

## Glass Passivated Single-Phase Bridge Rectifier

Case Type GBU

**Reverse Voltage** 200 and 600 V  
**Forward Current** 6.0 A

### Features

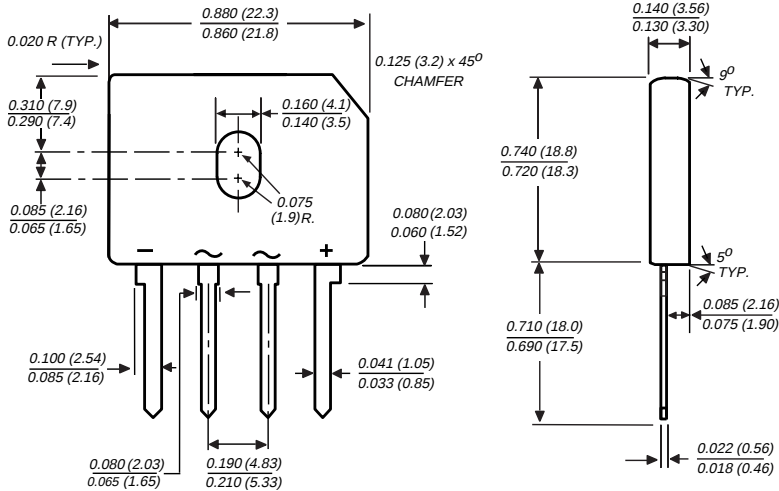
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 V<sub>RMS</sub>
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

### Mechanical Data

**Case:** Molded plastic body over passivated junctions  
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Mounting Position:** Any (Note 3)**Mounting Torque:** 5 in-lbs max.**Weight:** 0.15 oz., 4.0 g**Packaging codes/options:**

1/250 ea. per Bulk Tray Stack



Polarity shown on front side of case, positive lead by beveled corner

If preferred, marking on front side of case may be on reverse side of case. Lead forming option with 10mm-7.5mm spacing is available.

Dimensions in inches and (millimeters)

## Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter                                                                                                             | Symbol                               | G5SBA20     | G5SBA60 | Unit               |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------|---------|--------------------|
| Maximum repetitive peak reverse voltage                                                                               | V <sub>RRM</sub>                     | 200         | 600     | V                  |
| Maximum RMS voltage                                                                                                   | V <sub>RMS</sub>                     | 140         | 420     | V                  |
| Maximum DC blocking voltage                                                                                           | V <sub>DC</sub>                      | 200         | 600     | V                  |
| Maximum average forward rectified output current at T <sub>C</sub> = 100°C (Note 1)<br>T <sub>A</sub> = 25°C (Note 2) | I <sub>F(AV)</sub>                   | 6.0         |         | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)                                 | I <sub>FSM</sub>                     | 150         |         | A                  |
| Rating for fusing (t < 8.3ms)                                                                                         | I <sup>2</sup> t                     | 93          |         | A <sup>2</sup> sec |
| Typical thermal resistance per leg (Note 2)<br>(Note 1)                                                               | R <sub>θJA</sub><br>R <sub>θJC</sub> | 22<br>3.4   |         | °C/W               |
| Operating junction storage and temperature range                                                                      | T <sub>J</sub> , T <sub>STG</sub>    | -55 to +150 |         | °C                 |

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

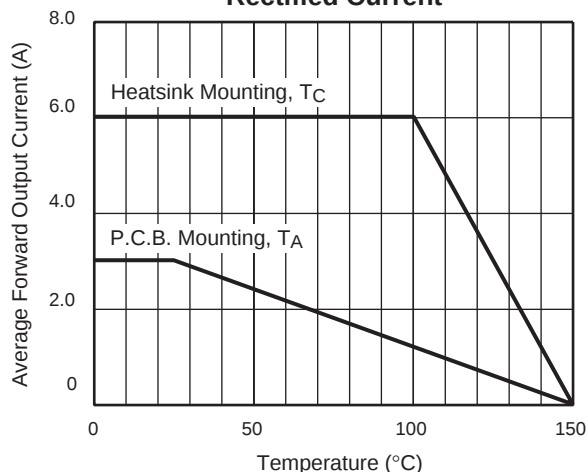
| Parameter                                                                                                       | Symbol         | G5SBA20    | G5SBA60 | Unit |
|-----------------------------------------------------------------------------------------------------------------|----------------|------------|---------|------|
| Maximum instantaneous forward voltage drop per leg at 3.0 A                                                     | V <sub>F</sub> | 1.05       |         | V    |
| Maximum DC reverse current at rated DC blocking voltage per leg T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 125°C | I <sub>R</sub> | 5.0<br>300 |         | μA   |

### Notes:

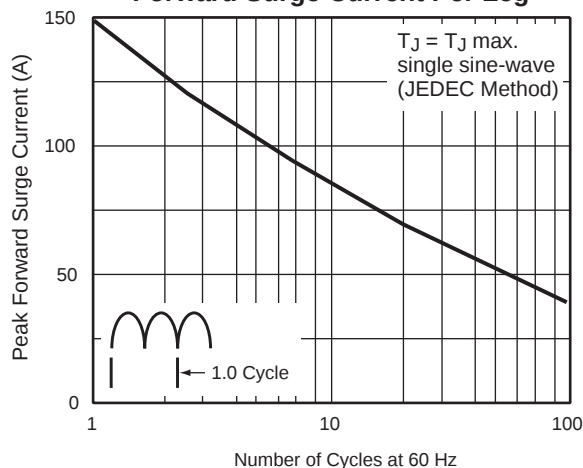
- (1) Unit case mounted on Al plate heatsink
- (2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

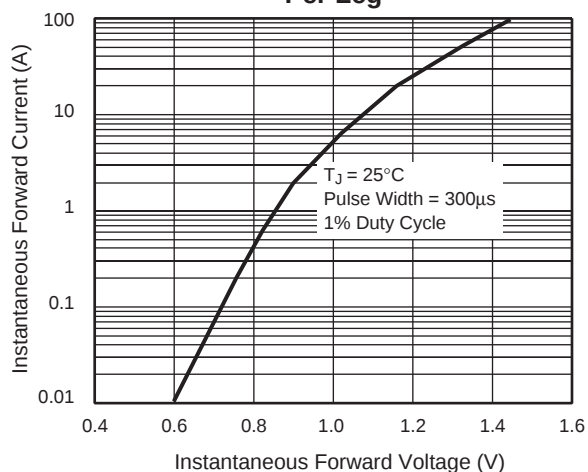
**Fig. 1 - Derating Curve Output Rectified Current**



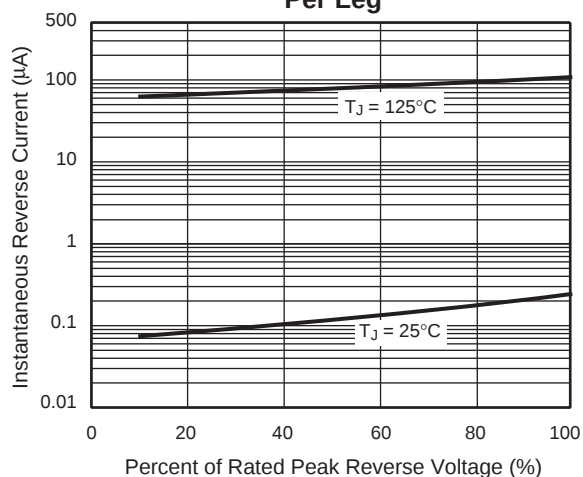
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



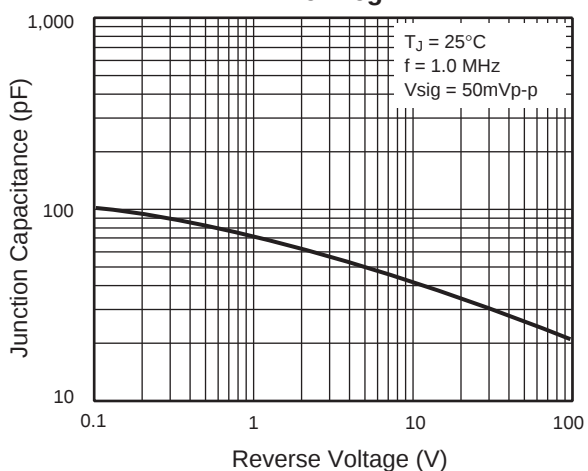
**Fig. 3 - Typical Forward Characteristics Per Leg**



**Fig. 4 - Typical Reverse Characteristics Per Leg**



**Fig. 5 - Typical Junction Capacitance Per Leg**



**Fig. 6 - Typical Transient Thermal Impedance**

