

## Silicon Power Schottky Diode

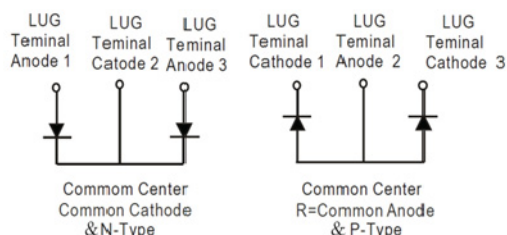
$V_{RRM} = 45\text{ V} - 100\text{ V}$

$I_{F(AV)} = 200\text{ A}$

### Features

- High Surge Capability
- Types from 45 V to 100 V  $V_{RRM}$
- Isolation Type Package
- Electrically Isolated Base Plate
- Not ESD Sensitive

### Three Tower Package



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

| Parameter                       | Symbol    | Conditions | MBRT20045(R) | MBRT20060(R) | MBRT20080(R) | MBRT200100(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                  |
| Operating temperature           | $T_j$     |            | -55 to 150   | -55 to 150   | -55 to 150   | -55 to 150    | $^{\circ}\text{C}$ |
| Storage temperature             | $T_{stg}$ |            | -55 to 150   | -55 to 150   | -55 to 150   | -55 to 150    | $^{\circ}\text{C}$ |

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

| Parameter                                                                    | Symbol             | Conditions                                      | MBRT20045(R) | MBRT20060(R) | MBRT20080(R) | MBRT200100(R) | Unit |
|------------------------------------------------------------------------------|--------------------|-------------------------------------------------|--------------|--------------|--------------|---------------|------|
| Average forward current (per pkg)                                            | I <sub>F(AV)</sub> | T <sub>C</sub> = 125 °C                         | 200          | 200          | 200          | 200           | A    |
| Peak forward surge current (per leg)                                         | I <sub>FSM</sub>   | t <sub>p</sub> = 8.3 ms, half sine              | 1500         | 1500         | 1500         | 1500          | A    |
| Maximum instantaneous forward voltage (per leg)                              | V <sub>F</sub>     | I <sub>FM</sub> = 100 A, T <sub>j</sub> = 25 °C | 0.70         | 0.75         | 0.84         | 0.84          | V    |
| Maximum instantaneous reverse current at rated DC blocking voltage (per leg) | I <sub>R</sub>     | T <sub>j</sub> = 25 °C                          | 1            | 1            | 1            | 1             | mA   |
|                                                                              |                    | T <sub>j</sub> = 100 °C                         | 10           | 10           | 10           | 10            |      |
|                                                                              |                    | T <sub>j</sub> = 150 °C                         | 30           | 30           | 30           | 30            |      |
| Thermal characteristics                                                      |                    |                                                 |              |              |              |               |      |
| Thermal resistance, junction-case (per leg)                                  | R <sub>θJC</sub>   |                                                 | 0.45         | 0.45         | 0.45         | 0.45          | °C/W |

Figure.1-Typical Forward Characteristics

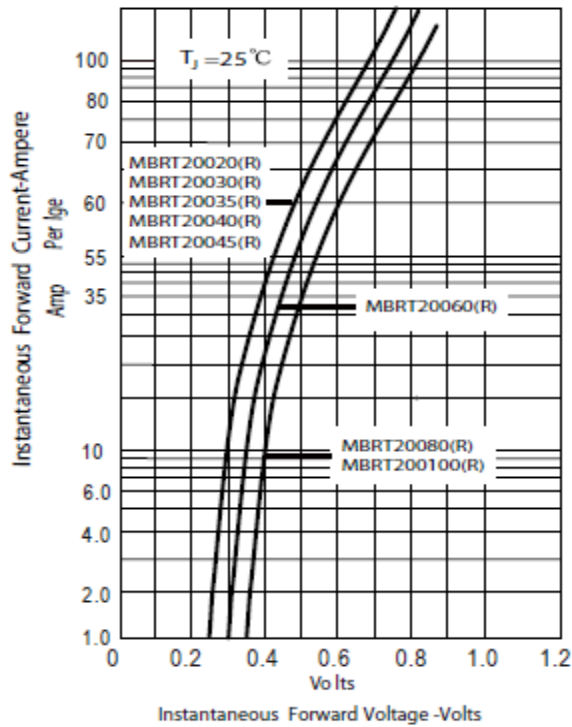


Figure.2-Forward Derating Curve

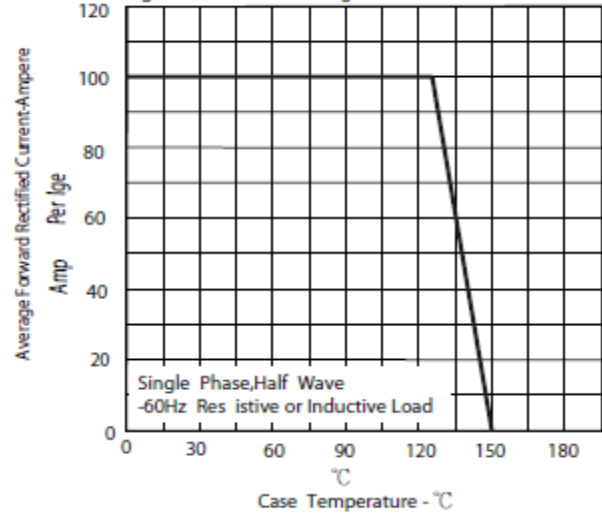


Figure.3-Peak Forward Surge Current

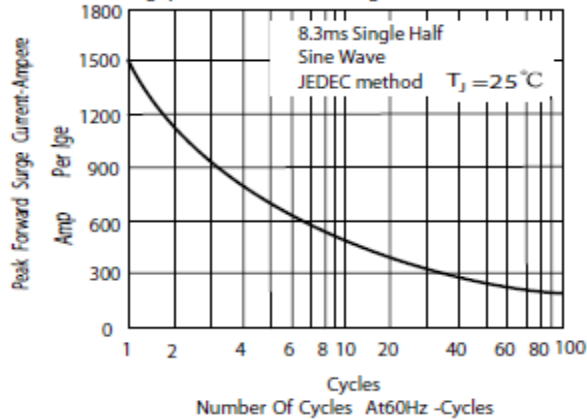
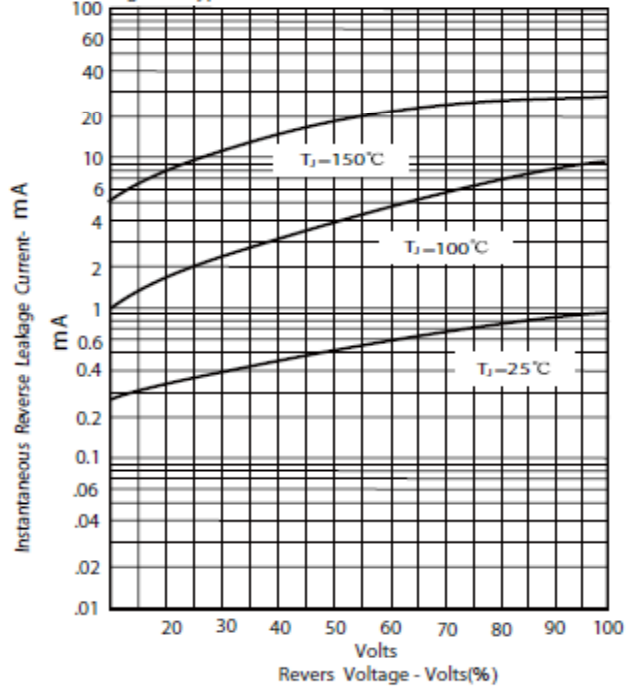
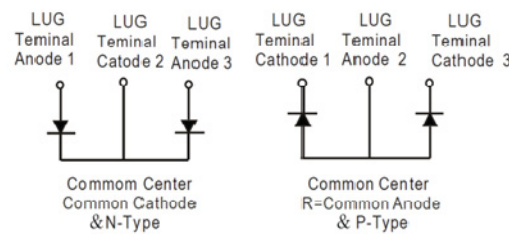
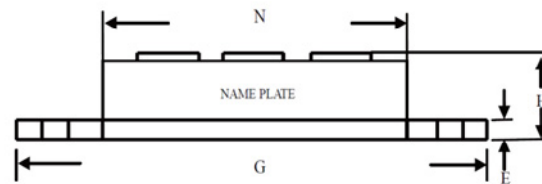
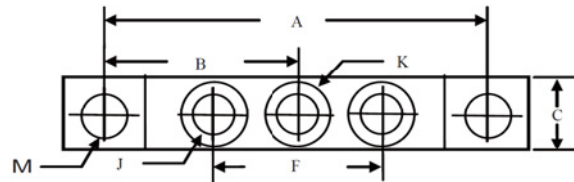


Figure.4-Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIM | Inches          |       | Millimeters |       |
|-----|-----------------|-------|-------------|-------|
|     | Min             | Max   | Min         | Max   |
| A   | 3.150           | NOM   | 80.01       | NOM   |
| B   | 1.565           | 1.585 | 39.75       | 40.26 |
| C   | .700            | .800  | 17.78       | 20.32 |
| E   | .119            | .132  | 3.02        | 3.35  |
| F   | 1.327           | REF   | 33.72       | REF   |
| G   | 3.55            | 3.65  | 90.17       | 92.71 |
| H   | ----            | .73   | ----        | 18.30 |
| J   | 1/4-20 UNC FULL |       |             |       |
| K   | .472            | .511  | 12          | 13    |
| M   | .275            | .295  | 6.99        | 7.49  |
| N   | 2.38            | 2.46  | 60.5        | 62.5  |

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