

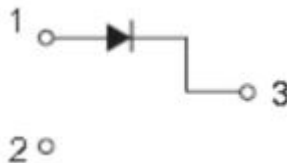
MMBD914 SURFACE MOUNT FAST SWITCHING DIODE



Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material - UL Recognition Flammability Classification 94V-0
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Weight: 0.008g

Maximum Ratings@T_A=25°C unless otherwise specified

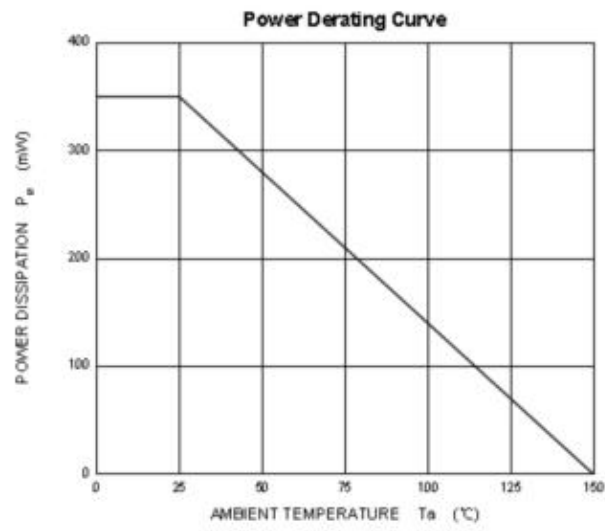
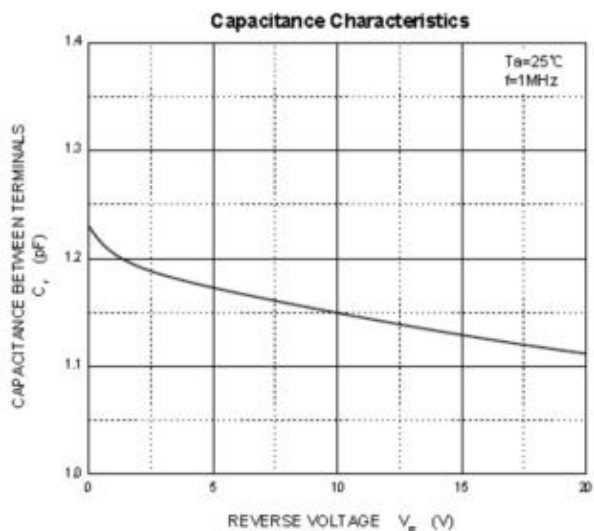
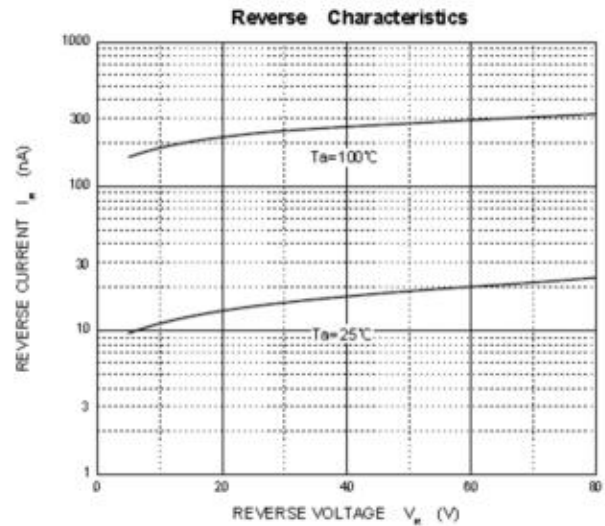
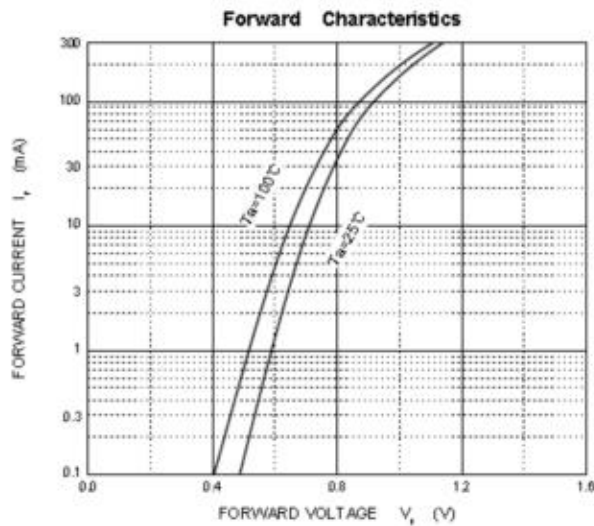
| Characteristic | Symbol | Limits | Units |
|--|--|-------------|-------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _R V _{RRM} V _{RWM} V _R | 100 | V |
| Average Rectified Output Current | I _O | 300 | mA |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I _{FSM} | 2.0 | A |
| Power Dissipation | P _d | 350 | mW |
| Typical Thermal Resistance, Junction to Ambient | R _{θJA} | 357 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

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

| Characteristic | Symbol | Min | Max | Units | Test Condition |
|---------------------------|----------|-----|--------------------------------|---------------------|--|
| Forward Voltage * | V_F | - | 0.715 0.855 1.00 1.25 | V | @ $I_F=1\text{mA}$ @ $I_F=10\text{mA}$ @ $I_F=50\text{mA}$ @ $I_F=150\text{mA}$ |
| Reverse Leakage Current * | I_R | - | 1.0 25 | μA nA | @ $V_R=75\text{V}$ @ $V_R=20\text{V}$ |
| Junction Capacitance | C_j | - | 2.0 | pF | $V_R=0\text{V}$, $f=1.0\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | - | 4.0 | ns | $I_F=I_R=10\text{mA}$, $I_{RR}=0.1 \times I_R$ |

* Pulse width < 300 μs , duty cycle < 2%
Note: 1. Device mounted on fiberglass substrate $40 \times 40 \times 1.5\text{mm}$

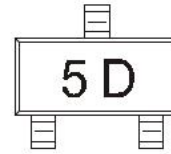
Ratings and Characteristics Curves



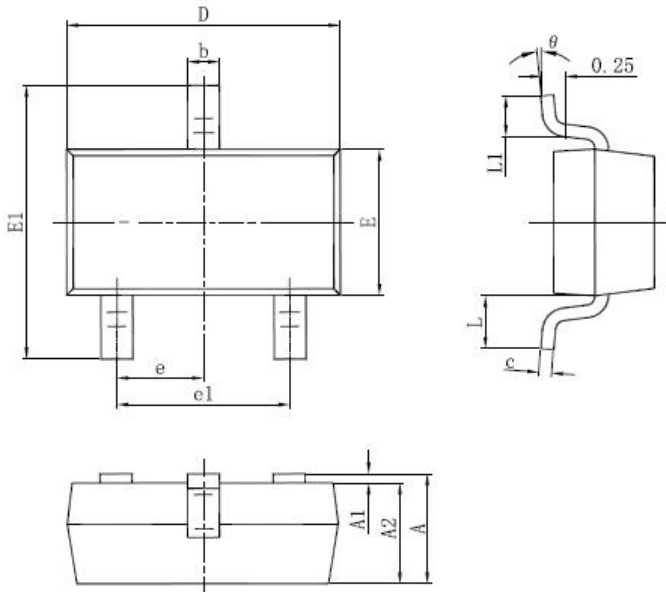
Ordering Information

| Device | Package | Shipping |
|---------|---------------------|----------------|
| MMBD914 | SOT-23 (Pb-Free) | 3000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

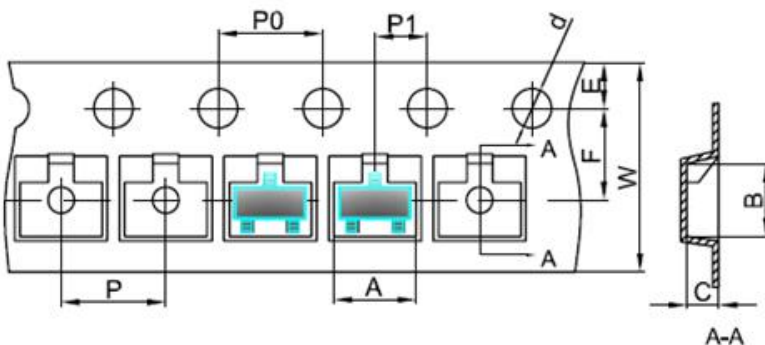
Marking Diagram


5D = Marking Code

Mechanical Dimensions SOT-23


| SYMBOL | Millimeters | | Inches | |
|----------|-------------|-------|------------|-------|
| | MIN. | MAX. | MIN. | MAX. |
| A | 0.890 | 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 | 0.076 | 0.170 | 0.003 | 0.007 |
| D | 2.650 | 3.050 | 0.104 | 0.120 |
| E | 1.190 | 1.400 | 0.047 | 0.055 |
| E1 | 2.100 | 2.550 | 0.083 | 0.100 |
| e | 0.950 TYP. | | 0.037 TYP. | |
| e1 | 1.780 | 2.050 | 0.070 | 0.081 |
| L | 0.550 REF. | | 0.022 REF. | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

Note: If date code is before 2016 year, please contact with factory about marking.

Carrier Tape Specification SOT-23


| SYMBOL | Millimeters | |
|--------|-------------|------|
| | Min. | Max. |
| A | 3.05 | 3.25 |
| B | 2.67 | 2.87 |
| C | 1.12 | 1.32 |
| d | 1.40 | 1.60 |
| E | 1.65 | 1.85 |
| F | 3.40 | 3.60 |
| P | 3.90 | 4.10 |
| P0 | 3.90 | 4.10 |
| P1 | 1.90 | 2.10 |
| W | 7.90 | 8.30 |

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