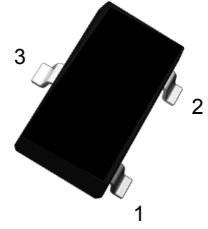


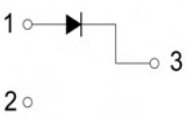
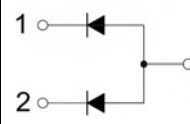
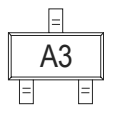
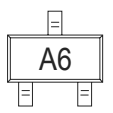
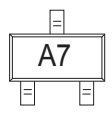
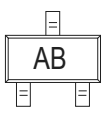
Features

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance



SOT-523

Schematic Diagram and Marking Information

| MMBD4448HT | MMBD4448HTA | MMBD4448HTC | MMBD4448HTS |
|--|--|--|--|
|  |  | | |
| MARKING:A3 | MARKING:A6 | MARKING:A7 | MARKING:AB |
|  |  |  |  |

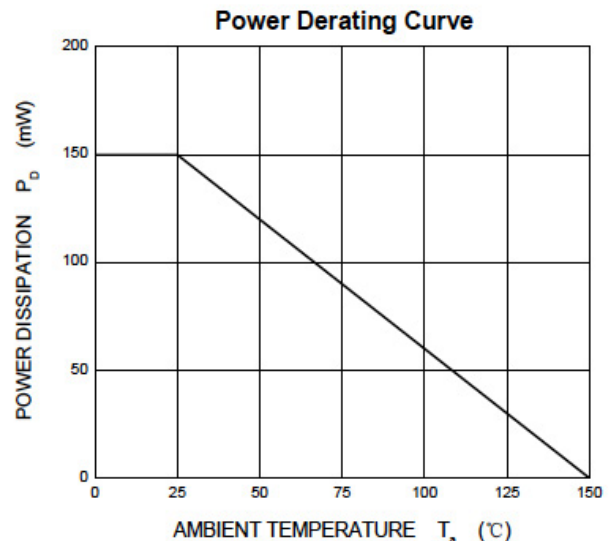
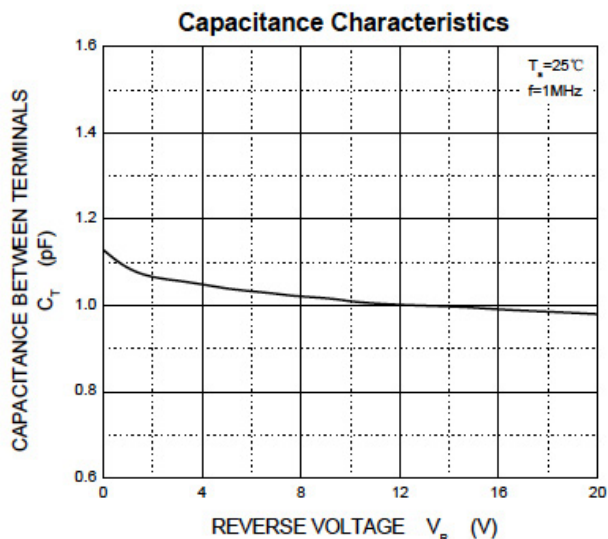
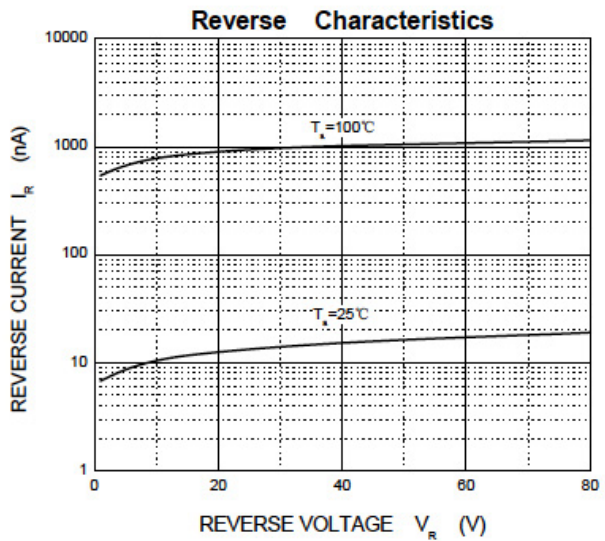
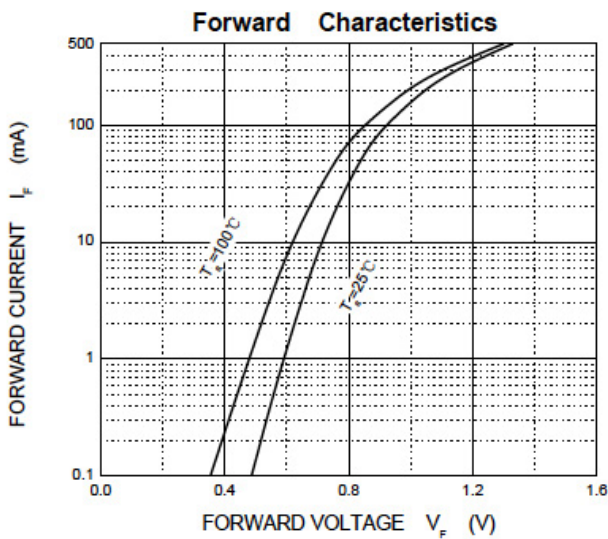
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|---------------------|-------------|------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 100 | V |
| Peak Repetitive Peak Reverse Voltage | V _{RRM} | 80 | V |
| Working Peak Reverse Voltage | V _{RWM} | | |
| DC Blocking Voltage | V _R | | |
| RMS Reverse Voltage | V _{R(RMS)} | 57 | V |
| Forward Continuous Current | I _{FM} | 500 | mA |
| Average Rectified Output Current | I _o | 250 | mA |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I _{FSM} | 2 | A |
| Power Dissipation | P _d | 150 | mW |
| Thermal Resistance from Junction to Ambient | R _{θJA} | 833 | °C/W |
| Storage Temperature | T _{STG} | -55 to +150 | °C |

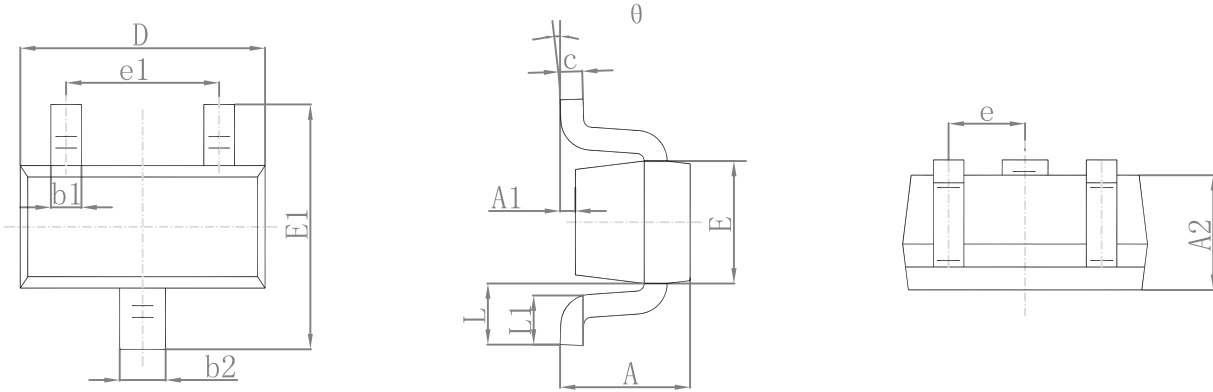
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Conditions | Min | Max | Unit |
|-------------------------------|----------|---|------|-------|---------------|
| Reverse Breakdown Voltage | V_R | $I_R=2.5\ \mu\text{A}$ | 80 | - | V |
| Forward Voltage | V_{F1} | $I_F=5\text{mA}$ | 0.62 | 0.72 | V |
| | V_{F2} | $I_F=10\text{mA}$ | - | 0.855 | V |
| | V_{F3} | $I_F=100\text{mA}$ | - | 1 | V |
| | V_{F4} | $I_F=150\text{mA}$ | - | 1.25 | V |
| Reverse Current | I_{R1} | $V_R=70\text{V}$ | - | 0.1 | μA |
| | I_{R2} | $V_R=20\text{V}$ | - | 25 | nA |
| Capacitance Between Terminals | C_T | $V_R=6\text{V}, f=1\text{MHz}$ | - | 3.5 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10\text{mA}$ $I_{rr}=0.1I_R, R_L=100\Omega$ | - | 4 | ns |

Typical Characteristics Curves

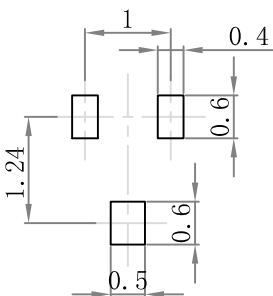


Package Outline Dimensions SOT-523



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.700 | 0.900 | 0.028 | 0.035 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.700 | 0.800 | 0.028 | 0.031 |
| b1 | 0.150 | 0.250 | 0.006 | 0.010 |
| b2 | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.100 | 0.200 | 0.004 | 0.008 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 0.700 | 0.900 | 0.028 | 0.035 |
| E1 | 1.450 | 1.750 | 0.057 | 0.069 |
| e | 0.500 TYP. | | 0.020 TYP. | |
| e1 | 0.900 | 1.100 | 0.035 | 0.043 |
| L | 0.400 REF. | | 0.016 REF. | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| theta | 0° | 8° | 0° | 8° |

Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.