## THERMAL CHARACTERISTICS

| Characteristic | Symbol | Value | Unit |
|---|---|---|---|
| Thermal Resistance, Junction−to−Lead ($T_L$ = 25°C) | $R_{\theta JL}$ | 12 | °C/W |

## ELECTRICAL CHARACTERISTICS

| | | | |
|---|---|---|---|
| Maximum Instantaneous Forward Voltage (Note 1) ($i_F$ = 1.0 A, $T_J$ = 25°C) | $V_F$ | 0.6 | V |
| Maximum Instantaneous Reverse Current (Note 1)<br>(Rated dc Voltage, $T_J$ = 25°C)<br>(Rated dc Voltage, $T_J$ = 100°C) | $i_R$ | <br>1.0<br>10 | mA |

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

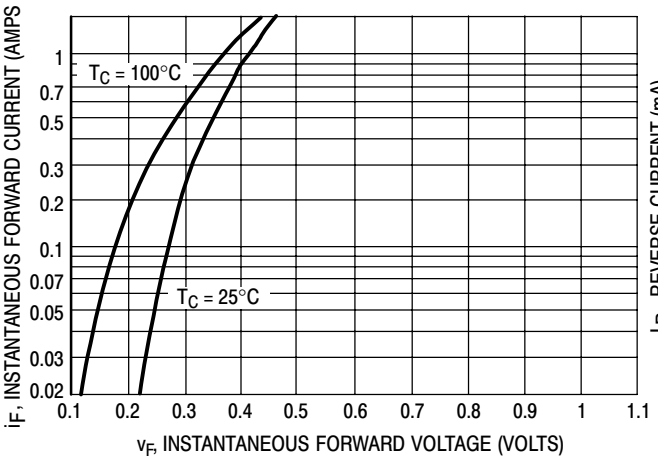



**Figure 1. Typical Forward Voltage**

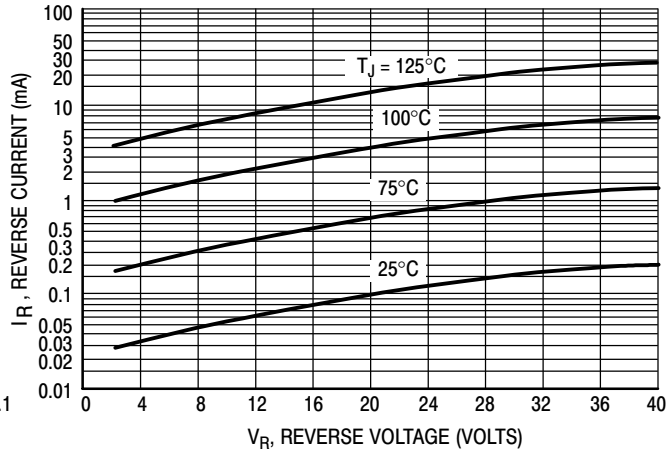



**Figure 2. Typical Reverse Current**

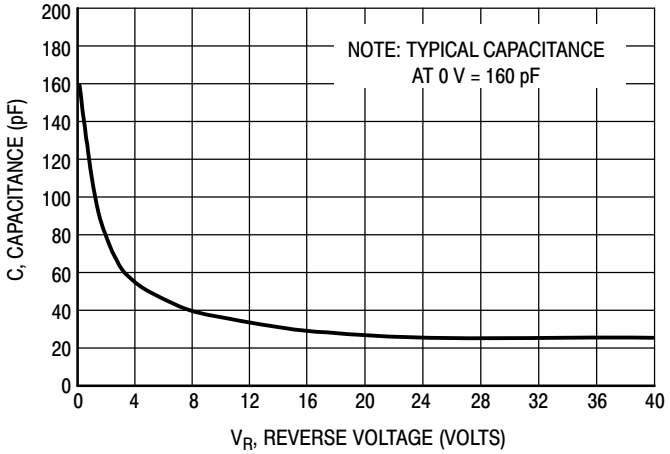



**Figure 3. Typical Capacitance**

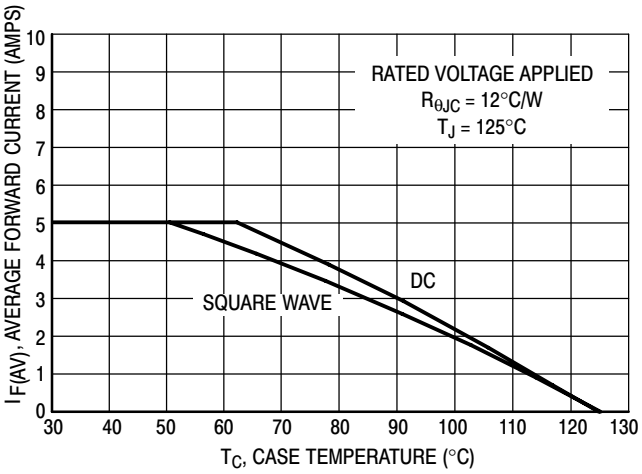



**Figure 4. Current Derating (Case)**

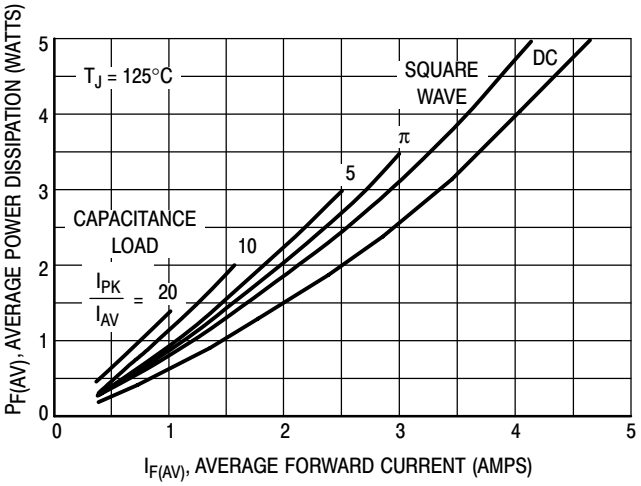
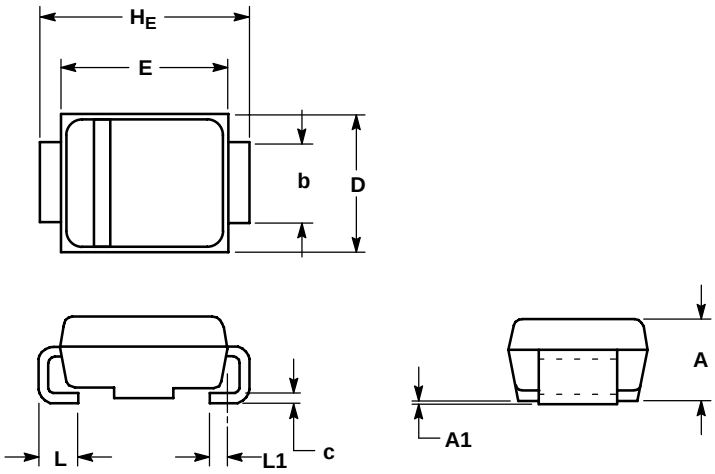



**Figure 5. Power Dissipation**

# MBRS120T3

## PACKAGE DIMENSIONS

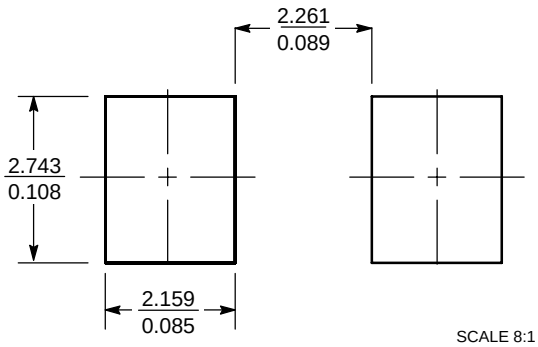
**SMB**
PLASTIC PACKAGE
CASE 403A−03
ISSUE E




NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P.

| | MILLIMETERS | | | INCHES | | |
|---|---|---|---|---|---|---|
| DIM | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 1.90 | 2.13 | 2.41 | 0.075 | 0.084 | 0.095 |
| A1 | 0.05 | 0.10 | 0.15 | 0.002 | 0.004 | 0.006 |
| b | 1.96 | 2.03 | 2.11 | 0.077 | 0.080 | 0.083 |
| c | 0.15 | 0.23 | 0.30 | 0.006 | 0.009 | 0.012 |
| D | 3.30 | 3.56 | 3.81 | 0.130 | 0.140 | 0.150 |
| E | 4.06 | 4.32 | 4.57 | 0.160 | 0.170 | 0.180 |
| $H_E$ | 5.21 | 5.44 | 5.59 | 0.205 | 0.214 | 0.220 |
| L | 0.76 | 1.02 | 1.27 | 0.030 | 0.040 | 0.050 |
| L1 | 0.51 REF | | | 0.020 REF | | |

## SOLDERING FOOTPRINT*




*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.



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