, T _A = 150°C V _R = 75V | | 25 50 5.0 | nA μA μA |
| C _T | Total Capacitance | V _R = 0, f = 1.0MHz | | 2.0 | pF |
| t _{rr} | Reverse Recovery Time | $I_F = 10\text{mA}, V_R = 6.0\text{V},$ $I_{rr} = 1.0\text{mA}, R_L = 100\Omega$ | | 4.0 | ns |
| V _{F(peak)} | Peak Forward Recovery Voltage | $I_F = 50$ mA, pw = 0.1 μ s rep rate: 5 to 10KHz | | 2.5 | V |

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Rev. I15