



# SCHOTTKY DIODE MODULE TYPE 2X120A / 80V

## Features

- High Surge Capability
- Type 80V  $V_{RRM}$
- Isolation Type Package
- Electrically Isolation Base Plate
- RoHS Compliant

## Maximum Ratings

Junction Operating Temperature : -40°C to +150°C

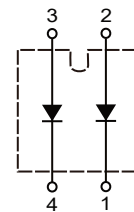
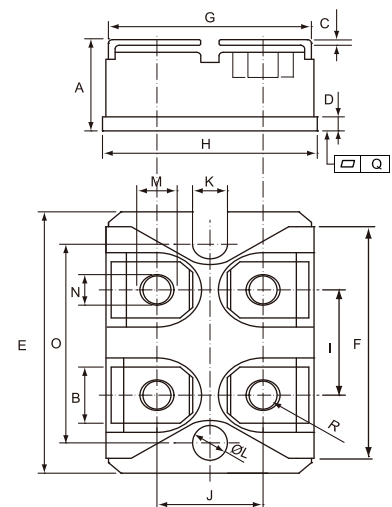
Storage Temperature : -40°C to +150°C

| Part Number    | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|----------------|--|---------------------|-----------------------------|
| MBRI2X121-080A | 80V                                    | 56V                 | 80V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |                 |                     |   |
|---|-----------------|---------------------|---|
| Average Forward Current<br>(Per pkg)<br>(Per diode)                               | $I_{F(AV)}$     | 240A<br>120A        | $T_C = 110^\circ\text{C}$   |
| Peak Forward Surge Current<br>(Per diode)   | $I_{FSM}$       | 1500A               | 8.3ms, half sine  |
| Maximum Instantaneous Forward Voltage*<br>(Per diode)                             | $V_F$           | 0.73V<br>0.84V      | $I_{FM} = 120\text{A}; T_J = 125^\circ\text{C}$<br>$I_{FM} = 120\text{A}; T_J = 25^\circ\text{C}$ |
| Maximum Instantaneous Reverse Current At Rated DC Blockig Voltage*<br>(Per diode) | $I_R$           | 1mA<br>10mA<br>30mA | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$<br>$T_J = 150^\circ\text{C}$                |
| Isolation Voltage   | $V_{iso}$       | 2500V               | A.C. 1 minute   |
| Maximum Thermal Resistance Junction To Case<br>(Per diode)                        | $R_{\theta jc}$ | 0.38°C/W            |   |
| Mounting Torque   |                 | 1.3Nm               | M4 Screw  |

\*Pulse Test: Pulse Width 300  $\mu$ sec, Duty Cycle < 2%



MBRI 2X121 - xxxA

|   | DIMENSIONS |       |       |       |
|---|------------|-------|-------|-------|
|   | INCHES     |       | MM    |       |
|   | MIN        | MAX   | MIN   | MAX   |
| A | 0.460      | 0.483 | 11.68 | 12.28 |
| B | 0.307      | 0.323 | 7.80  | 8.20  |
| C | 0.030      | 0.033 | 0.75  | 0.85  |
| D | 0.071      | 0.081 | 1.80  | 2.05  |
| E | 1.488      | 1.504 | 37.80 | 38.20 |
| F | 1.248      | 1.260 | 31.70 | 32.00 |
| G | 0.917      | 0.957 | 23.30 | 24.30 |
| H | 0.996      | 1.008 | 25.30 | 25.60 |
| I | 0.579      | 0.602 | 14.70 | 15.30 |
| J | 0.492      | 0.516 | 12.50 | 13.10 |
| K | 0.161      | 0.169 | 4.10  | 4.30  |
| L | 0.161      | 0.169 | 4.10  | 4.30  |
| M | 0.181      | 0.197 | 4.60  | 5.00  |
| N | 0.165      | 0.181 | 4.20  | 4.60  |
| O | 1.181      | 1.197 | 30.00 | 30.40 |
| Q | -0.002     | 0.004 | -0.05 | 0.10  |
| R | M4*8       |       |       |       |



Figure.1 - Typical Forward Characteristics

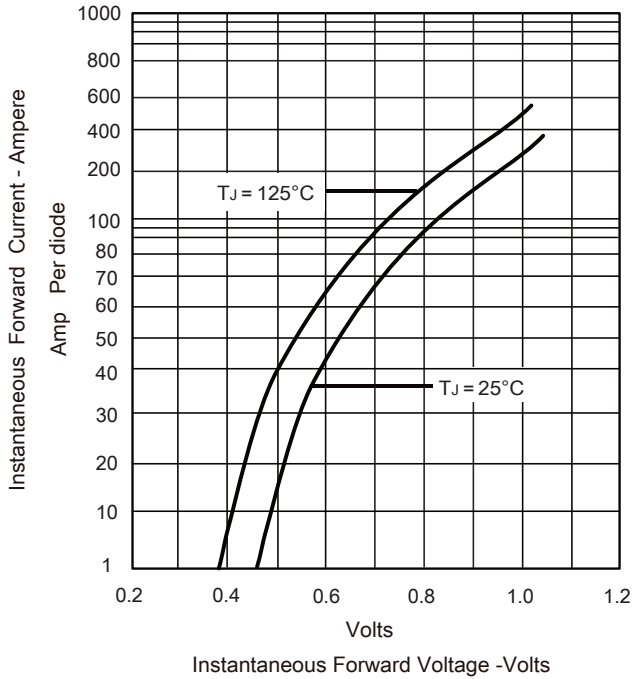


Figure.2 - Forward Derating Curve

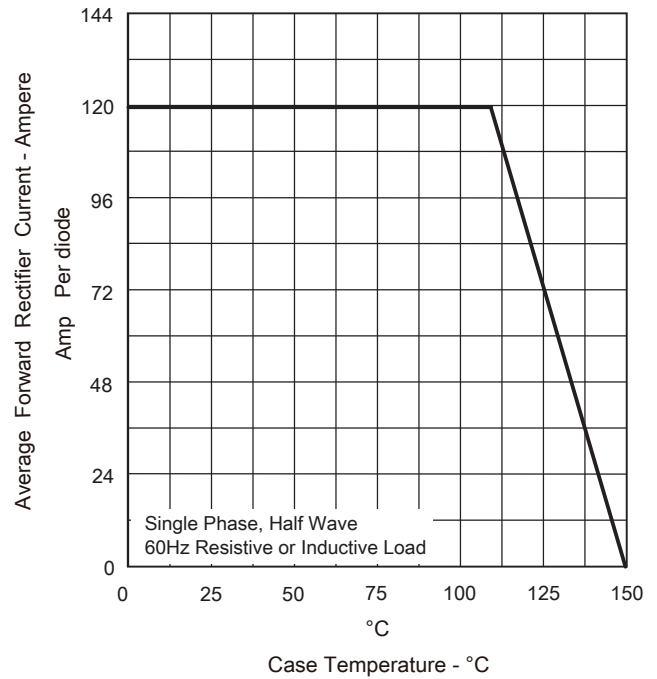


Figure.3 - Peak Forward Surge Current

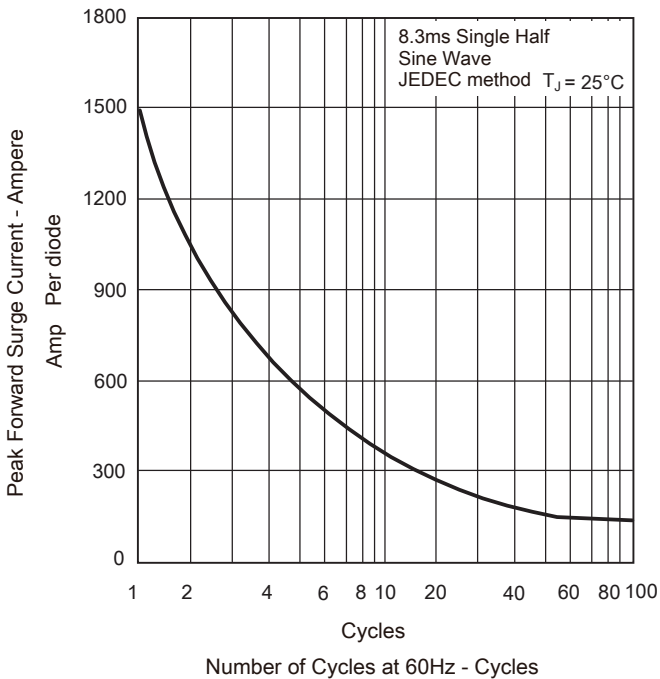
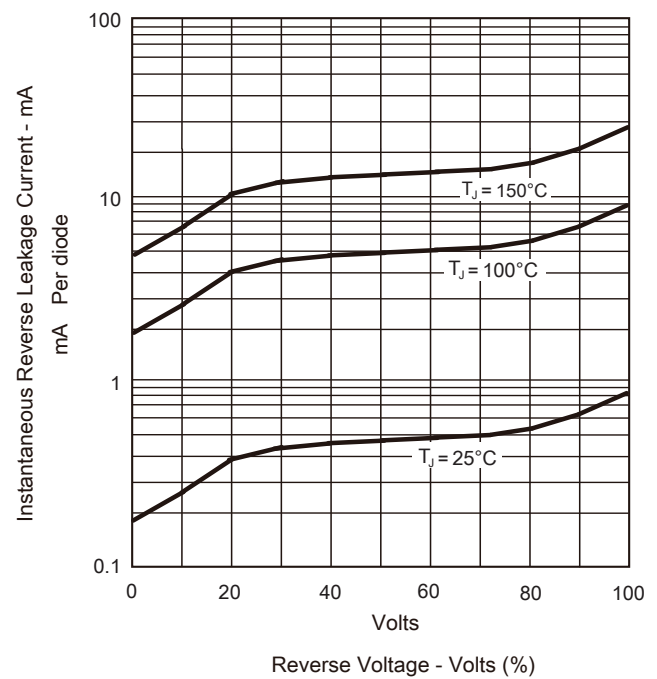


Figure.4 - Typical Reverse Characteristics





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