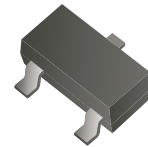


MMBD914-HF

Reverse Voltage: 75 Volts
 Forward Current: 200 mA
 RoHS Device
 Halogen Free



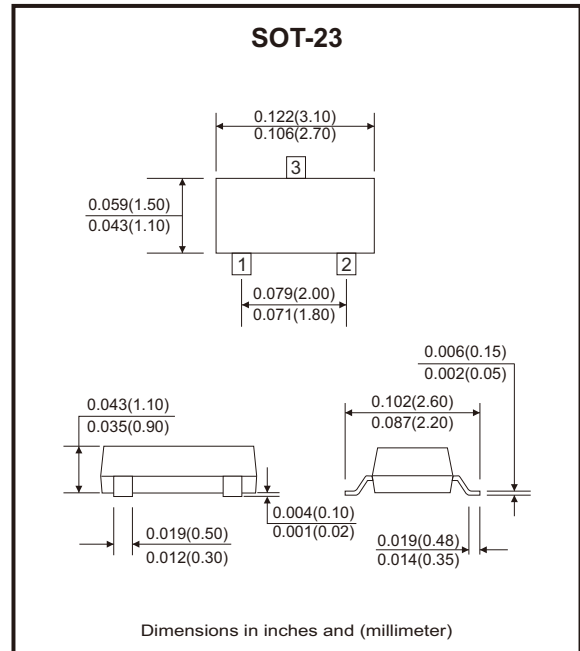
Features

- Fast switching speed.
- For general purpose switching applications.
- High conductance.
- Surface mount package ideally suited for automatic insertion.

Mechanical data

- Case: SOT-23, molded plastic.

Circuit diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|----------|-------------|------|
| Peak repetitive peak reverse voltage | VRRM | 75 | V |
| Working peak reverse voltage | VRWM | | |
| DC reverse voltage | VR | | |
| Non-repetitive peak reverse voltage | VRM | 100 | V |
| RMS reverse voltage | VR(RMS) | 53 | V |
| Forward continuous current | IFM | 300 | mA |
| Non-repetitive peak forward surge current | IFSM | @t= 1μs | 2.0 |
| | | @t= 1s | 1.0 |
| Average rectified output current | Io | 200 | mA |
| Power dissipation | Pd | 350 | mW |
| Thermal resistance junction to ambient air | RθJA | 357 | °C/W |
| Operating and storage temperature range | TJ, TSTG | -65 to +150 | °C |

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Conditions | Min | Max | Unit |
|---------------------------|--|--|-----|----------------------------|-------------------------------------|
| Reverse breakdown voltage | $V_{(BR)R}$ | $I_R=100\mu A$ | 75 | | V |
| Forward voltage | V_{F1} V_{F2} V_{F3} V_{F4} | $I_F=1mA$ $I_F=10mA$ $I_F=50mA$ $I_F=150mA$ | | 715 855 1000 1250 | mV |
| Reverse current | I_R | $V_R=75V$ $V_R=75V, T_J=150^\circ C$ $V_R=25V, T_J=150^\circ C$ $V_R=20V$ | | 1.0 50 30 25 | μA μA μA nA |
| Reverse recovery time | t_{rr} | $I_F=I_R=10mA, I_{rr}=0.1*I_R, R_L=100\Omega$ | | 4 | nS |
| Diode capacitance | C_D | $V_R=0V, f=1MHz$ | | 2 | pF |

Rating and Characteristic Curves (MMBD914-HF)

Fig.1 - Power Derating Curve

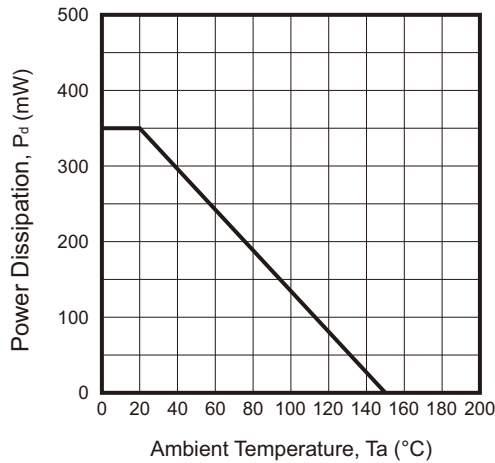


Fig.2 - Forward Characteristics

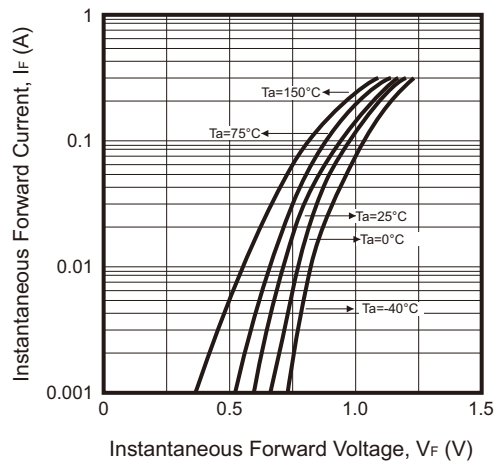


Fig.3 - Typical Reverse Characteristics

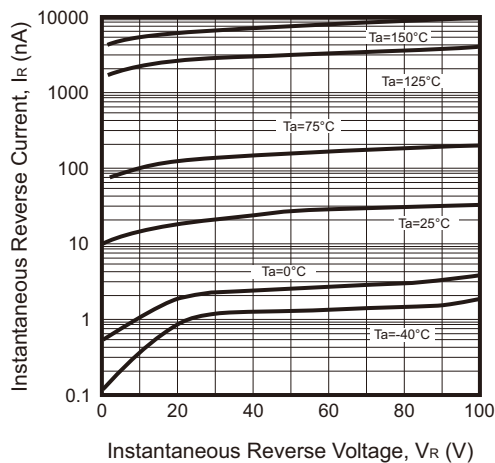
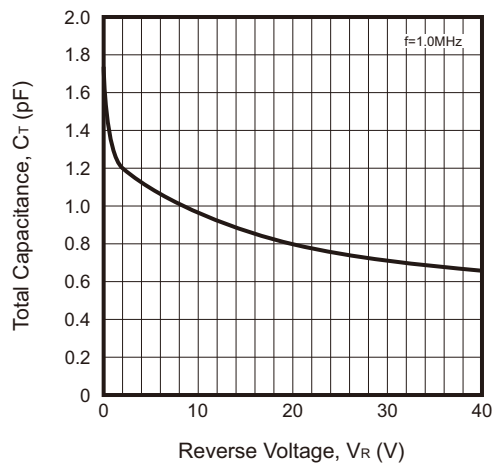


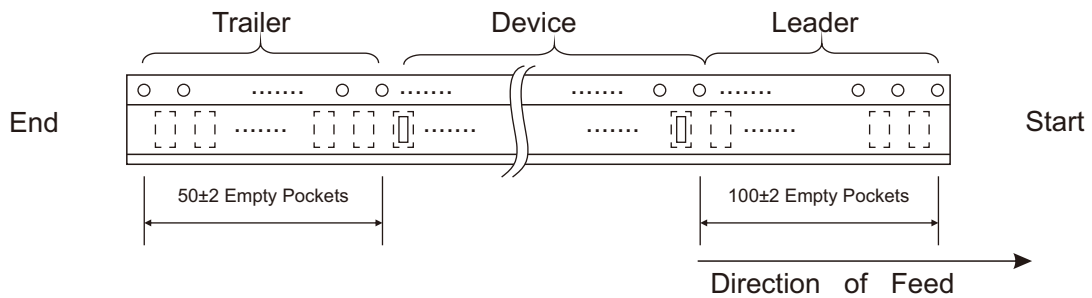
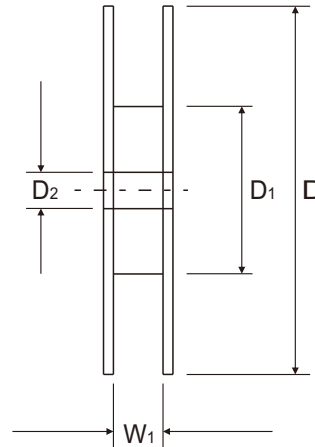
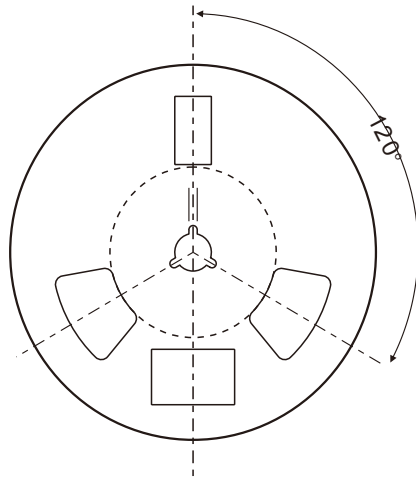
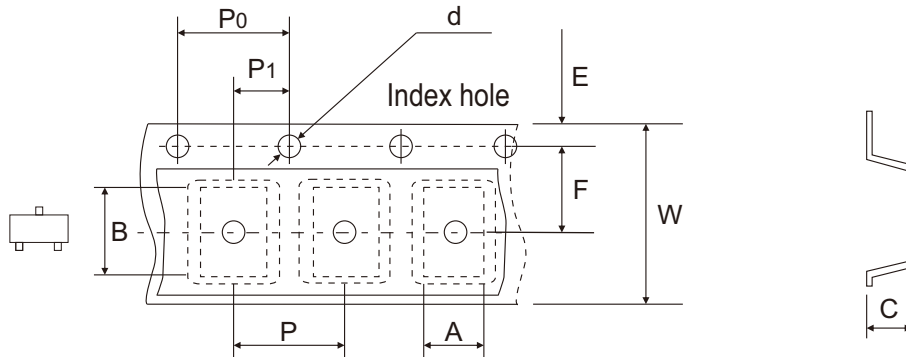
Fig.4 - Typical Capacitance vs. Reverse Voltage



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REV:A

Reel Taping Specification



| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | 1.50 ± 0.10 | 178.00 ± 1.00 | 54.00 ± 0.50 | 13.00 ± 0.50 |
| | (inch) | 0.124 ± 0.004 | 0.109 ± 0.004 | 0.048 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.039 | 2.126 ± 0.020 | 0.512 ± 0.020 |

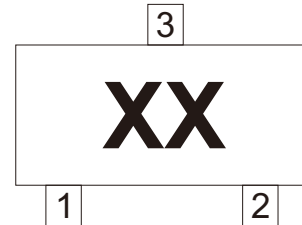
| SOT-23 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 + 0.30 - 0.10 | 9.50 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 + 0.012 - 0.004 | 0.374 ± 0.039 |

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REV:A

Marking Code

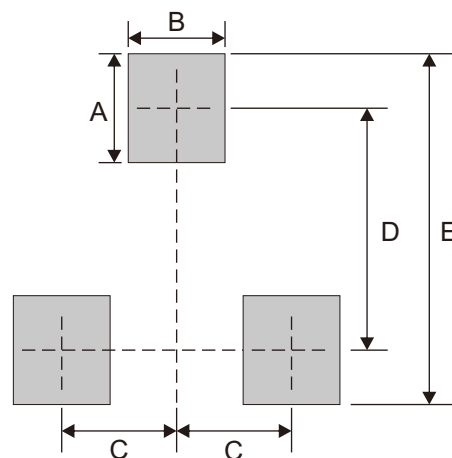
| Part Number | Marking Code |
|-------------|--------------|
| MMBD914-HF | 5D |



xx = Product type marking code

Suggested PAD Layout

| SIZE | SOT-23 | |
|------|--------|--------|
| | (mm) | (inch) |
| A | 0.90 | 0.035 |
| B | 0.80 | 0.031 |
| C | 0.95 | 0.037 |
| D | 2.00 | 0.079 |
| E | 2.90 | 0.114 |



Note: 1. The pad layout is for reference purposes only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOT-23 | 3,000 | 7 |