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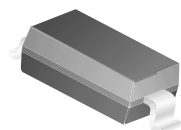
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# MMSD4448

## Small Signal Diode



**SOD123**  
Color Band Denotes Cathode  
Top Marking: 10

### Absolute Maximum Ratings \* $T_a = 25^\circ\text{C}$ 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<br>Pulse Width = 1.0 second<br>Pulse Width = 1.0 microsecond | 1.0         | A                |
|             |  | 2.0         | A                |
| $T_{STG}$   | Storage Temperature Range  | -55 to +150 | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature   | 150         | $^\circ\text{C}$ |

\* 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   | $^\circ\text{C/W}$ |

### Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

| Symbol               | Parameter                     | Conditions  | Min. | Max. | Units         |
|----------------------|-------------------------------|---|------|------|---------------|
| $V_R$                | Breakdown Voltage             | $I_R = 5.0\mu\text{A}$  | 75   |      | V             |
|                      |                               | $I_R = 100\mu\text{A}$  | 100  |      |               |
| $V_F$                | Forward Voltage               | $I_F = 5\text{mA}$  | 0.62 | 0.72 | V             |
|                      |                               | $I_F = 100\text{mA}$  |      | 1.0  | V             |
| $I_R$                | Reverse Leakage               | $V_R = 20\text{V}$  |      | 25   | nA            |
|                      |                               | $V_R = 20\text{V}, T_A = 150^\circ\text{C}$   |      | 50   | $\mu\text{A}$ |
|                      |                               | $V_R = 75\text{V}$  |      | 5.0  | $\mu\text{A}$ |
| $C_T$                | Total Capacitance             | $V_R = 0, f = 1.0\text{MHz}$  |      | 2.0  | pF            |
| $t_{rr}$             | Reverse Recovery Time         | $I_F = 10\text{mA}, V_R = 6.0\text{V},$<br>$I_{rr} = 1.0\text{mA}, R_L = 100\Omega$ |      | 4.0  | ns            |
| $V_{F(\text{peak})}$ | Peak Forward Recovery Voltage | $I_F = 50\text{mA}, \text{pw} = 0.1\mu\text{s}$<br>rep rate: 5 to 10KHz             |      | 2.5  | V             |

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