

America Semiconductor



"In America Semi We Trust"

MANUFACTURER OF WORLD CLASS HIGH POWER SEMICONDUCTORS

America Semiconductor

Silicon Power Schottky Diode

MBR6045 thru MBR60100R

$V_{RRM} = 20\text{ V} - 100\text{ V}$
 $I_F = 60\text{ A}$

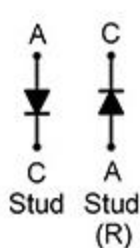
Features

- High Surge Capability
- Types up to 100 V V_{RRM}

DO-5 Package

Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.



Maximum ratings, at $T_J = 25\text{ }^\circ\text{C}$, unless otherwise specified ("R" devices have leads reversed)

| Parameter | Symbol | Conditions | MBR6045 (R) | MBR6060 (R) | MBR6080 (R) | MBR60100 (R) | Unit |
|--|------------|--|-------------|-------------|-------------|--------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 45 | 60 | 80 | 100 | V |
| RMS reverse voltage | V_{RMS} | | 32 | 42 | 50 | 70 | V |
| DC blocking voltage | V_{DC} | | 45 | 60 | 80 | 100 | V |
| Continuous forward current | I_F | $T_C \leq 100\text{ }^\circ\text{C}$ | 60 | 60 | 60 | 60 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$ | 700 | 700 | 700 | 700 | A |
| Operating temperature | T_J | | -65 to 150 | -65 to 150 | -65 to 150 | -65 to 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -65 to 175 | -65 to 175 | -65 to 175 | -65 to 175 | $^\circ\text{C}$ |

Electrical characteristics, at $T_J = 25\text{ }^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Conditions | MBR6045 (R) | MBR6060(R) | MBR6080 (R) | MBR60100 (R) | Unit |
|-----------------------|--------|---|-------------|------------|-------------|--------------|------|
| Diode forward voltage | V_F | $I_F = 60\text{ A}$, $T_J = 25\text{ }^\circ\text{C}$ | 0.65 | 0.75 | 0.84 | 0.84 | V |
| Reverse current | I_R | $V_R = 20\text{ V}$, $T_J = 25\text{ }^\circ\text{C}$ | 5 | 5 | 5 | 5 | mA |
| | | $V_R = 20\text{ V}$, $T_J = 125\text{ }^\circ\text{C}$ | 150 | 150 | 150 | 150 | mA |

Thermal characteristics

| Parameter | Symbol | Conditions | MBR6045 (R) | MBR6060(R) | MBR6080 (R) | MBR60100 (R) | Unit |
|-------------------------------------|------------|------------|-------------|------------|-------------|--------------|--------------------|
| Thermal resistance, junction - case | R_{thJC} | | 1.0 | 1.0 | 1.0 | 1.0 | $^\circ\text{C/W}$ |

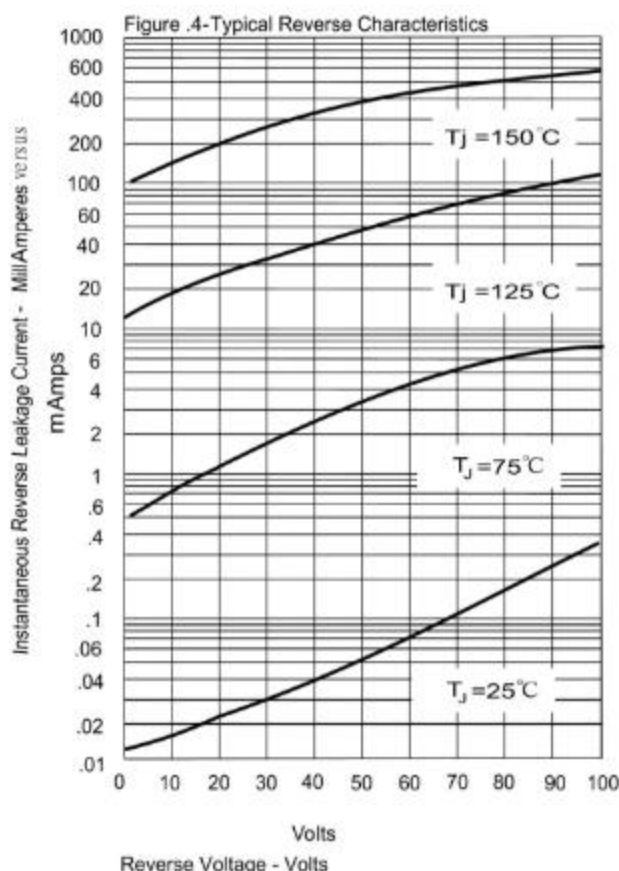
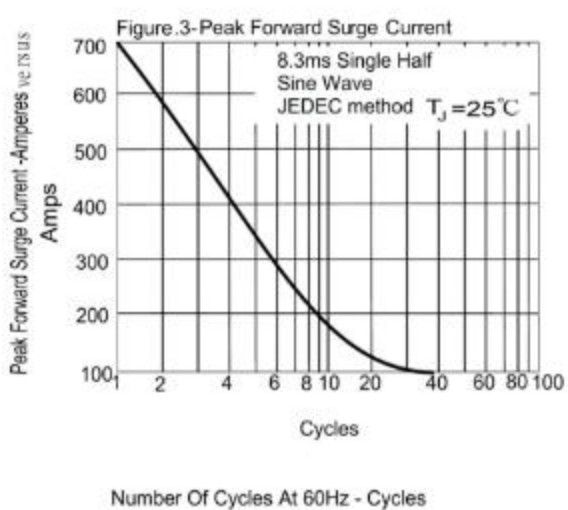
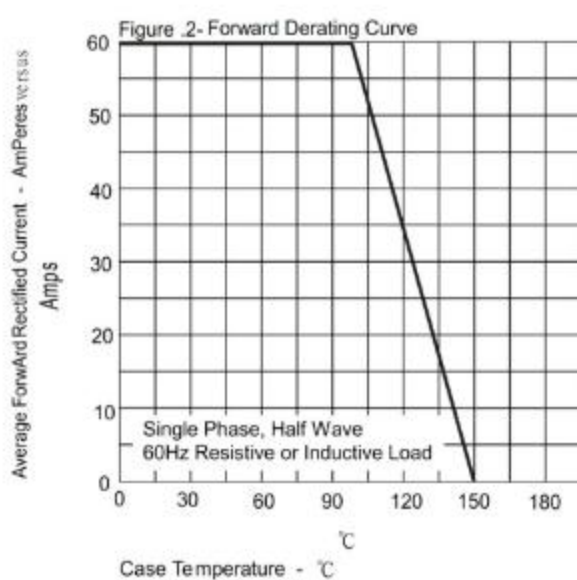
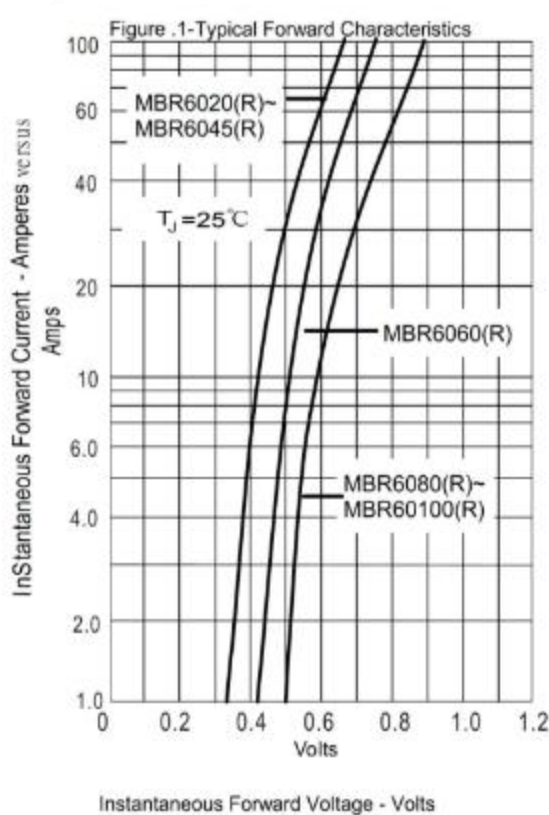


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