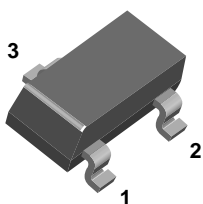


MMBD1401 / 1403 / 1404 / 1405



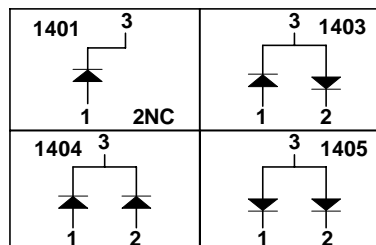
SOT-23



MARKING

| | | | |
|----------|----|----------|----|
| MMBD1401 | 29 | MMBD1403 | 32 |
| MMBD1404 | 33 | MMBD1405 | 34 |

Connection Diagrams



Small Signal Diodes

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-------------|--|-------------|------------------|
| 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 Pulse Width = 1.0 microsecond | 1.0 2.0 | A 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 any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

| Symbol | Parameter | Value | Units |
|-----------------|---|-------|---------------------------|
| P_D | Power Dissipation | 350 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357 | $^\circ\text{C}/\text{W}$ |

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Conditions | Min | Max | Units |
|----------|-----------------------|--|-----|--------------------------|--------------------|
| V_R | Breakdown Voltage | $I_R = 100 \mu\text{A}$ | 200 | | V |
| V_F | Forward Voltage | $I_F = 10 \text{ mA}$ $I_F = 50 \text{ mA}$ $I_F = 200 \text{ mA}$ $I_F = 300 \text{ mA}$ | 760 | 800 920 1.0 1.1 | mV mV V V |
| I_R | Reverse Current | $V_R = 120 \text{ V}$ $V_R = 175 \text{ V}$ | | 40 100 | nA nA |
| C_T | Total Capacitance | $V_R = 0, f = 1.0 \text{ MHz}$ | | 2.0 | pF |
| t_{rr} | Reverse Recovery Time | $I_F = I_R = 30 \text{ mA}, I_{RR} = 3.0 \text{ mA}, R_L = 100 \Omega$ | | 50 | ns |

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