



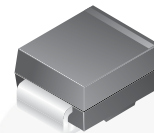
February 2015

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 (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 | $^\circ\text{C}/\text{W}$ |

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

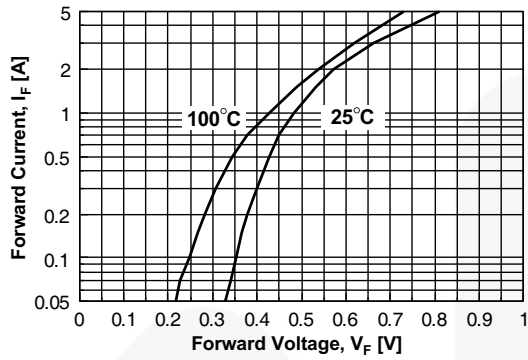


Figure 1. Forward Voltage Characteristics

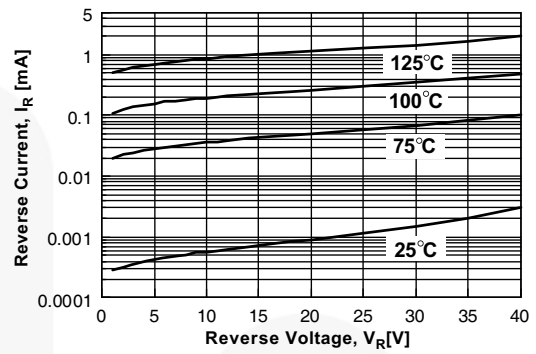


Figure 2. Reverse Current vs. Reverse Voltage

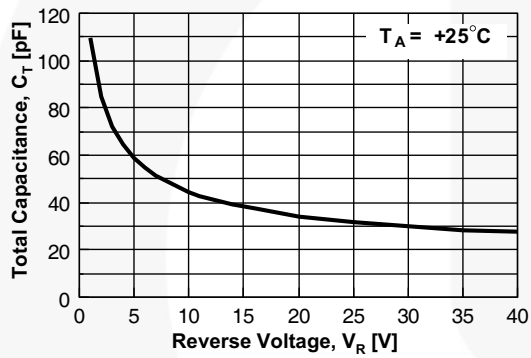
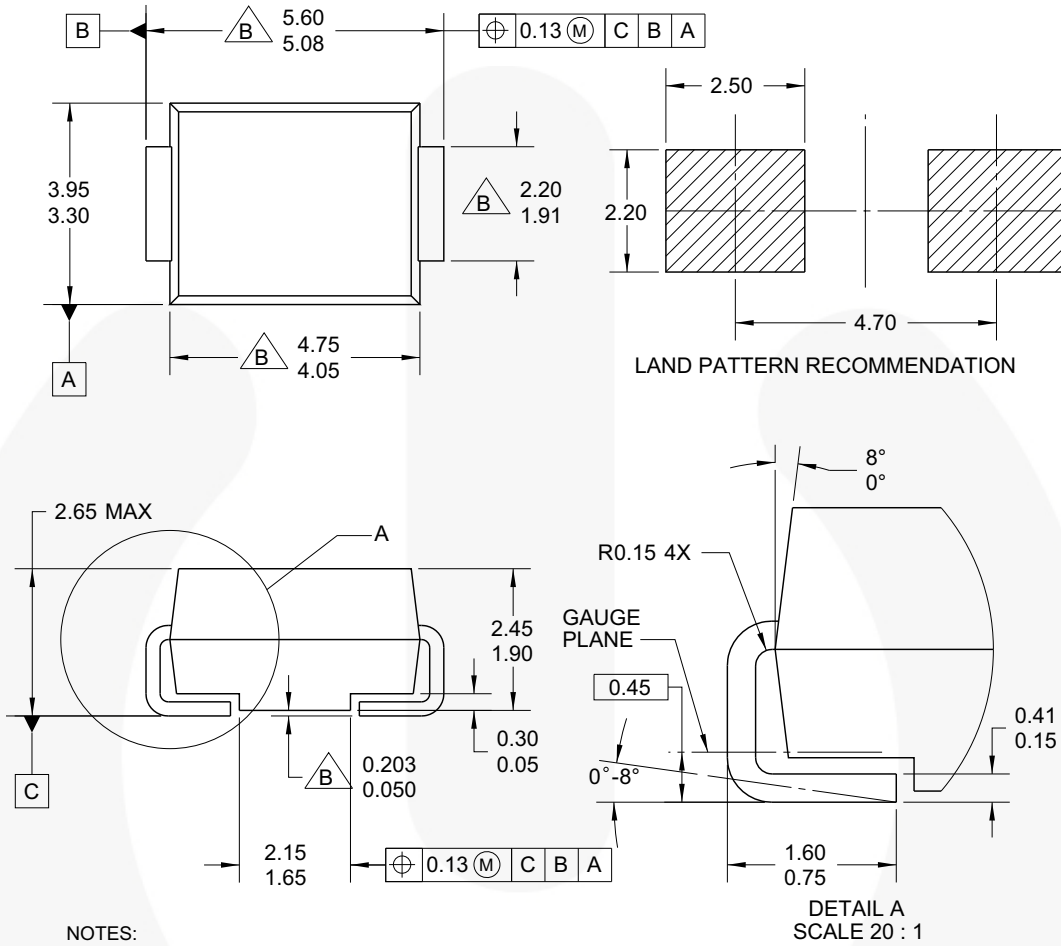


Figure 3. Total Capacitance

Physical Dimension



NOTES:

- A. EXCEPT WHERE NOTED CONFORMS TO JEDEC DO214 VARIATION AA.
- B. DOES NOT COMPLY JEDEC STD. VALUE.
- C. ALL DIMENSIONS ARE IN MILLIMETERS.
- D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- E. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
- F. LAND PATTERN STD. DIOM5336X240M.
- G. DRAWING FILE NAME: DO214AAREV1

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



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