

## Silicon Power Schottky Diode

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

$I_F = 200\text{ A}$

### Features

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

TO-244AB Package



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

| Parameter                                            | Symbol     | Conditions                                   | MBRF20045 (R) | MBRF20060 (R) | MBRF20080 (R) | MBRF200100 (R) | Unit |
|------------------------------------------------------|------------|----------------------------------------------|---------------|---------------|---------------|----------------|------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |                                              | 45            | 60            | 80            | 100            | V    |
| RMS reverse voltage                                  | $V_{RMS}$  |                                              | 32            | 42            | 56            | 70             | V    |
| DC blocking voltage                                  | $V_{DC}$   |                                              | 45            | 60            | 80            | 100            | V    |
| Continuous forward current                           | $I_F$      | $T_C \leq 140\text{ °C}$                     | 200           | 200           | 200           | 200            | A    |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ °C}$ , $t_p = 8.3\text{ ms}$ | 1500          | 1500          | 1500          | 1500           | A    |
| Operating temperature                                | $T_j$      |                                              | -40 to 175    | -40 to 175    | -40 to 175    | -40 to 175     | °C   |
| Storage temperature                                  | $T_{stg}$  |                                              | -40 to 175    | -40 to 175    | -40 to 175    | -40 to 175     | °C   |

Electrical characteristics, at  $T_j = 25\text{ °C}$ , unless otherwise specified

| Parameter             | Symbol | Conditions                                  | MBRF20045 (R) | MBRF20060 (R) | MBRF20080 (R) | MBRF200100 (R) | Unit |
|-----------------------|--------|---------------------------------------------|---------------|---------------|---------------|----------------|------|
| Diode forward voltage | $V_F$  | $I_F = 100\text{ A}$ , $T_j = 25\text{ °C}$ | 0.65          | 0.75          | 0.84          | 0.84           | V    |
| Reverse current       | $I_R$  | $V_R = 20\text{ V}$ , $T_j = 25\text{ °C}$  | 5             | 5             | 5             | 5              | mA   |
|                       |        | $V_R = 20\text{ V}$ , $T_j = 125\text{ °C}$ | 200           | 200           | 200           | 200            |      |

### Thermal characteristics

|                                     |            |  |     |     |     |     |      |
|-------------------------------------|------------|--|-----|-----|-----|-----|------|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 0.5 | 0.5 | 0.5 | 0.5 | °C/W |
|-------------------------------------|------------|--|-----|-----|-----|-----|------|

Figure .1-Typical Forward Characteristics

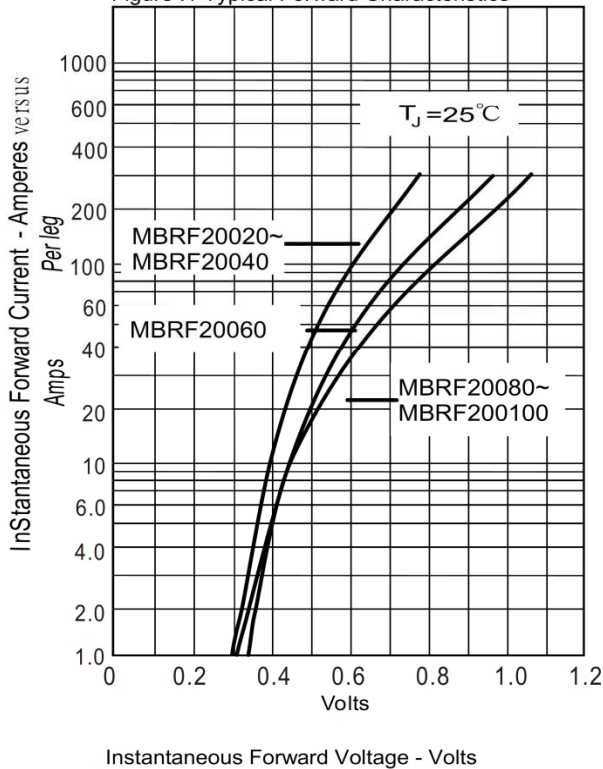


Figure .2-Forward Derating Curve

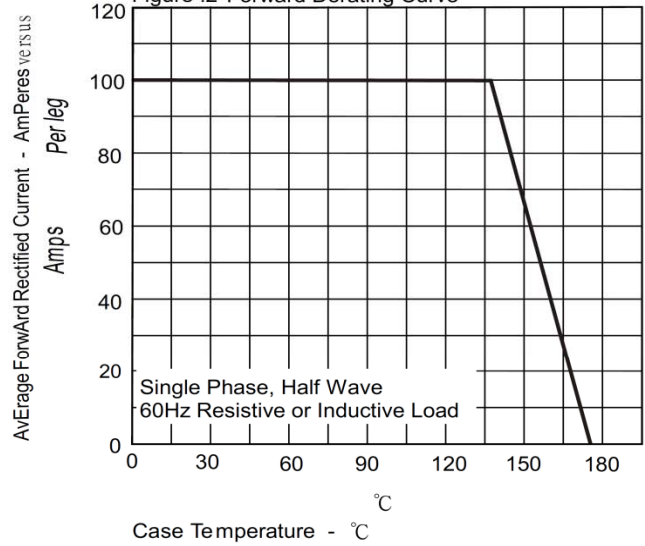


Figure.3-Peak Forward Surge Current

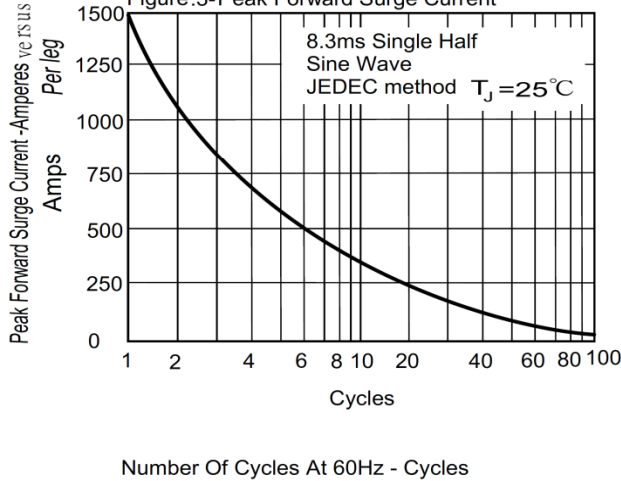


Figure .4-Typical Reverse Characteristics

