

## Silicon Power Schottky Diode

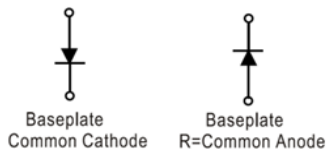
$V_{RRM} = 20\text{ V} - 40\text{ V}$

$I_{F(AV)} = 120\text{ A}$

### Features

- High Surge Capability
- Types from 20 V to 40 V  $V_{RRM}$
- Not ESD Sensitive

D-67 Package



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

| Parameter                       | Symbol    | Conditions | MBRH12020(R) | MBRH12030(R) | MBRH12035(R) | MBRH12040(R) | Unit |
|---------------------------------|-----------|------------|--------------|--------------|--------------|--------------|------|
| Repetitive peak reverse voltage | $V_{RRM}$ |            | 20           | 30           | 35           | 40           | V    |
| RMS reverse voltage             | $V_{RMS}$ |            | 14           | 21           | 25           | 28           | V    |
| DC blocking voltage             | $V_{DC}$  |            | 20           | 30           | 35           | 40           | V    |
| Operating temperature           | $T_j$     |            | -55 to 150   | -55 to 150   | -55 to 150   | -55 to 150   | °C   |
| Storage temperature             | $T_{stg}$ |            | -55 to 150   | -55 to 150   | -55 to 150   | -55 to 150   | °C   |

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

| Parameter                                                          | Symbol      | Conditions                                     | MBRH12020(R) | MBRH12030(R) | MBRH12035(R) | MBRH12040(R) | Unit |
|--------------------------------------------------------------------|-------------|------------------------------------------------|--------------|--------------|--------------|--------------|------|
| Average forward current (per pkg)                                  | $I_{F(AV)}$ | $T_C = 125\text{ °C}$                          | 120          | 120          | 120          | 120          | A    |
| Peak forward surge current                                         | $I_{FSM}$   | $t_p = 8.3\text{ ms}$ , half sine              | 2000         | 2000         | 2000         | 2000         | A    |
| Maximum instantaneous forward voltage                              | $V_F$       | $I_{FM} = 120\text{ A}$ , $T_j = 25\text{ °C}$ | 0.70         | 0.70         | 0.70         | 0.70         | V    |
| Maximum instantaneous reverse current at rated DC blocking voltage | $I_R$       | $T_j = 25\text{ °C}$                           | 1            | 1            | 1            | 1            | mA   |
|                                                                    |             | $T_j = 100\text{ °C}$                          | 10           | 10           | 10           | 10           |      |
|                                                                    |             | $T_j = 150\text{ °C}$                          | 30           | 30           | 30           | 30           |      |

### Thermal characteristics

|                                   |                 |  |      |      |      |      |      |
|-----------------------------------|-----------------|--|------|------|------|------|------|
| Thermal resistance, junction-case | $R_{\theta JC}$ |  | 0.48 | 0.48 | 0.48 | 0.48 | °C/W |
|-----------------------------------|-----------------|--|------|------|------|------|------|

Figure .1-Typical Forward Characteristics

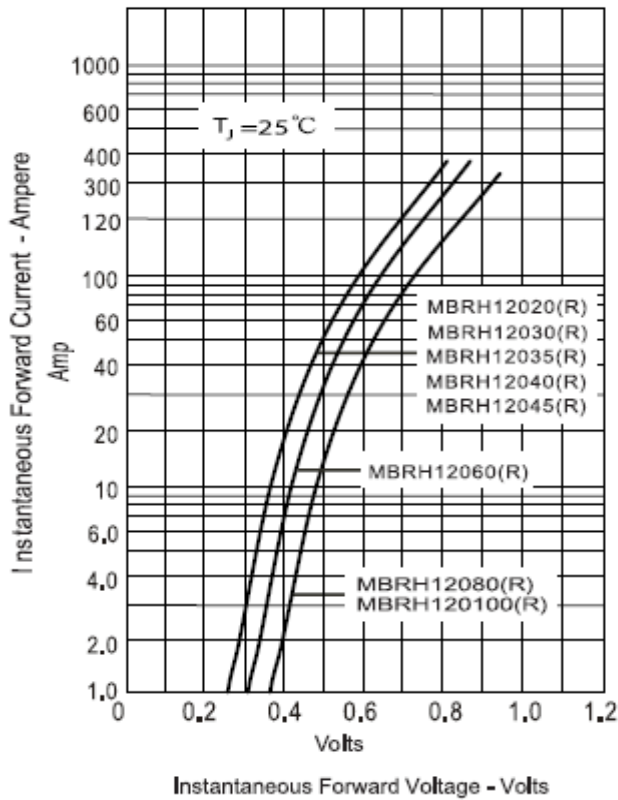


Figure .2-Forward Derating Curve

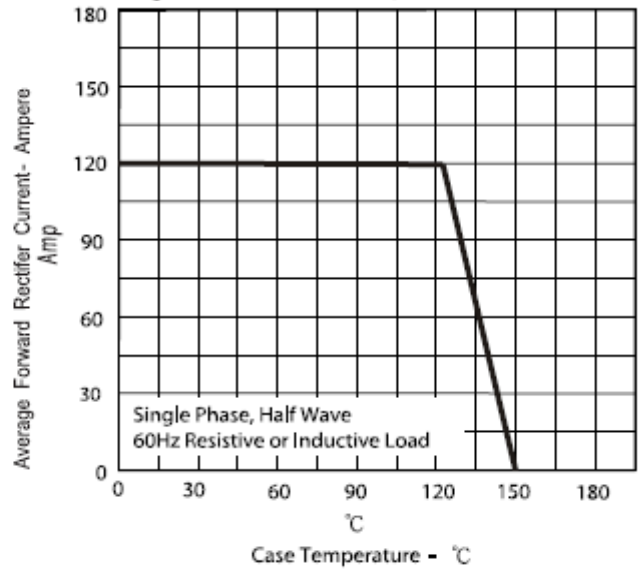


Figure .3-Peak Forward Surge Current

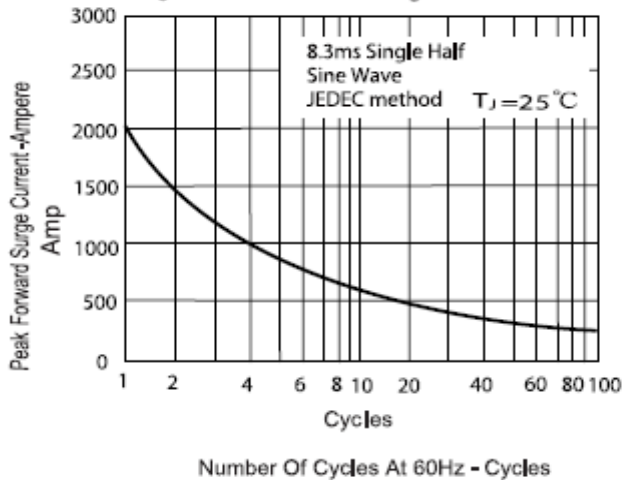
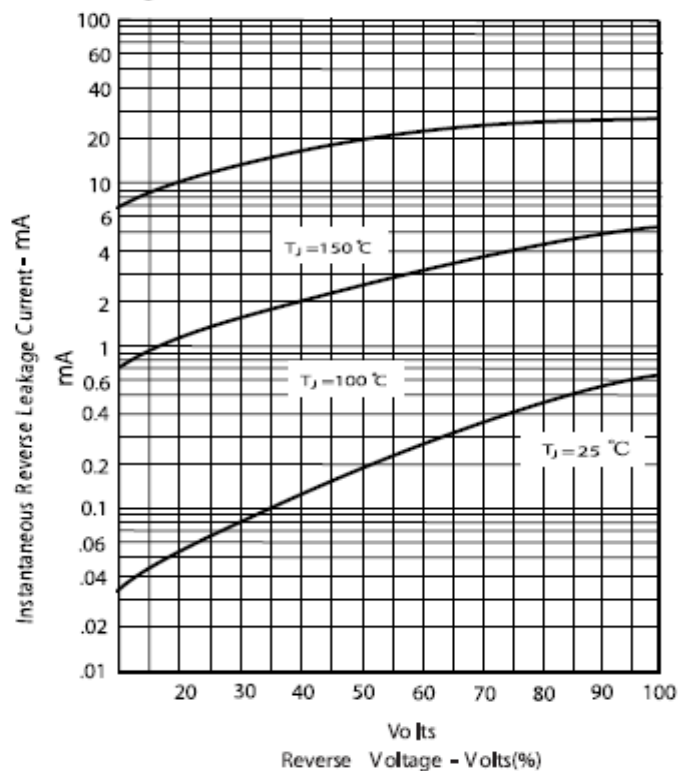
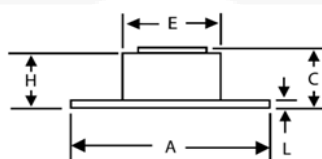
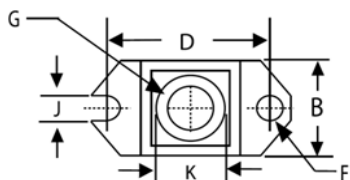


Figure .4- Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



Baseplate  
Common Cathode



Baseplate  
R=Common Anode

| DIMENSIONS |             |       |       |       |      |
|------------|-------------|-------|-------|-------|------|
| DIM        | INCHES      |       | MM    |       | NOTE |
|            | MIN         | MAX   | MIN   | MAX   |      |
| A          | 1.515       | 1.560 | 38.48 | 39.62 |      |
| B          | .725        | .775  | 18.42 | 19.69 |      |
| C          | .595        | .625  | 15.11 | 15.88 |      |
| D          | 1.182       | 1.192 | 30.02 | 30.28 |      |
| E          | .736        | .744  | 18.70 | 18.90 |      |
| F          | .152        | .160  | 3.86  | 4.061 | Ø    |
| G          | 1/4- 20 UNC |       |       |       |      |
| H          | .540        | .580  | 13.72 | 14.73 |      |
| J          | .156        | .160  | 3.96  | 4.06  |      |
| K          | .480        | .492  | 12.20 | 12.50 | Ø    |
| L          | .120        | .130  | 3.05  | 3.30  |      |

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