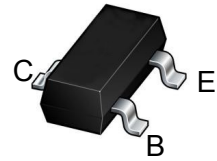


## FEATURES

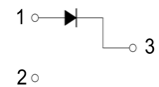
- Average Rectified Output Current:  $I_O=200\text{ mA}$
- Power Dissipation of 350mw



SOT-23

## Package Marking and Ordering Information

| Product ID | Pack   | Marking | Qty(PCS) |
|------------|--------|---------|----------|
| MMBD4148A  | SOT-23 | 5H      | 3000     |



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

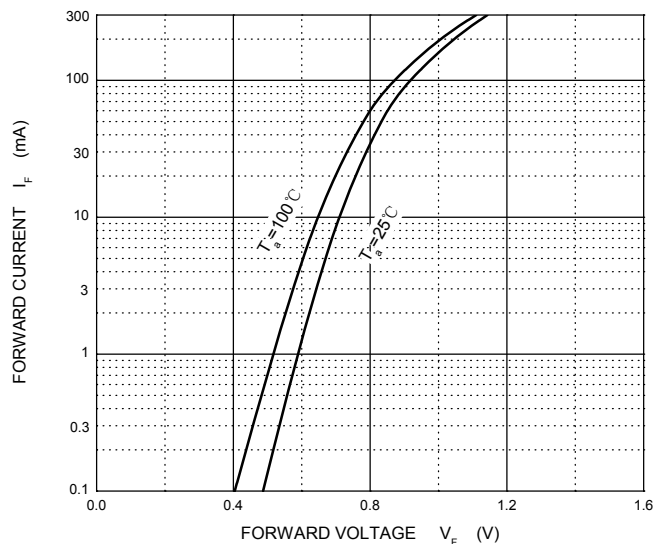
| Parameter                                                    | Symbol          | Limit    | Unit                 |
|--------------------------------------------------------------|-----------------|----------|----------------------|
| Non-Repetitive Peak Reverse Voltage                          | $V_{RM}$        | 100      | V                    |
| Peak Repetitive Peak Reverse Voltage                         | $V_{RRM}$       | 100      | V                    |
| Working Peak Reverse Voltage                                 | $V_{RWM}$       |          |                      |
| DC Blocking Voltage                                          | $V_R$           |          |                      |
| RMS Reverse Voltage                                          | $V_{R(RMS)}$    | 72       | V                    |
| Forward Continuous Current                                   | $I_{FM}$        | 300      | mA                   |
| Average Rectified Output Current                             | $I_O$           | 200      | mA                   |
| Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | $I_{FSM}$       | 2.0      | A                    |
| Power Dissipation                                            | $P_D$           | 350      | mW                   |
| Thermal Resistance Junction to Ambient                       | $R_{\theta JA}$ | 357      | $^{\circ}\text{C/W}$ |
| Junction Temperature                                         | $T_J$           | 150      | $^{\circ}\text{C}$   |
| Storage Temperature                                          | $T_{STG}$       | -55~+150 | $^{\circ}\text{C}$   |

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

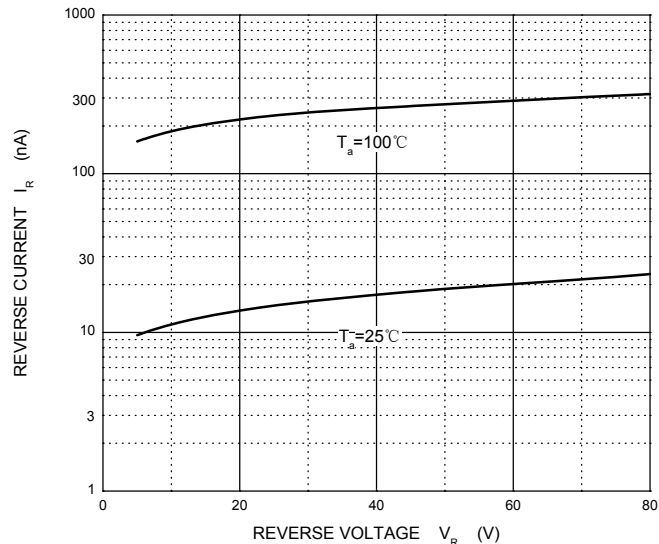
| Parameter                     | Symbol      | Min | Typ | Max | Unit          | Conditions                                                                 |
|-------------------------------|-------------|-----|-----|-----|---------------|----------------------------------------------------------------------------|
| Reverse breakdown voltage     | $V_{(BR)1}$ | 100 |     |     | V             | $I_R=100\mu\text{A}$                                                       |
|                               | $V_{(BR)2}$ | 75  |     |     | V             | $I_R=5\mu\text{A}$                                                         |
| Forward voltage               | $V_F$       |     |     | 1   | V             | $I_F=10\text{mA}$                                                          |
| Reverse current               | $I_{R1}$    |     |     | 5   | $\mu\text{A}$ | $V_R=75\text{V}$                                                           |
|                               | $I_{R2}$    |     |     | 25  | nA            | $V_R=25\text{V}$                                                           |
| Capacitance between terminals | $C_T$       |     |     | 4   | pF            | $V_R=0\text{V}, f=1\text{MHz}$                                             |
| Reverse recovery time         | $t_{rr}$    |     |     | 4   | ns            | $I_F=I_R=10\text{mA}, V_R=6\text{V}, I_{rr}=0.1 \times I_R, R_L=100\Omega$ |

## Typical Characteristics

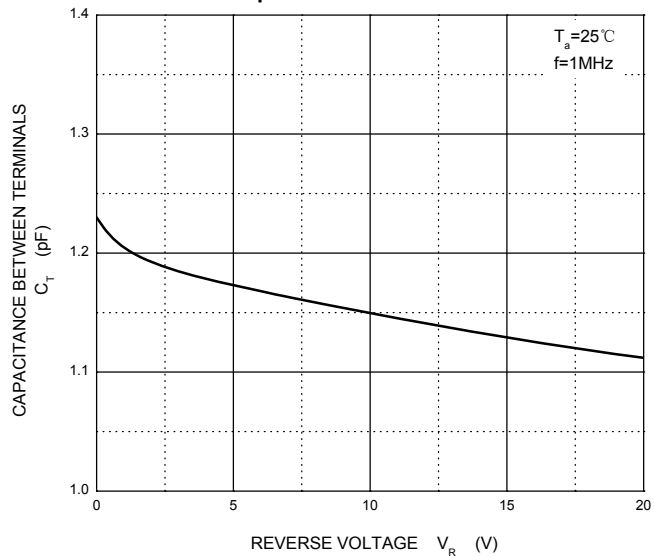
Forward Characteristics



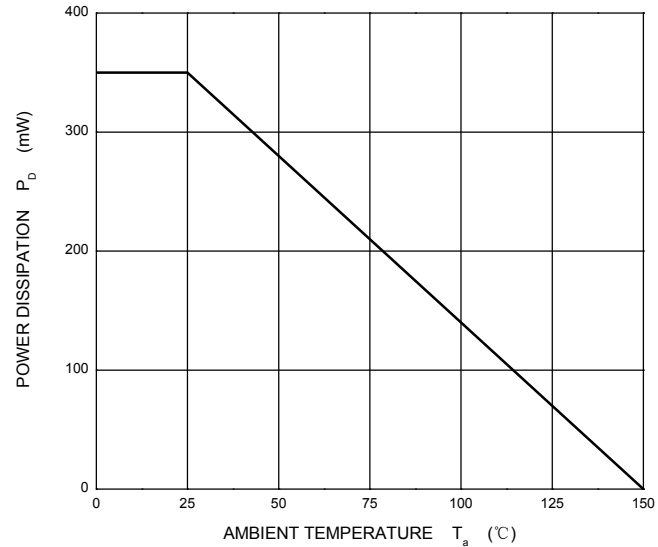
Reverse Characteristics



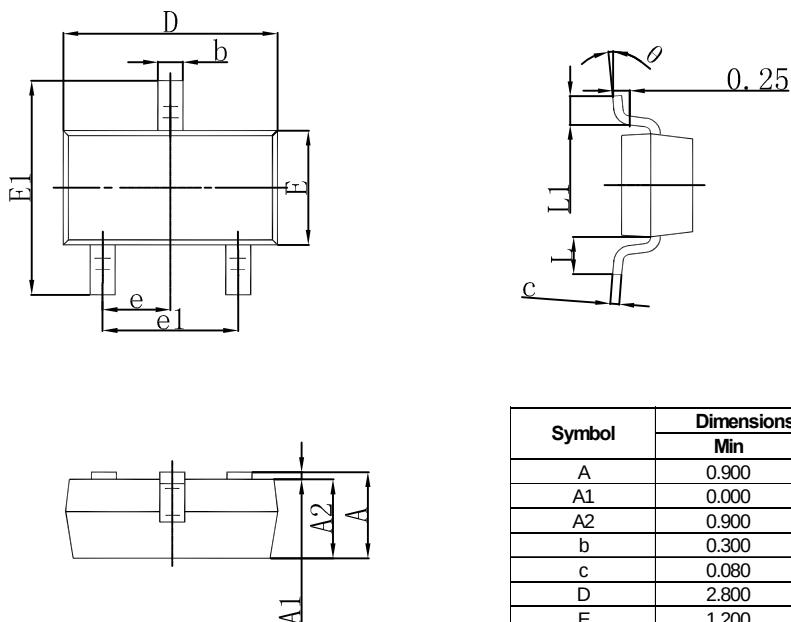
Capacitance Characteristics



Power Derating Curve

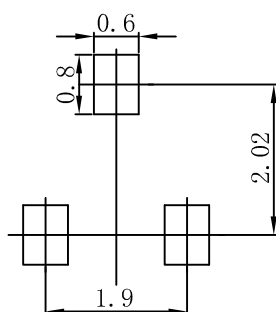


## SOT-23 Package Outline Dimensions



| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.900                     | 1.050 | 0.035                | 0.041 |
| b        | 0.300                     | 0.500 | 0.012                | 0.020 |
| c        | 0.080                     | 0.150 | 0.003                | 0.006 |
| D        | 2.800                     | 3.000 | 0.110                | 0.118 |
| E        | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1       | 2.250                     | 2.550 | 0.089                | 0.100 |
| e        | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1       | 1.800                     | 2.000 | 0.071                | 0.079 |
| L        | 0.550 REF                 |       | 0.022 REF            |       |
| L1       | 0.300                     | 0.500 | 0.012                | 0.020 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 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.