

Single Phase Glass Passivated Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 400\text{ V}$

$I_O = 15\text{ A}$

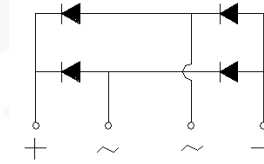
Features

- Epoxy Resin material compliant with 94V-0 standards of UL UL Material Flammability Provisions
- Compliant with UL Provisions, UL Code: E303851
- Ideal for printed circuit boards
- High surge overload rating
- High temperature soldering guaranteed: 260°C/ 10 seconds, 9.5 mm lead length
- Not ESD Sensitive

Mechanical Data

- Case: Epoxy resin body over passivated junctions
- Weight: 4.60 g
- Mounting position: Any

GBU Package



Maximum ratings at $T_A = 25\text{ °C}$, unless otherwise specified

| Parameter | Symbol | Conditions | GBU15A | GBU15B | GBU15D | GBU15G | Unit |
|---------------------------------|-----------|------------|------------|------------|------------|------------|------|
| Repetitive peak reverse voltage | V_{RRM} | | 50 | 100 | 200 | 400 | V |
| RMS reverse voltage | V_{RMS} | | 35 | 70 | 140 | 280 | V |
| DC blocking voltage | V_{DC} | | 50 | 100 | 200 | 400 | V |
| Operating temperature | T_j | | -40 to 150 | -40 to 150 | -40 to 150 | -40 to 150 | °C |
| Storage temperature | T_{stg} | | -40 to 150 | -40 to 150 | -40 to 150 | -40 to 150 | °C |

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

Single phase, half sine wave, 50 Hz, resistive load

For capacitive load derate current by 20%

| Parameter | Symbol | Conditions | GBU15A | GBU15B | GBU15D | GBU15G | Unit |
|--|-----------------|--|------------------------------|--------------------|--------------------|--------------------|------------------|
| Maximum forward rectified current | I_O | $T_C = 100\text{ °C}$ | 15 ⁽¹⁾ | 15 ⁽¹⁾ | 15 ⁽¹⁾ | 15 ⁽¹⁾ | A |
| | | $T_A = 25\text{ °C}$ | 3.8 ⁽²⁾ | 3.8 ⁽²⁾ | 3.8 ⁽²⁾ | 3.8 ⁽²⁾ | |
| Peak forward surge current | I_{FSM} | $t_p = 10\text{ ms}, T_j = 25\text{ °C}$ | 250 | 250 | 250 | 250 | A |
| Maximum forward voltage drop | V_F | $I_F = 7.5\text{ A}$ | 1.05 | 1.05 | 1.05 | 1.05 | V |
| Maximum reverse current at rated DC blocking voltage | I_R | $T_A = 25\text{ °C}$ | 5 | 5 | 5 | 5 | µA |
| | | $T_A = 125\text{ °C}$ | 500 | 500 | 500 | 500 | |
| Insulation strength (lead wire to case) | V_{dis} | AC voltage: 1 min leakage current < 1mA | 2.5 | 2.5 | 2.5 | 2.5 | kV |
| Rating for fusing at $T_j = 25\text{ °C}$ | I^2t | $1\text{ ms} < t_p < 10\text{ ms}$ | 80 | 80 | 80 | 80 | A ² s |
| Typical thermal resistance | $R_{\theta JA}$ | | 22 ⁽²⁾ | 22 ⁽²⁾ | 22 ⁽²⁾ | 22 ⁽²⁾ | °C/W |
| | $R_{\theta JC}$ | | 5.0 ⁽¹⁾ | 5.0 ⁽¹⁾ | 5.0 ⁽¹⁾ | 5.0 ⁽¹⁾ | |
| Mounting Torque | M | | 0.8 (0.5 N.m is recommended) | | | | N.m |

¹ - Device mounted on 65 mm x 35 mm x 1.5 mm heatsink

² - Device mounted on PCB without heatsink

³ - Recommended mounted position is to bolt down device on a heatsink with silicon thermal compound for maximum heat transfer using M3 screw.

Fig.1: Current Derating Curve

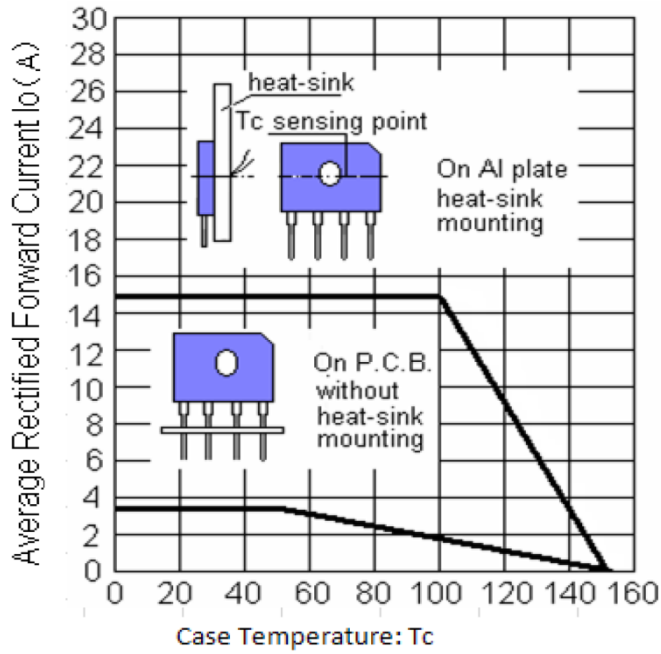


Fig.2: Typical Reverse Characteristics

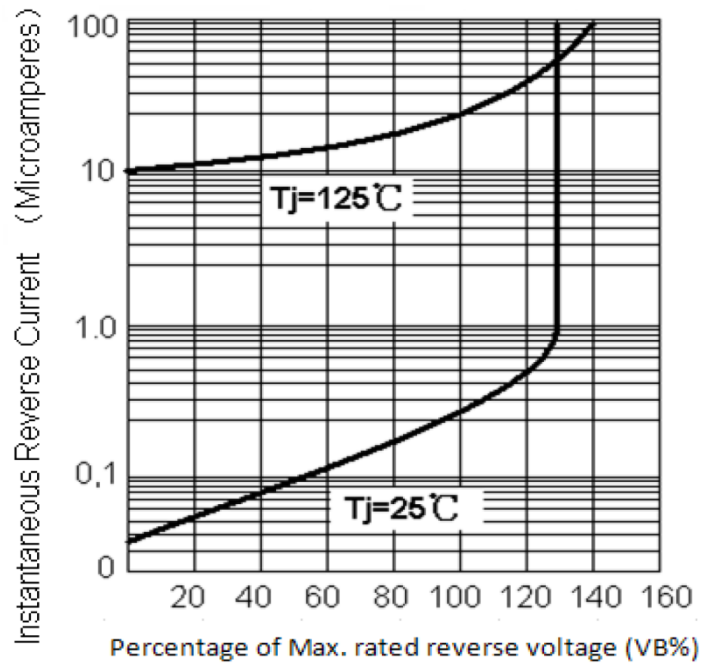


Fig.3: Max. Surge Current

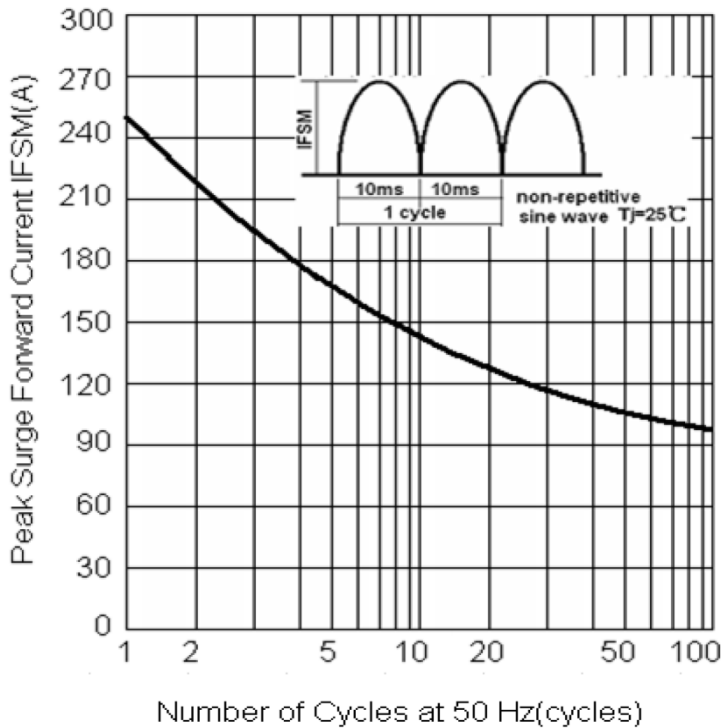
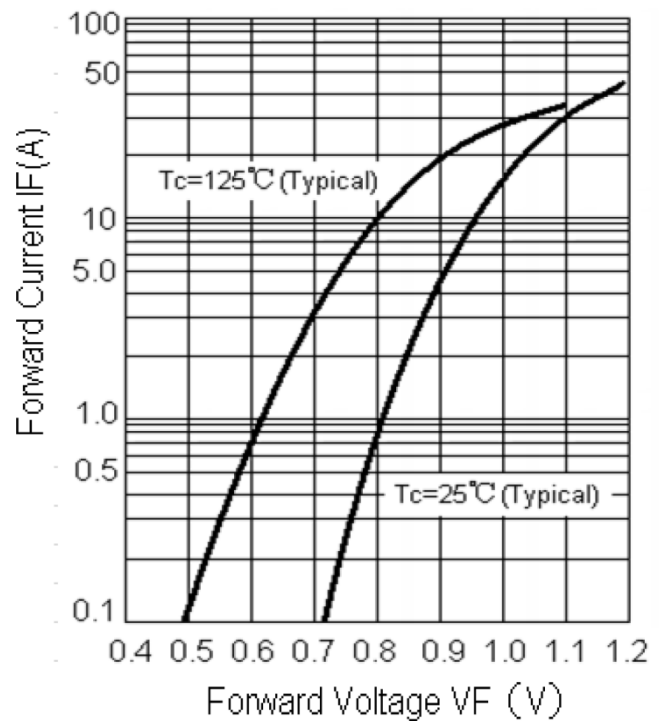


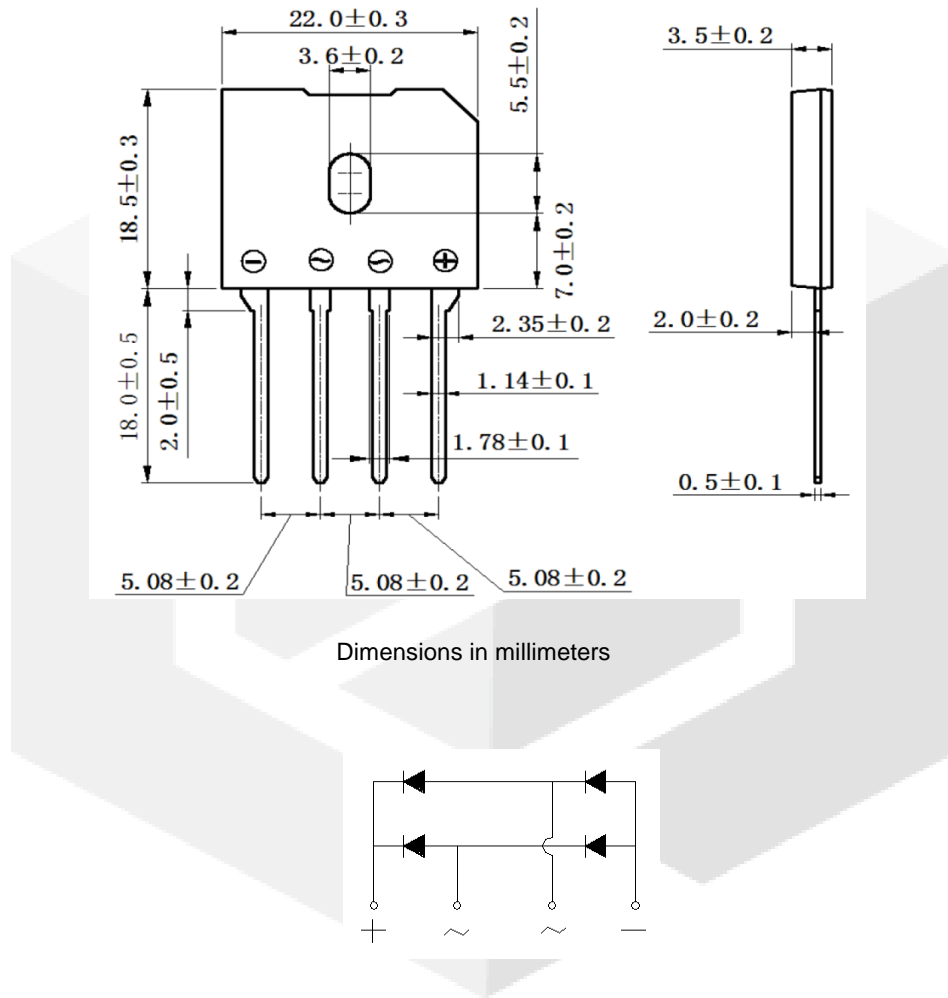
Fig.4: Rated Forward Features



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

GBU



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[GeneSiC Semiconductor:](#)

[GBU15G](#)