

MMBD7000

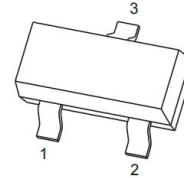
Switching Diode

FEATURE

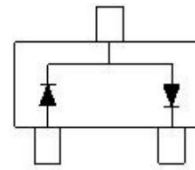
- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance
- Low Current Leakage
- Small Outline Surface Mount Package
- RoHS compliant / Green EMC

MARKING: M5C

SOT-23



Schematic diagram



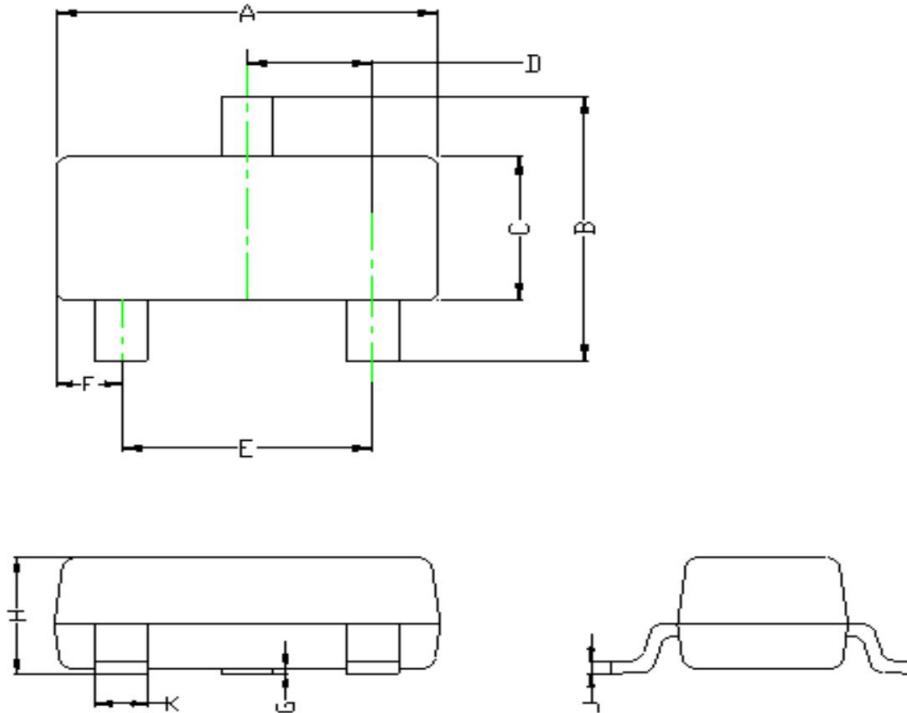
ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|-----------------|-------------|---------------------------|
| Reverse Voltage | V_R | 100 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Average Rectified Output Current | I_o | 200 | mA |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 556 | $^\circ\text{C}/\text{W}$ |
| Peak Forward Surge Current $t=1\text{s}$, Non-Repetitive | I_{FSM} | 0.5 | A |
| Power Dissipation | P_D | 225 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|---------------------------------|----------|--|-----|------|-------|---------------|
| Forward Voltage | V_F | $I_F=10\text{mA}$ | | | 0.855 | V |
| | | $I_F=100\text{mA}$ | | | 1.1 | V |
| Reverse Breakdown Voltage | V_R | $I_R=100\mu\text{A}$ | 100 | | | V |
| Reverse Voltage Leakage Current | I_R | $V_R=50\text{V}$ $T_j=25^\circ\text{C}$ | | | 1.0 | μA |
| | | $V_R=50\text{V}$ $T_j=125^\circ\text{C}$ | | | 100 | μA |
| | | $V_R=100\text{V}$ | | | 3.0 | μA |
| Capacitance between terminals | C_T | $V_R=0\text{V}$, $f=1.0\text{MHz}$ | | | 2 | pF |
| Reverse Recovery Time | T_{rr} | $I_F=I_R=10\text{mA}$, $I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R$, $R_L=100\Omega$ | | | 4 | nS |

SOT-23 Package Information



| Symbol | Dimensions In Millimeters | | |
|--------|---------------------------|-----|-------|
| | Min | Typ | Max |
| A | 2.800 | - | 3.040 |
| B | 2.100 | - | 2.640 |
| C | 1.200 | - | 1-400 |
| D | 0.890 | - | 1.030 |
| E | 1.780 | - | 2.050 |
| F | 0.450 | - | 0.600 |
| G | 0.013 | - | 0.100 |
| H | 0.900 | - | 1.110 |
| J | 0.090 | - | 0.180 |
| K | 0.370 | - | 0.510 |
| L | 0.300 | - | 0500 |

1. Unit mm