

# Single Phase Glass Passivated Silicon Bridge Rectifier

 $V_{RRM} = 600\text{ V} - 1000\text{ V}$ 
 $I_O = 15\text{ A}$ 

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500 V<sub>RMS</sub>
- Glass passivated chip junction
- Ideal for printed circuit boards
- High surge overload rating
- High temperature soldering guaranteed: 260°C/ 10 seconds, 0.375 (9.5mm) lead length
- Not ESD Sensitive

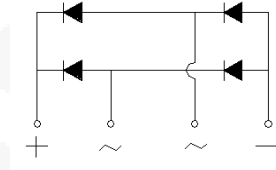
## Mechanical Data

Case: Molded plastic body over passivated junctions

Terminals: Plated leads, solderable per MIL-STD-750 Method 2026.

Mounting position: Any

GBU Package



## Maximum ratings at T<sub>c</sub> = 25 °C, unless otherwise specified

| Parameter                       | Symbol    | Conditions | GBU15J     | GBU15K     | GBU15M     | Unit |
|---------------------------------|-----------|------------|------------|------------|------------|------|
| Repetitive peak reverse voltage | $V_{RRM}$ |            | 600        | 800        | 1000       | V    |
| RMS reverse voltage             | $V_{RMS}$ |            | 420        | 560        | 700        | V    |
| DC blocking voltage             | $V_{DC}$  |            | 600        | 800        | 1000       | V    |
| Operating temperature           | $T_j$     |            | -55 to 150 | -55 to 150 | -55 to 150 | °C   |
| Storage temperature             | $T_{stg}$ |            | -55 to 150 | -55 to 150 | -55 to 150 | °C   |

## Electrical characteristics at T<sub>c</sub> = 25 °C, unless otherwise specified

Single phase, half sine wave, 60 Hz, resistive or inductive load.

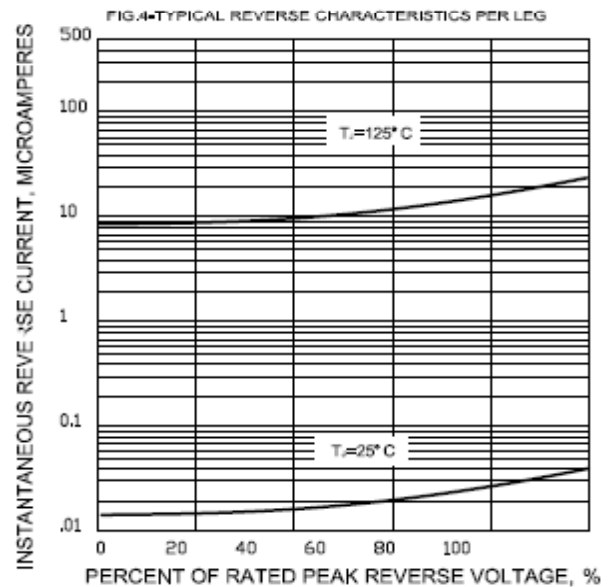
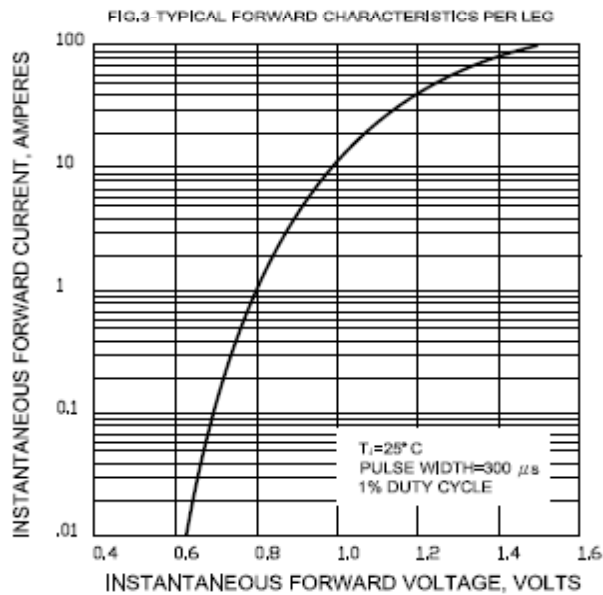
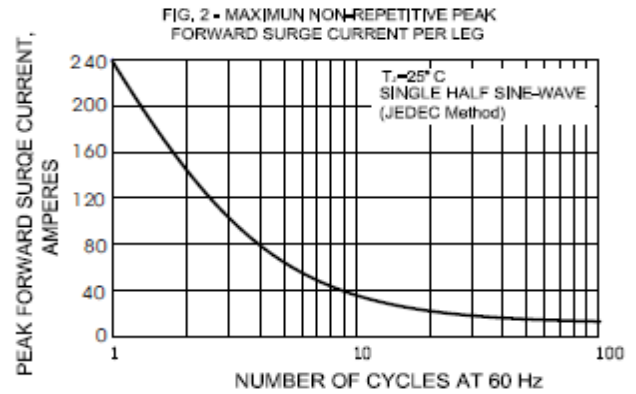
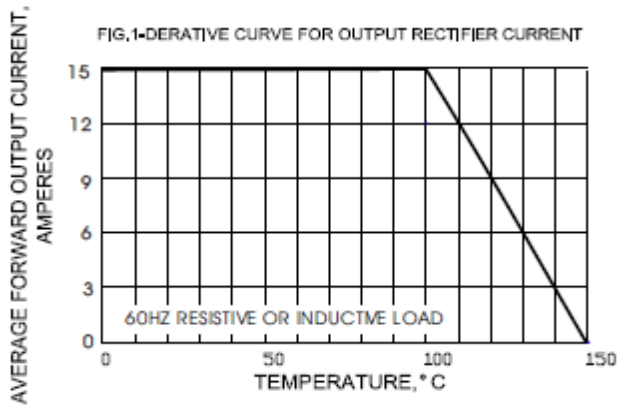
For capacitive load derate current by 20%.

| Parameter                                                       | Symbol          | Conditions                                    | GBU15J   | GBU15K   | GBU15M   | Unit |
|-----------------------------------------------------------------|-----------------|-----------------------------------------------|----------|----------|----------|------|
| Maximum average forward rectified current <sup>1,2</sup>        | $I_O$           | $T_c = 100\text{ °C}$                         | 15.0     | 15.0     | 15.0     | A    |
| Peak forward surge current                                      | $I_{FSM}$       | $t_p = 8.3\text{ ms, half sine}$              | 240      | 240      | 240      | A    |
| Maximum instantaneous forward voltage drop per leg              | $V_F$           | $I_F = 15\text{ A}$                           | 1.1      | 1.1      | 1.1      | V    |
| Maximum DC reverse current at rated DC blocking voltage per leg | $I_R$           | $T_a = 25\text{ °C}$<br>$T_a = 125\text{ °C}$ | 5<br>500 | 5<br>500 | 5<br>500 | μA   |
| Typical junction capacitance per leg <sup>3</sup>               | $C_j$           |                                               | 80       | 80       | 80       | pF   |
| Typical thermal resistance per leg <sup>1,2</sup>               | $R_{\theta JC}$ |                                               | 2.2      | 2.2      | 2.2      | °C/W |

<sup>1</sup> - Device mounted on 100 mm x 100 mm x 1.6 mm Cu plate heatsink

<sup>2</sup> - Recommended mounted position is to bolt down device on a heatsink with silicon thermal compound for maximum heat transfer using #6 screw.

<sup>3</sup> - Measured at 1.0 MHz and applied reverse bias of 4.0 V



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

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