

## Silicon Power Schottky Diode

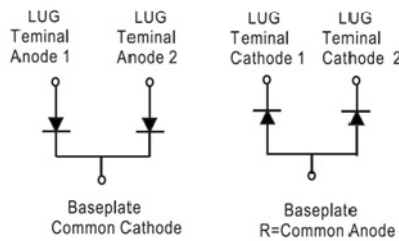
$V_{RRM} = 150\text{ V} - 200\text{ V}$

$I_{F(AV)} = 300\text{ A}$

### Features

- High Surge Capability
- Types from 150 V to 200 V  $V_{RRM}$
- Not ESD Sensitive

TO-244AB Package



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

| Parameter                       | Symbol    | Conditions | MBRF300150(R) | MBRF300200(R) | Unit             |
|---------------------------------|-----------|------------|---------------|---------------|------------------|
| Repetitive peak reverse voltage | $V_{RRM}$ |            | 150           | 200           | V                |
| RMS reverse voltage             | $V_{RMS}$ |            | 106           | 141           | V                |
| DC blocking voltage             | $V_{DC}$  |            | 150           | 200           | V                |
| Operating temperature           | $T_j$     |            | -55 to 150    | -55 to 150    | $^\circ\text{C}$ |
| Storage temperature             | $T_{stg}$ |            | -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   | MBRF300150(R) | MBRF300200(R) | Unit |
|--|-------------|--|---------------|---------------|------|
| Average forward current (per pkg)                      | $I_{F(AV)}$ | $T_C = 125\text{ }^\circ\text{C}$  | 300           | 300           | A    |
| Peak forward surge current (per leg)                   | $I_{FSM}$   | $t_p = 8.3\text{ ms}$ , half sine  | 2000          | 2000          | A    |
| Maximum forward voltage (per leg)                      | $V_F$       | $I_{FM} = 150\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$   | 0.88          | 0.92          | V    |
| Reverse current at rated DC blocking voltage (per leg) | $I_R$       | $T_j = 25\text{ }^\circ\text{C}$<br>$T_j = 100\text{ }^\circ\text{C}$<br>$T_j = 150\text{ }^\circ\text{C}$ | 1<br>10<br>30 | 1<br>10<br>30 | mA   |

### Thermal characteristics

| Parameter                                   | Symbol          | Conditions | MBRF300150(R) | MBRF300200(R) | Unit               |
|---|-----------------|------------|---------------|---------------|--------------------|
| Thermal resistance, junction-case (per leg) | $R_{\theta JC}$ |            | 0.40          | 0.40          | $^\circ\text{C/W}$ |

Figure .1- Typical Forward Characteristics

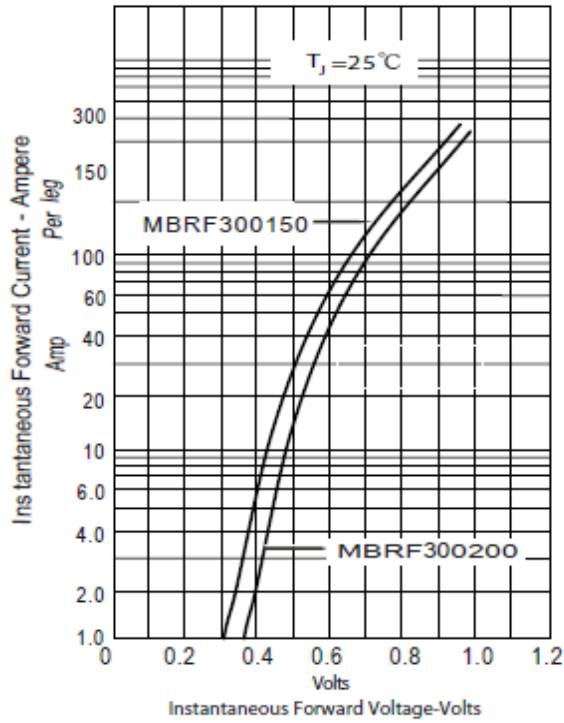


Figure .2- Forward Derating Curve

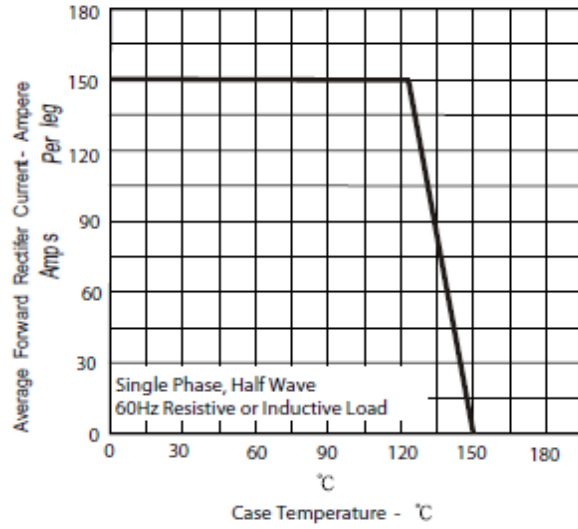


Figure.3-Peak Forward Surge Current

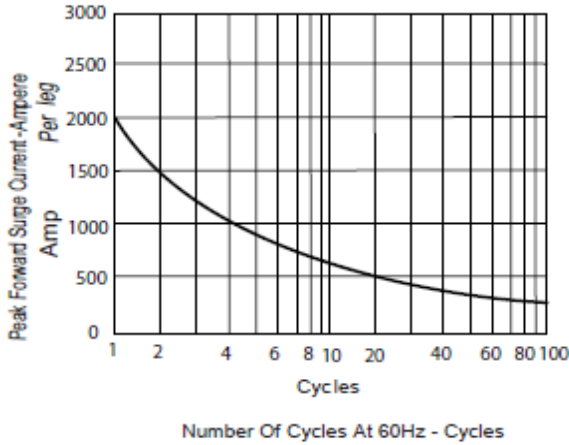
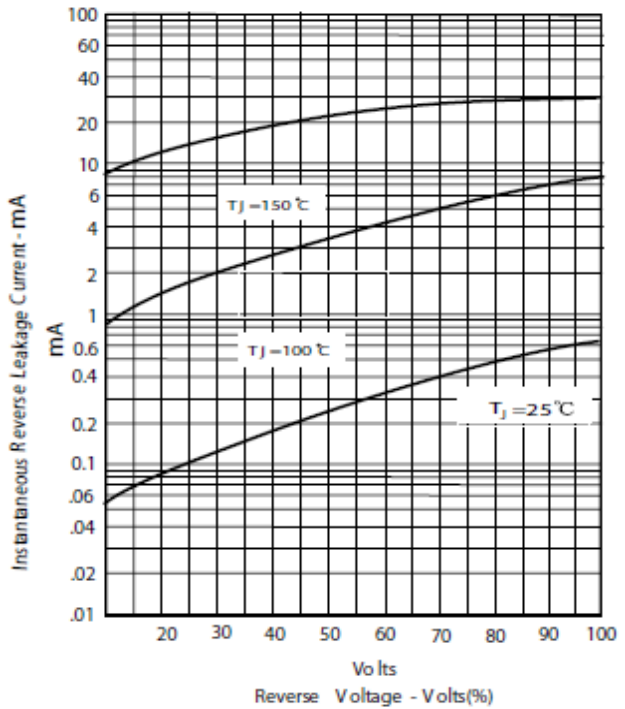
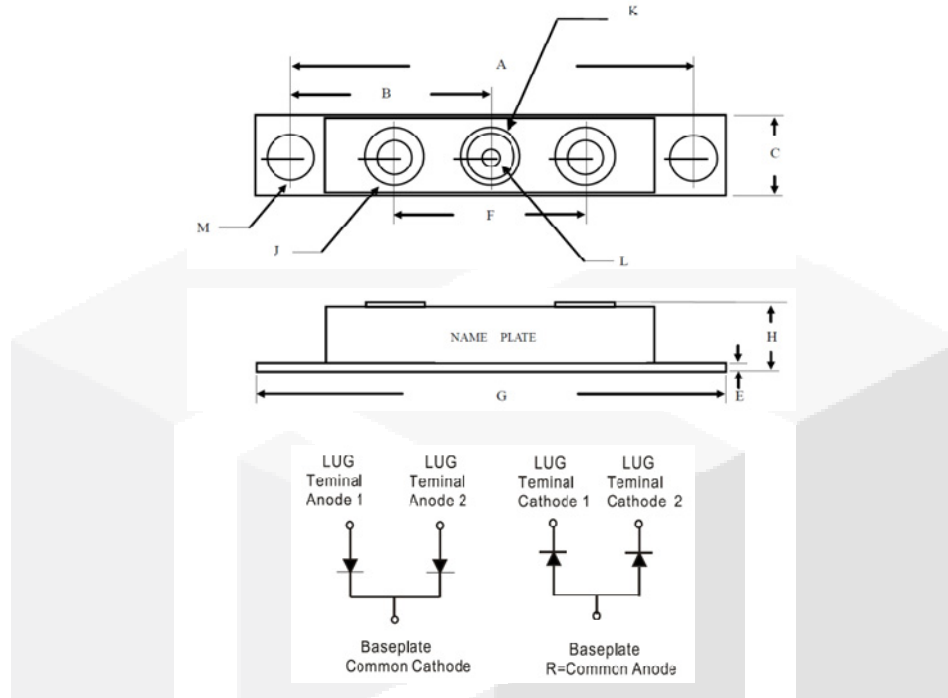


Figure .4- Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIM | Inches          |       | Millimeters |       |
|-----|-----------------|-------|-------------|-------|
|     | Min             | Max   | Min         | Max   |
| A   | 3.144           | NOM   | 79.85       | NOM   |
| B   | 1.565           | 1.585 | 39.75       | 40.26 |
| C   | 0.700           | 0.800 | 17.78       | 20.32 |
| E   | 0.119           | 0.14  | 3.02        | 3.50  |
| F   | 1.358           | REF.  | 34.50       | REF.  |
| G   | 3.55            | 3.65  | 90.17       | 92.71 |
| H   | 0.604           | 0.65  | 15.35       | 16.51 |
| J   | 1/4-20 UNC FULL |       |             |       |
| K   | 0.380           | 0.410 | 9.65        | 10.41 |
| L   | 0.185           | 0.195 | 4.70        | 4.95  |
| M   | 0.275           | 0.295 | 6.99        | 7.49  |