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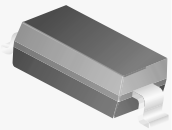
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February 2015

# MMSD3070
# Small Signal Diode



**SOD123**

COLOR BAND DENOTES CATHODE
TOP MARKING: **33**

## Ordering Information

| Part Number | Top Mark | Package | Packing Method |
|---|---|---|---|
| MMSD3070 | 33 | SOD-123 2L | Tape and Reel |

## Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A$ = 25°C unless otherwise noted.

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

## Thermal Characteristics

Values are at $T_A$ = 25°C unless otherwise noted.

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

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## Electrical Characteristics

Values are at $T_A$ = 25°C unless otherwise noted.

| Symbol | Parameter | Conditions | Min. | Max. | Unit |
|---|---|---|---|---|---|
| $V_R$ | Breakdown Voltage | $I_R$ = 100 µA | 200 | | V |
| $V_F$ | Forward Voltage | $I_F$ = 100 mA | | 1.0 | V |
| $I_R$ | Reverse Current | $V_R$ = 175 V | | 100 | nA |
| | | $V_R$ = 175 V, $T_A$ = 150°C | | 100 | µA |
| $C_T$ | Total Capacitance | $V_R$ = 0, f = 1.0 MHz | | 5.0 | pF |
| $t_{rr}$ | Reverse Recovery Time | $I_F$ = $I_R$ = 30 mA, $I_{RR}$ = 1.0 mA, $R_L$ = 100 Ω | | 50 | ns |

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## Typical Performance Characteristics

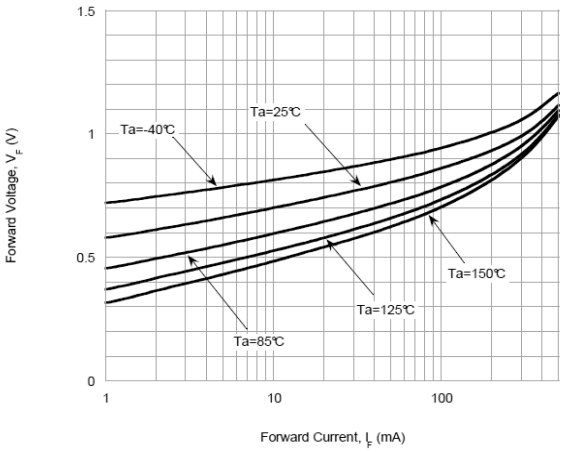



**Figure 1. Forward Voltage vs. Forward Current**

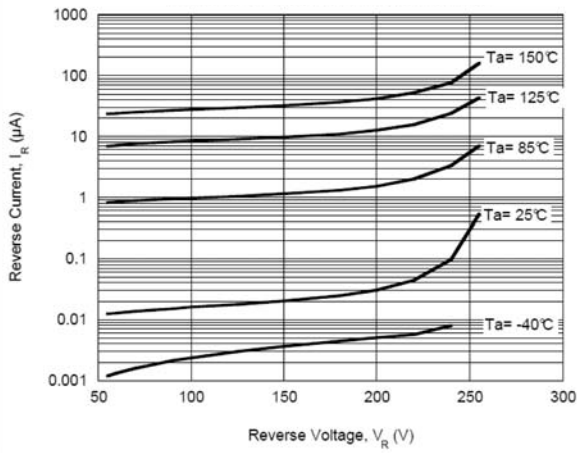



**Figure 2. Reverse Current vs. Reverse Voltage**

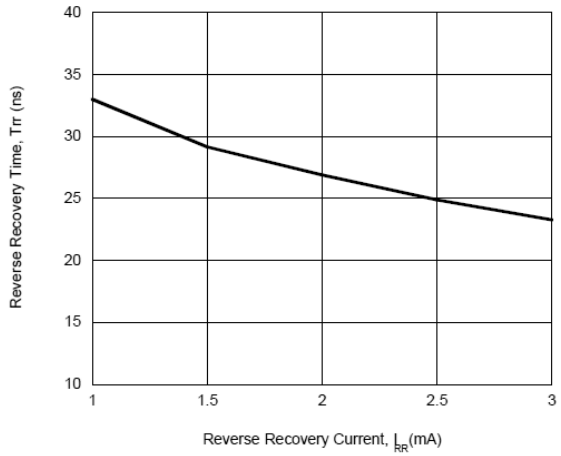



**Figure 3. Reverse Recovery Time vs. Reverse Recovery Current**

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## Physical Dimensions

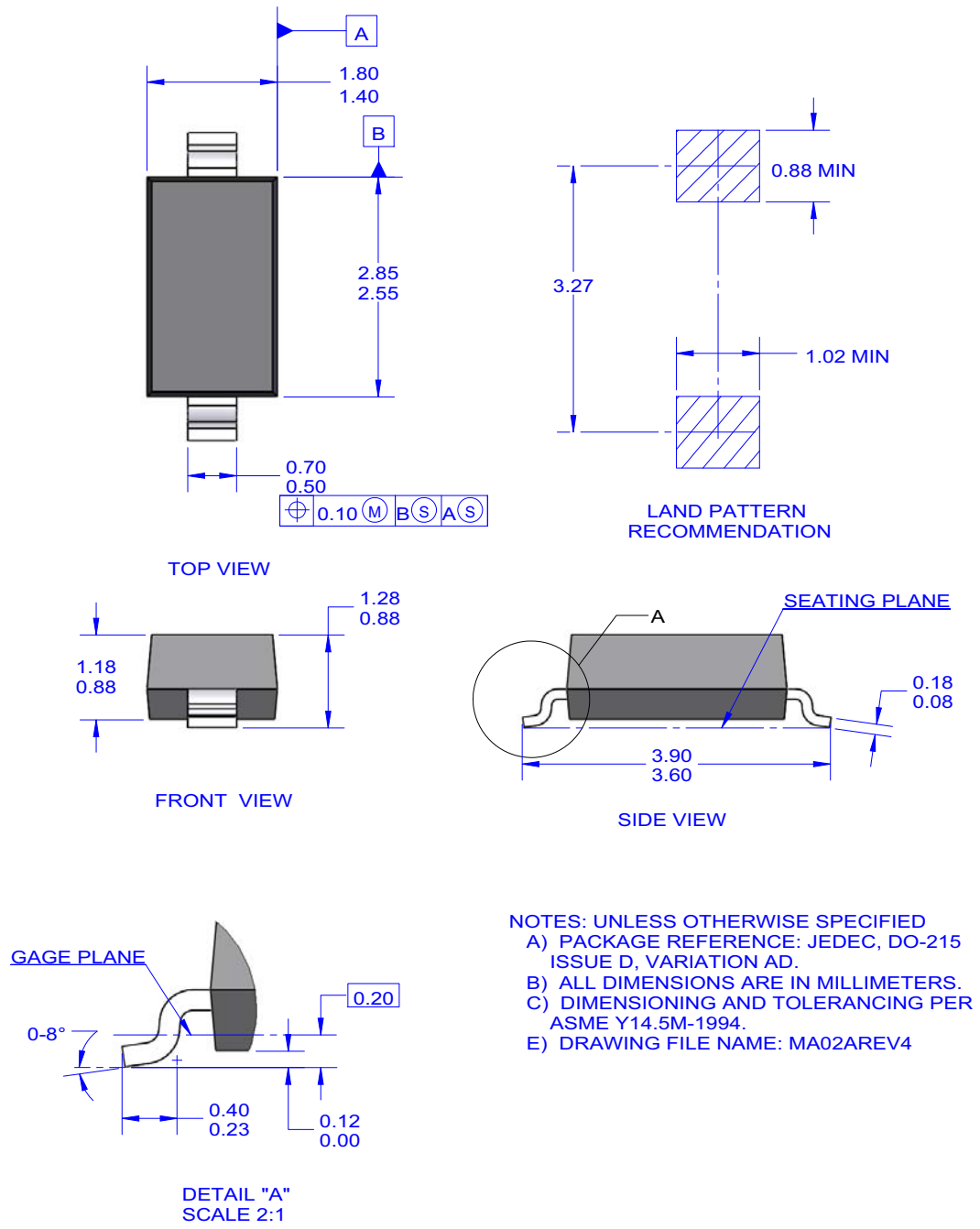



**Figure 4. 2-LEAD, SOD123, JEDEC DO-219**

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|---|---|---|
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