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## Silicon Power Schottky Diode

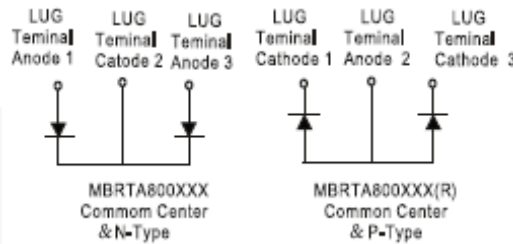
$V_{RRM} = 45\text{ V} - 100\text{ V}$

$I_{F(AV)} = 800\text{ A}$

### Features

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

### Heavy Three Tower Package



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

| Parameter                       | Symbol    | Conditions | MBRTA80045(R) | MBRTA80060(R) | MBRTA80080(R) | MBRTA800100(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     | °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                                     | MBRTA80045(R) | MBRTA80060(R) | MBRTA80080(R) | MBRTA800100(R) | Unit |
|--------------------------------------------------------|-------------|------------------------------------------------|---------------|---------------|---------------|----------------|------|
| Average forward current (per pkg)                      | $I_{F(AV)}$ | $T_C = 100\text{ °C}$                          | 800           | 800           | 800           | 800            | A    |
| Peak forward surge current (per leg)                   | $I_{FSM}$   | $t_p = 8.3\text{ ms}$ , half sine              | 6000          | 6000          | 6000          | 6000           | A    |
| Maximum instantaneous forward voltage (per leg)        | $V_F$       | $I_{FM} = 400\text{ A}$ , $T_j = 25\text{ °C}$ | 0.72          | 0.78          | 0.84          | 0.84           | V    |
| Reverse current at rated DC blocking voltage (per leg) | $I_R$       | $T_j = 25\text{ °C}$                           | 1             | 1             | 1             | 1              | mA   |
|                                                        |             | $T_j = 100\text{ °C}$                          | 10            | 10            | 10            | 10             |      |
|                                                        |             | $T_j = 150\text{ °C}$                          | 50            | 50            | 50            | 50             |      |

### Thermal characteristics

|                                               |                 |  |      |      |      |      |      |
|-----------------------------------------------|-----------------|--|------|------|------|------|------|
| Thermal resistance, junction - case (per leg) | $R_{\theta JC}$ |  | 0.25 | 0.25 | 0.25 | 0.25 | °C/W |
|-----------------------------------------------|-----------------|--|------|------|------|------|------|

Figure.1-Typical Forward Characteristics

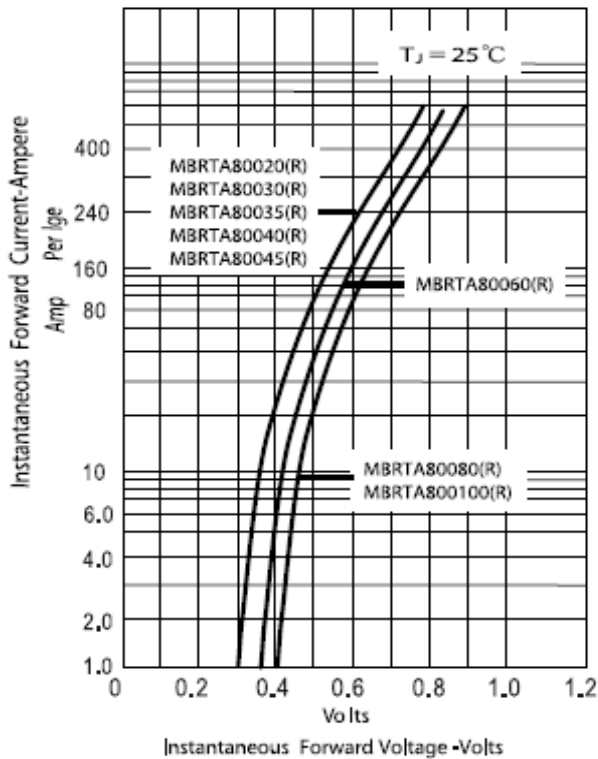


Figure.2-Forward Derating Curve

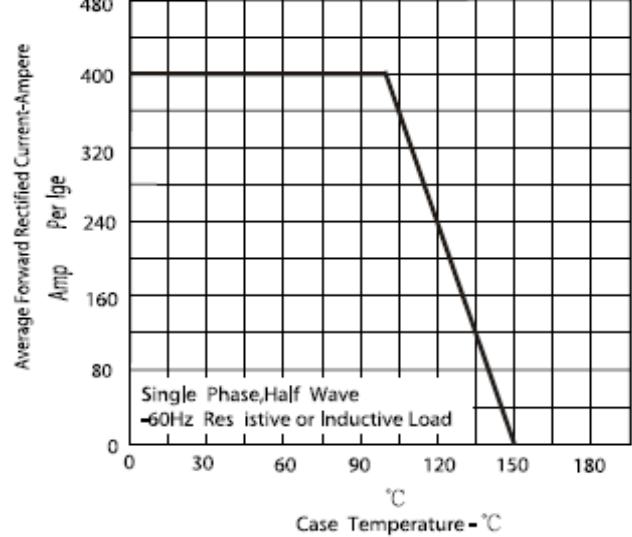


Figure.3-Peak Forward Surge Current

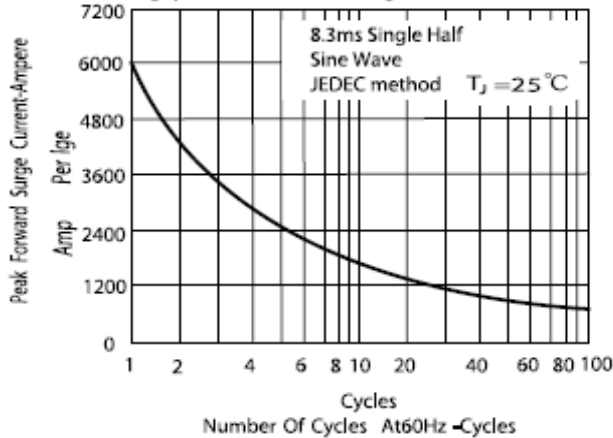
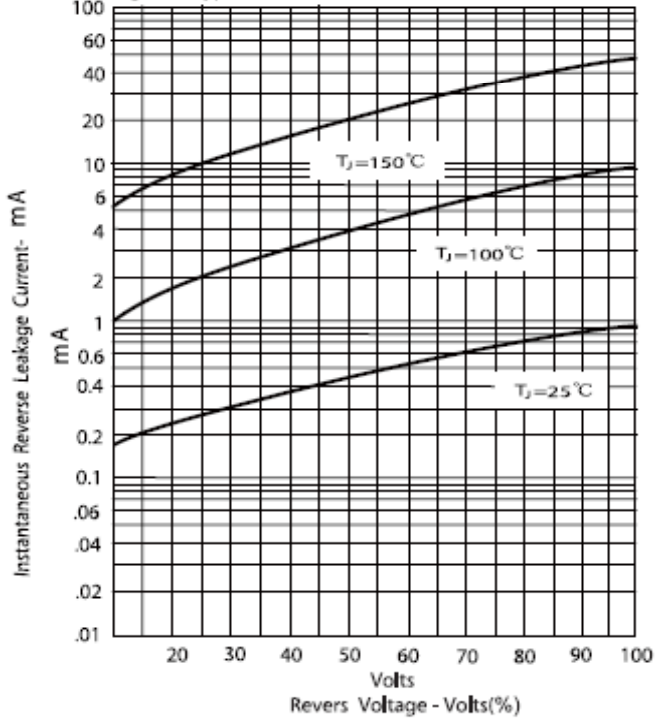
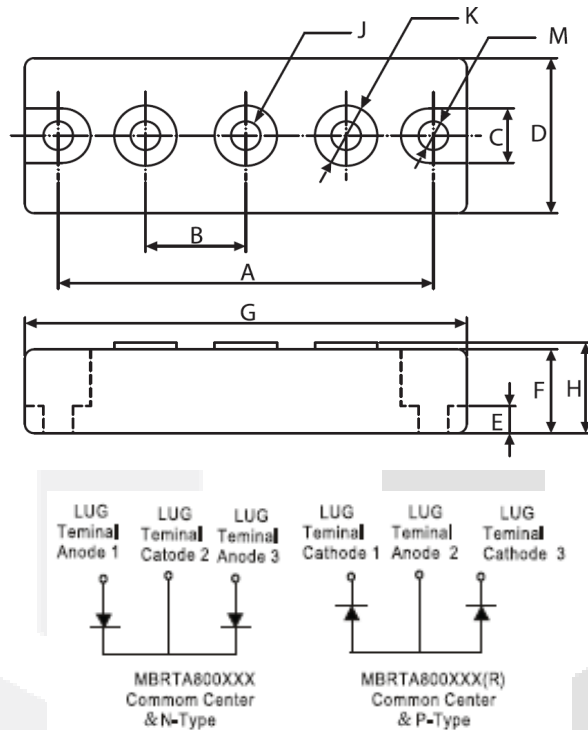


Figure.4-Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIMENSIONS |                   |       |       |       |
|------------|-------------------|-------|-------|-------|
|            | INCHES            |       | MM    |       |
|            | MIN               | MAX   | MIN   | MAX   |
| A          | 3.150             | NOM   | 80.01 | NOM   |
| B          | .872              | .892  | 22.15 | 22.65 |
| C          | .465              | .479  | 11.82 | 12.18 |
| D          | 1.337             | 1.356 | 33.95 | 34.45 |
| E          | .230              | .234  | 5.84  | 6.16  |
| F          | .725              | REF   | 18.42 | REF   |
| G          | 3.668             | 3.768 | 93.17 | 95.71 |
| H          | ----              | .791  | ---   | 20.10 |
| J          | 1/4 - 20 UNC FULL |       |       |       |
| K          | .509              | .538  | 12.92 | 13.68 |
| M          | .238              | .258  | 6.05  | 6.55  |