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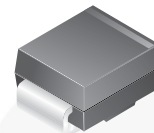
February 2015

# MBRS140

## Schottky Rectifier

### Features

- Compact Surface Mount with J-bend Leads (SMB)
- 1.5 W Power Dissipation Package
- 1.0 A, Forward Voltage less than 600 mV



**SMB (DO-214AA)**  
Color Band Denote Cathode

### Ordering Information

| Part Number | Top Mark | Package        | Packing Method |
|-------------|----------|----------------|----------------|
| MBRS140     | B140     | DO-214AA (SMB) | Tape and Reel  |

### Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

| Symbol      | Parameter  | Value       | Unit             |
|-------------|--|-------------|------------------|
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage   | 40          | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current at $T_L = 120^\circ\text{C}$               | 1.0         | A                |
| $I_{FSM}$   | Non-Repetitive Peak Forward Surge Current<br>(8.3 ms, Single Half-Sine-Wave) | 40          | A                |
| $T_{STG}$   | Storage Temperature Range  | -65 to +150 | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature   | -65 to +125 | $^\circ\text{C}$ |

### Thermal Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

| Symbol          | Parameter                            | Value | Unit               |
|-----------------|--------------------------------------|-------|--------------------|
| $R_{\theta JL}$ | Thermal Resistance, Junction-to-Lead | 12    | $^\circ\text{C/W}$ |

### Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

| Symbol | Parameter       | Conditions                                   | Min. | Max. | Unit |
|--------|-----------------|--|------|------|------|
| $V_F$  | Forward Voltage | $I_F = 1.0\text{ A}$                         |      | 600  | mV   |
| $I_R$  | Reverse Current | $V_R = 40\text{ V}$                          |      | 1.0  | mA   |
|        |                 | $V_R = 40\text{ V}, T_A = 100^\circ\text{C}$ |      | 10   |      |

### Typical Performance Characteristics

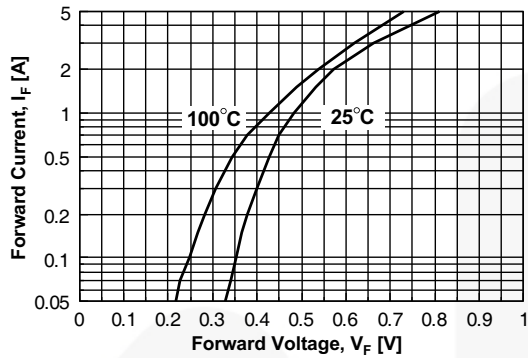


Figure 1. Forward Voltage Characteristics

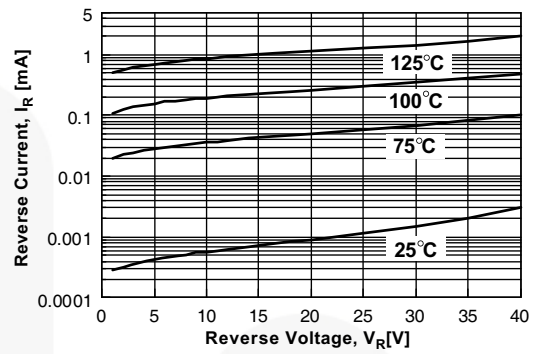


Figure 2. Reverse Current vs. Reverse Voltage

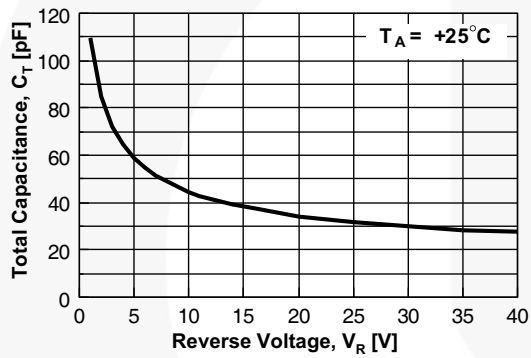


Figure 3. Total Capacitance

Physical Dimension

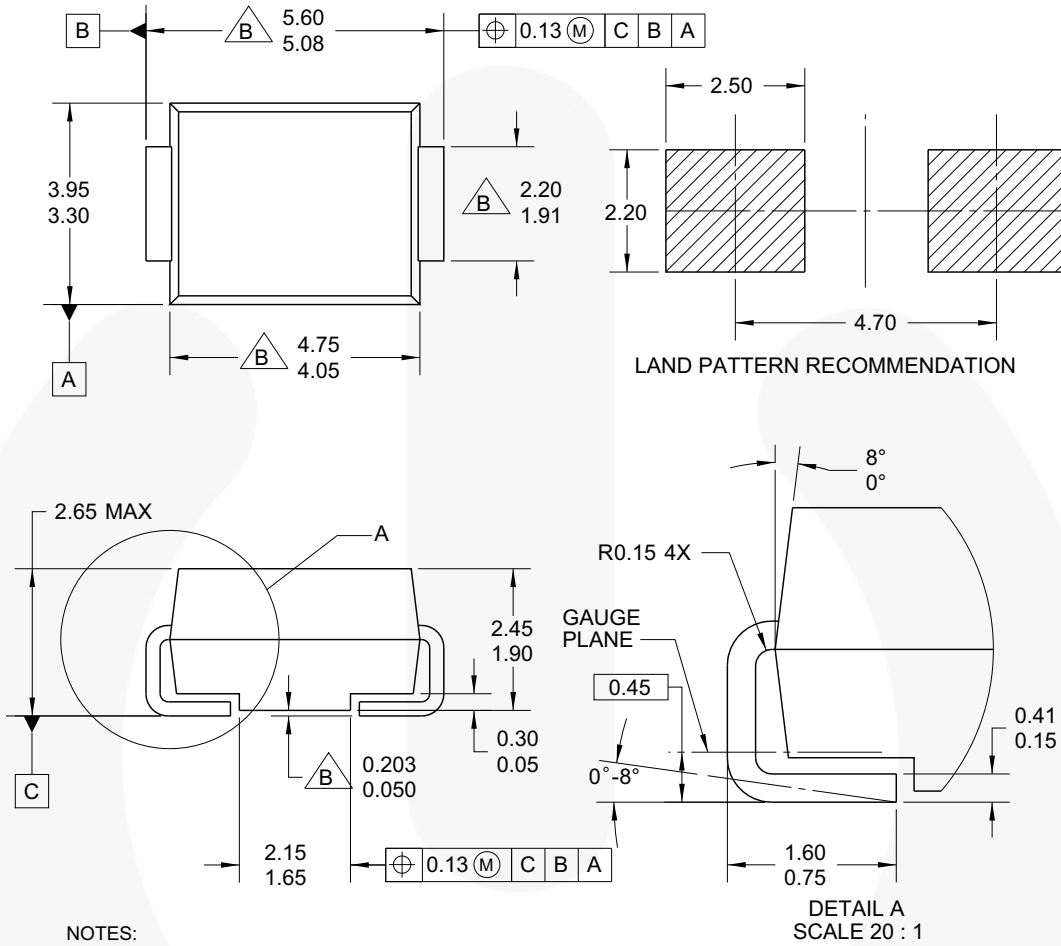



Figure 4. 2-LEAD, SMB, JEDEC DO-214, VARIATION AA





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