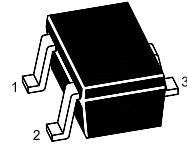
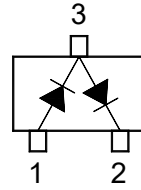


MMBD2840W

Silicon Epitaxial Planar Switching Diode



Applications

- For high speed switching applications

SOT-323 Plastic Package

1. Anode 2. Cathode 3. Anode / Cathode

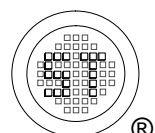
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|--|----------------|---------------|------------------|
| Maximum Repetitive Reverse Voltage | V_{RRM} | 35 | V |
| DC Reverse Voltage | V_R | 30 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 100 | mA |
| Maximum Forward Current | I_{FM} | 300 | mA |
| Non-repetitive Peak Forward Surge Current at $t = 1 \mu\text{s}$ | I_{FSM} | 4 | A |
| Power Dissipation | P_D | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_j, T_{stg} | - 55 to + 150 | $^\circ\text{C}$ |

Thermal Characteristics

| Parameter | Symbol | Max. | Unit |
|---|-----------------|------|--------------------|
| Thermal Resistance from Junction to Ambient ¹⁾ | $R_{\theta JA}$ | 625 | $^\circ\text{C/W}$ |

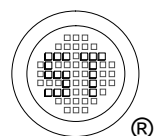
¹⁾ Device mounted on FR-4 PCB with minimum recommended pad layout.



MMBD2840W

Characteristics at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|--|------------------|-------------|-----------------|---------------|
| Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$ | $V_{(BR)R}$ | 30 | - | V |
| Forward Voltage at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 100 \text{ mA}$ | V_F | - - - | 1 1.2 1.4 | V |
| Reverse Current at $V_R = 30 \text{ V}$ | I_R | - | 0.1 | μA |
| Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$ | C_{tot} | - | 6 | pF |



MMBD2840W

Electrical Characteristics Curves

Fig. 1 Power Derating Curve

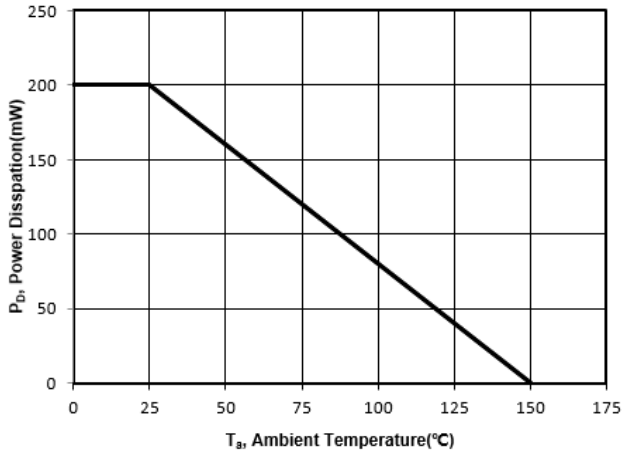


Fig. 2 Capacitance Characteristics

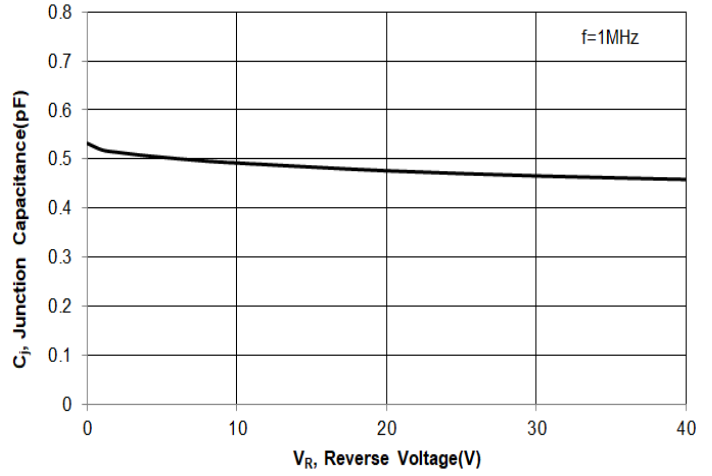


Fig. 3 Reverse Characteristics

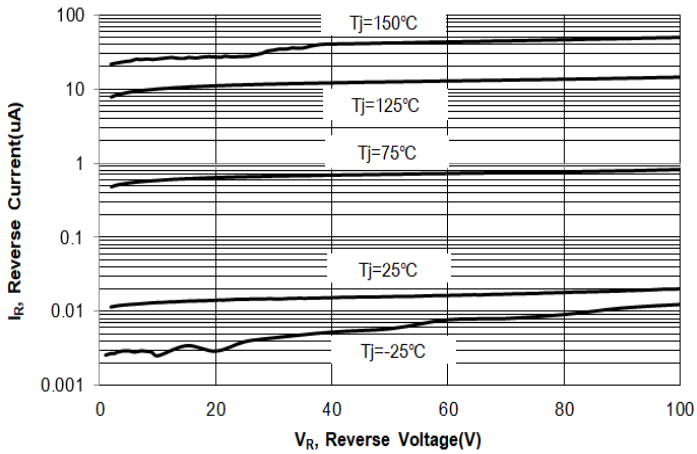
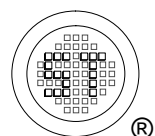
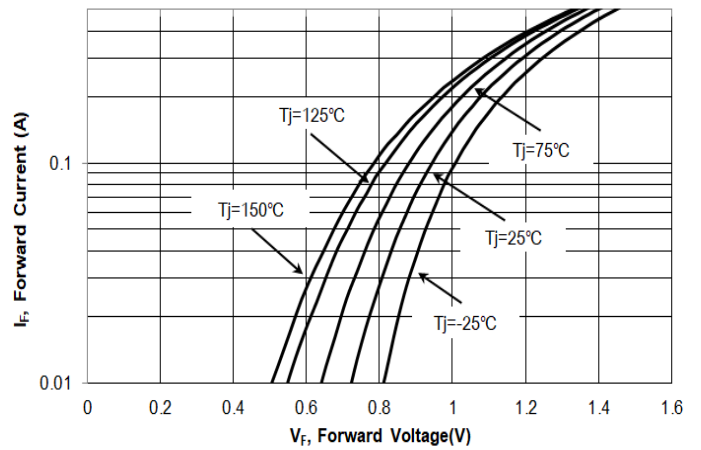


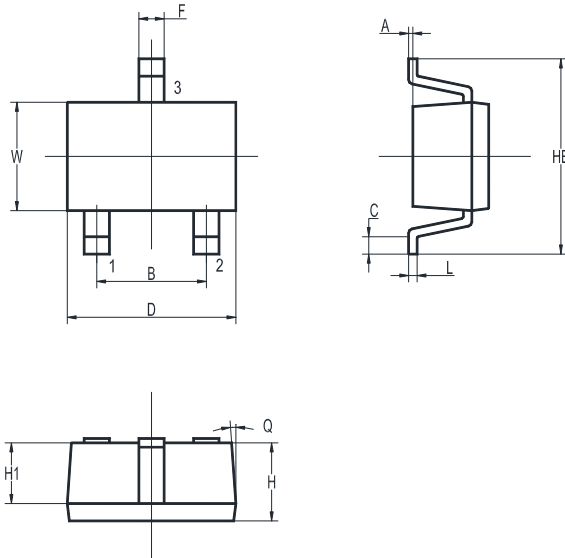
Fig. 4 Forward Characteristics



MMBD2840W

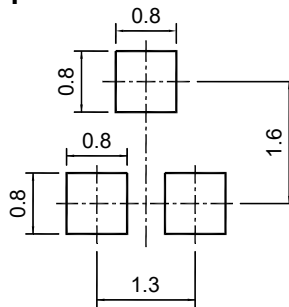
Package Outline Dimensions (Units: mm)

SOT-323



| UNIT | A | B | C | D | H | H1 | HE | F | L | W | Q |
|------|-------------|------------|-------------|------------|------------|-------------|------------|--------------|--------------|--------------|------------|
| mm | 0.1 MAX. | 1.4 1.2 | 0.2 MIN. | 2.1 1.9 | 1.0 0.8 | 0.7 TYP. | 2.4 2.0 | 0.35 0.25 | 0.15 0.05 | 1.35 1.15 | 5° MAX. |

Recommended Soldering Footprint

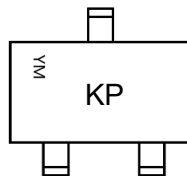


Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|---------|-----------------|---------|---------------|-----------|------|---------------------------|
| | | mm | inch | mm | inch | |
| SOT-323 | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

Marking information

- " KP " = Part No.
 - " YM " = Date Code Marking
 - " Y " = Year
 - " M " = Month
- Font type: Arial



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