

Silicon Power Schottky Diode

 $V_{RRM} = 20\text{ V} - 100\text{ V}$
 $I_F = 120\text{ A}$

Features

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

Three Tower Package

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

| Parameter | Symbol | Conditions | MBRT12045 (R) | MBRT12060 (R) | MBRT12080 (R) | MBRT120100 (R) | Unit |
|--|------------|--|---------------|---------------|---------------|----------------|------|
| Repetitive peak reverse voltage | V_{RRM} | | 45 | 60 | 80 | 100 | V |
| RMS reverse voltage | V_{RMS} | | 32 | 42 | 57 | 70 | V |
| DC blocking voltage | V_{DC} | | 45 | 60 | 80 | 100 | V |
| Continuous forward current | I_F | $T_C \leq 100\text{ °C}$ | 120 | 120 | 120 | 120 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$ | 800 | 800 | 800 | 800 | A |
| Operating temperature | T_j | | -40 to 150 | -40 to 150 | -40 to 150 | -40 to 150 | °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 | MBRT12045 (R) | MBRT12060(R) | MBRT12080 (R) | MBRT120100 (R) | Unit |
|-----------------------|--------|---|---------------|--------------|---------------|----------------|------|
| Diode forward voltage | V_F | $I_F = 60\text{ A}$, $T_j = 25\text{ °C}$ | 0.75 | 0.8 | 0.88 | 0.88 | V |
| Reverse current | I_R | $V_R = 20\text{ V}$, $T_j = 25\text{ °C}$ | 1 | 1 | 1 | 1 | mA |
| | | $V_R = 20\text{ V}$, $T_j = 125\text{ °C}$ | 20 | 20 | 20 | 20 | |

Thermal characteristics

| Parameter | Symbol | Conditions | MBRT12045 (R) | MBRT12060 (R) | MBRT12080 (R) | MBRT120100 (R) | Unit |
|-------------------------------------|------------|------------|---------------|---------------|---------------|----------------|------|
| Thermal resistance, junction - case | R_{thJC} | | 0.21 | 0.21 | 0.21 | 0.21 | °C/W |

Figure .1-Typical Forward Characteristics

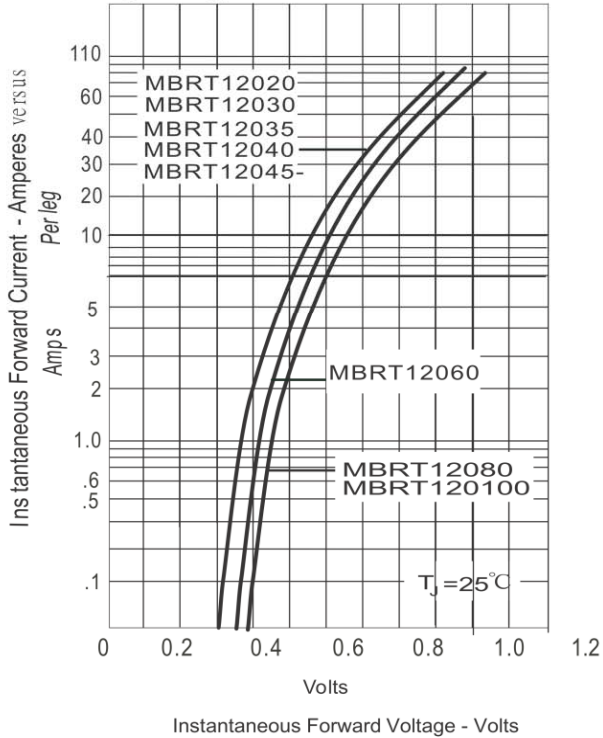


Figure .2- Forward Derating Curve

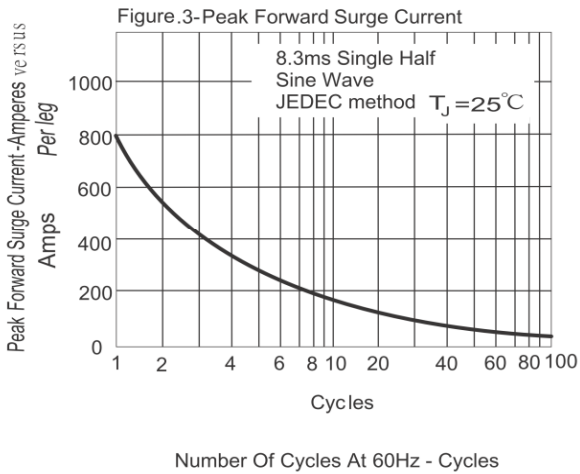
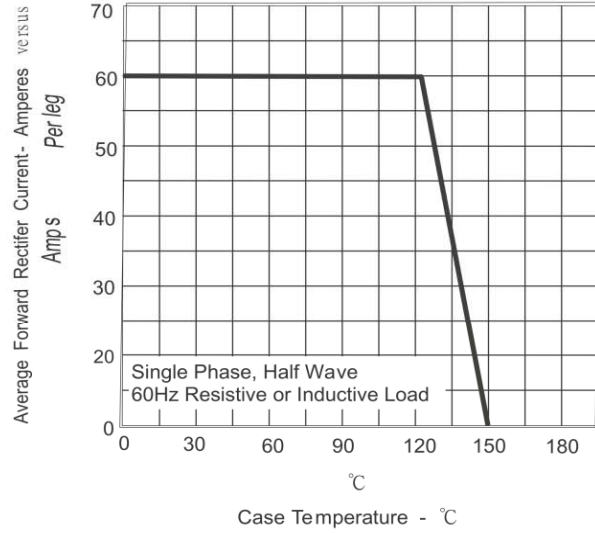


Figure .4-Typical Reverse Characteristics

