

**VOLTAGE RANGE: 40 - 200V**  
**CURRENT: 3.0 A**

### Features

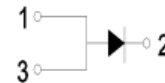
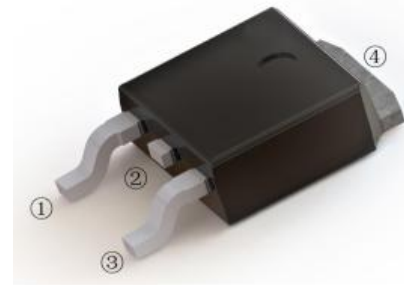
- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed

### Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- Mounting position: Any
- Weight: 2.24 grams



### TO-252(D-PAK)



### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| CHARACTERISTICS   | SYMBOL            | MBRD340     | MBRD345 | MBRD360 | MBRD3100 | MBRD3150 | MBRD3200 | UNIT |
|---|-------------------|-------------|---------|---------|----------|----------|----------|------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>  | 40          | 45      | 60      | 100      | 150      | 200      | V    |
| Maximum RMS Voltage   | V <sub>RMS</sub>  | 28          | 31.5    | 42      | 70       | 105      | 140      | V    |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>   | 40          | 45      | 60      | 100      | 150      | 200      | V    |
| Maximum Average Forward Rectified Current   | I <sub>(AV)</sub> | 3.0         |         |         |          |          |          | A    |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load (JEDEC Method) | I <sub>FSM</sub>  | 80          |         |         |          |          |          | A    |
| Maximum Forward Voltage at 3.0A DC  | V <sub>F</sub>    | 0.60        | 0.70    | 0.85    | 0.90     | 0.92     |          | V    |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage  | I <sub>R</sub>    | 0.5<br>20   |         |         |          |          |          | mA   |
| Typical Junction Capacitance Per Element (Note1)  | C <sub>J</sub>    | 600         | 400     |         |          |          |          | pF   |
| Typical Thermal Resistance (Note2)  | R <sub>θJA</sub>  | 45          |         |         |          |          |          | °C/W |
| Operating Temperature Range   | T <sub>J</sub>    | -55 to +150 |         |         |          |          |          | °C   |
| Storage Temperature Range   | T <sub>STG</sub>  | -55 to +150 |         |         |          |          |          | °C   |

NOTES: 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2.Mounted on 10cm x 10cm x 1mm copper pad area

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

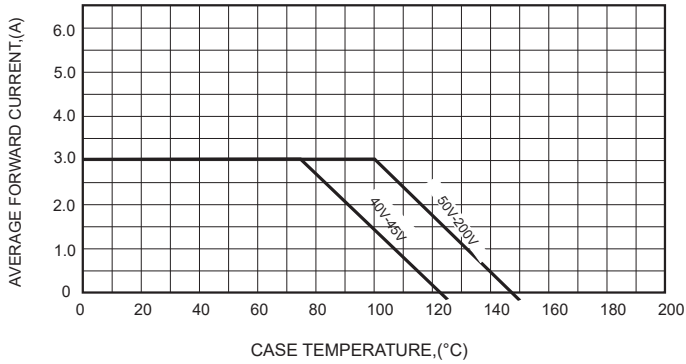


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

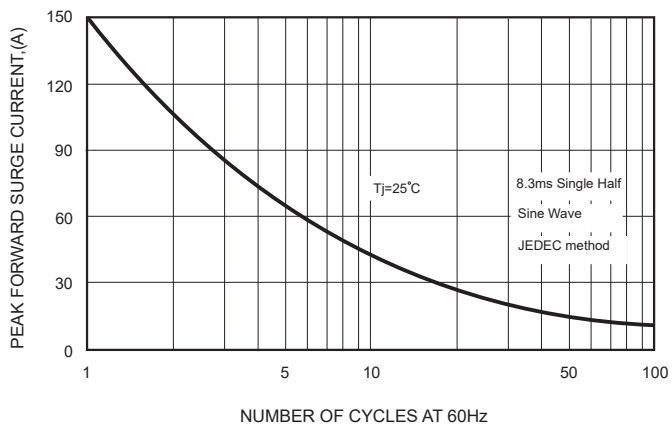


FIG.2-TYPICAL FORWARD CHARACTERISTICS

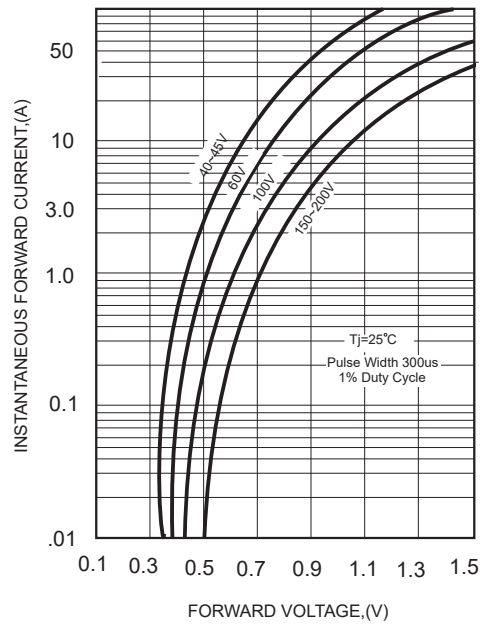
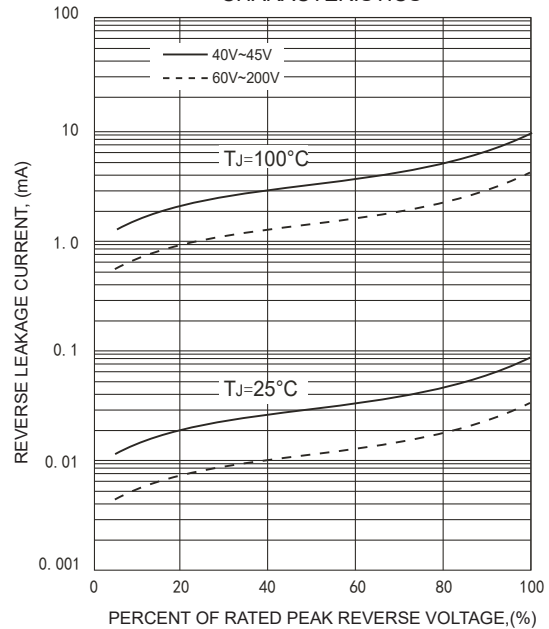
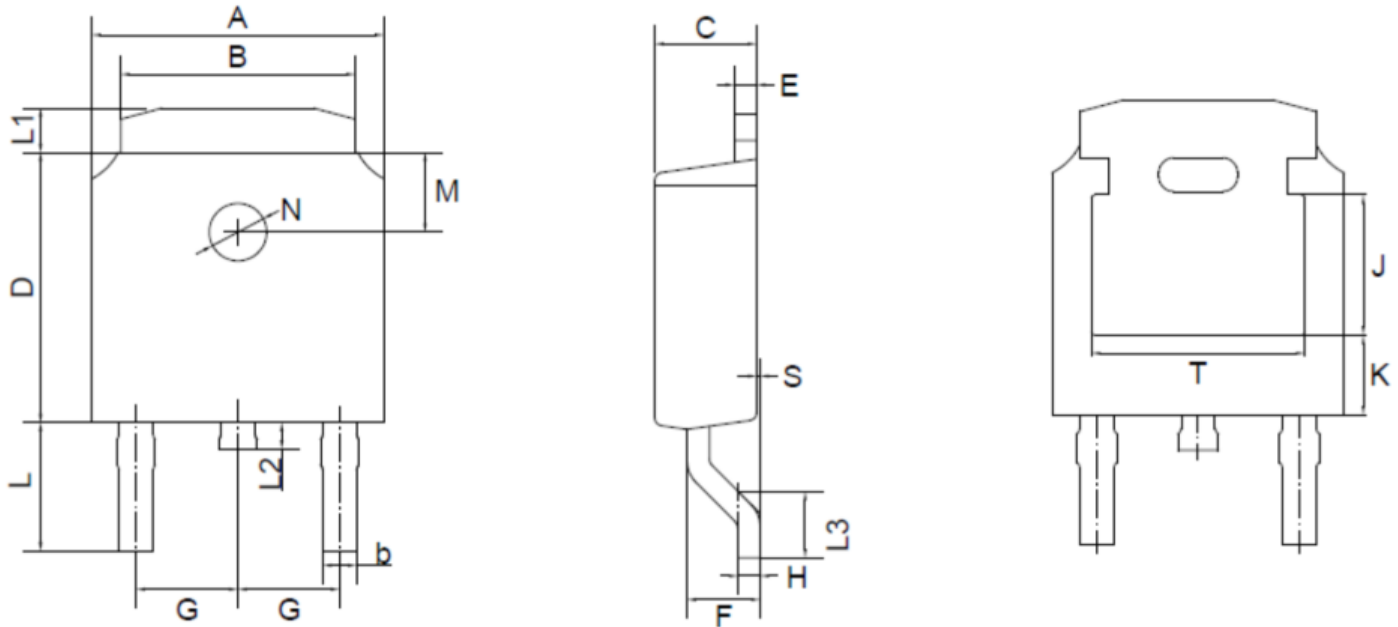


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



### TO-252(D-PAK) Package Outline Dimensions

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TO-252(D-PAK) mechanical data

| UNIT |     | A   | B   | b   | C   | D   | E   | F   | G       | H    | L   | L1  | L2  | L3   | S   | M       | N       | J    | K    | T    |
|------|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|-----|-----|------|-----|---------|---------|------|------|------|
| mm   | max | 6.7 | 5.5 | 0.8 | 2.5 | 6.3 | 0.6 | 1.8 | 2.29    | 0.55 | 3.1 | 1.2 | 1.0 | 1.75 | 0.1 | 1.8     | 1.3     | 3.16 | 1.80 | 4.83 |
|      | min | 6.3 | 5.1 | 0.3 | 2.1 | 5.9 | 0.4 | 1.3 | TYPICAL | 0.45 | 2.7 | 0.8 | 0.6 | 1.40 | 0.0 | TYPICAL | TYPICAL | ref. | ref. | ref. |
| mil  | max | 264 | 217 | 31  | 98  | 248 | 24  | 71  | 90      | 22   | 122 | 47  | 39  | 69   | 4   | 71      | 51      | 124  | 71   | 190  |
|      | min | 248 | 201 | 12  | 83  | 232 | 16  | 51  | TYPICAL | 18   | 106 | 31  | 24  | 55   | 0   | TYPICAL | TYPICAL | ref. | ref. | ref. |