



## Silicon Power Schottky Diode

### Features

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

## MBR60045CT thru MBR600100CTR

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

$$I_F = 600 \text{ A}$$

Twin Tower Package



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

| Parameter  | Symbol     | Conditions  | MBR60045CT (R) | MBR60060CT (R) | MBR60080CT (R) | MBR600100CT (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                           | $I_F$      | $T_C \leq 100^\circ\text{C}$                      | 600            | 600            | 600            | 600             | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25^\circ\text{C}$ , $t_p = 8.3 \text{ ms}$ | 4000           | 4000           | 4000           | 4000            | A                |
| Operating temperature                                | $T_j$      |   | -40 to 150     | -40 to 150     | -40 to 150     | -40 to 150      | $^\circ\text{C}$ |
| Storage temperature                                  | $T_{stg}$  |   | -40 to 175     | -40 to 175     | -40 to 175     | -40 to 175      | $^\circ\text{C}$ |

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

| Parameter             | Symbol | Conditions                                       | MBR60045CT (R) | MBR60060CT (R) | MBR60080CT (R) | MBR600100CT (R) | Unit |
|-----------------------|--------|--|----------------|----------------|----------------|-----------------|------|
| Diode forward voltage | $V_F$  | $I_F = 300 \text{ A}$ , $T_j = 25^\circ\text{C}$ | 0.75           | 0.8            | 0.88           | 0.88            | V    |
| Reverse current       | $I_R$  | $V_R = 20 \text{ V}$ , $T_j = 25^\circ\text{C}$  | 1              | 1              | 1              | 1               | mA   |
|                       |        | $V_R = 20 \text{ V}$ , $T_j = 125^\circ\text{C}$ | 20             | 20             | 20             | 20              |      |

### Thermal characteristics

|                                     |                 |  |      |      |      |      |                    |
|-------------------------------------|-----------------|--|------|------|------|------|--------------------|
| Thermal resistance, junction - case | $R_{\theta JC}$ |  | 0.12 | 0.12 | 0.12 | 0.12 | $^\circ\text{C/W}$ |
|-------------------------------------|-----------------|--|------|------|------|------|--------------------|



Figure .1-Typical Forward Characteristics

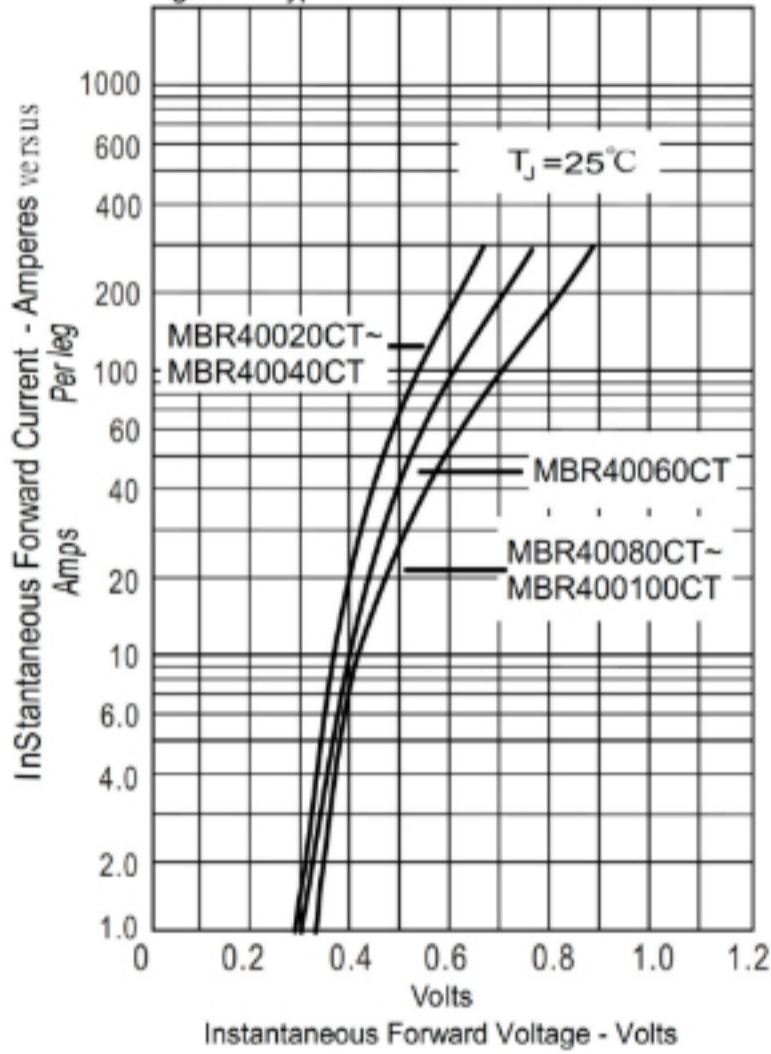


Figure .2- Forward Derating Curve

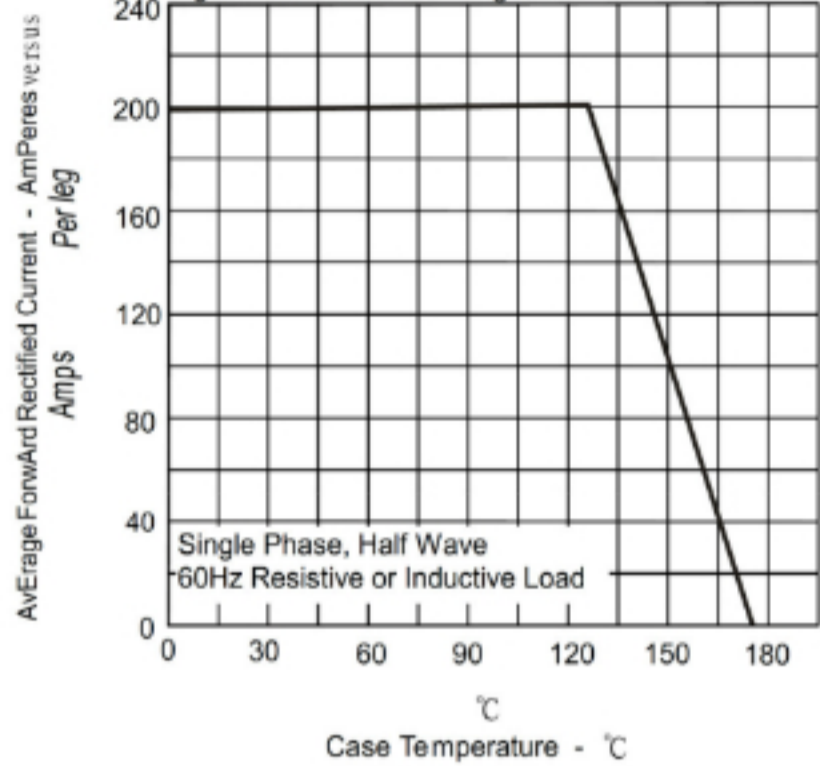


Figure .3-Peak Forward Surge Current

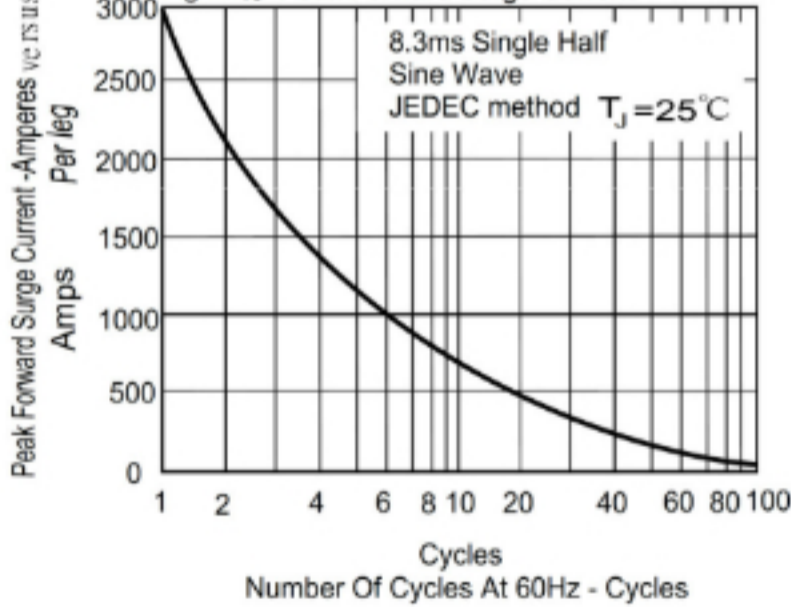


Figure .4- Typical Reverse Characteristics

