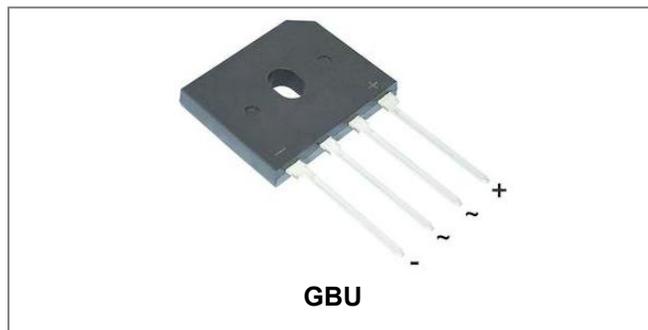


## GBU25005 THRU GBU2510

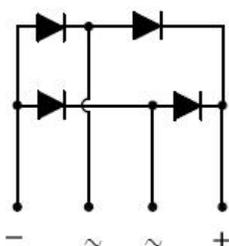
### Single-Phase 25.0A Glass Passivated Bridge Rectifier



#### Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

#### Circuit Diagram



#### Mechanical Data

- Case: GBU, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Lead Free: For RoHS / Lead Free Version

#### Maximum Ratings: @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Type Number   | Symbol  | GBU 25005 | GBU 2501 | GBU 2502 | GBU 2504 | GBU 2506 | GBU 2508 | GBU 2510 | Units            |
|---|---|-----------|----------|----------|----------|----------|----------|----------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>DC</sub> | 50        | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| RMS Reverse Voltage   | V <sub>RMS</sub>  | 35        | 70       | 140      | 280      | 420      | 560      | 700      | V                |
| Average forward rectified output current<br>(with heatsink)<br>@T <sub>C</sub> =90°C (without heatsink)               | I <sub>O</sub>  | 25<br>3.6 |          |          |          |          |          |          | A                |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>  | 350       |          |          |          |          |          |          | A                |
| I <sup>2</sup> t Rating for fusing (t < 8.3ms)  | I <sup>2</sup> t  | 508.357   |          |          |          |          |          |          | A <sup>2</sup> s |

**Electrical Characteristics: @T<sub>A</sub>=25°C unless otherwise specified**

| Type Number   | Symbol          | GBU 25005 | GBU 2501 | GBU 2502 | GBU 2504 | GBU 2506   | GBU 2508 | GBU 2510 | Units |    |
|---|-----------------|-----------|----------|----------|----------|------------|----------|----------|-------|----|
| Forward Voltage (per element) @I <sub>F</sub> =12.5A  | V <sub>F</sub>  |           |          |          |          | 1.0        |          |          |       | V  |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C | I <sub>RM</sub> |           |          |          |          | 5.0<br>200 |          |          |       | μA |
| Typical Junction Capacitance(per leg)<br>(Note 1)   | C <sub>J</sub>  |           |          |          |          | 110        |          |          |       | pF |

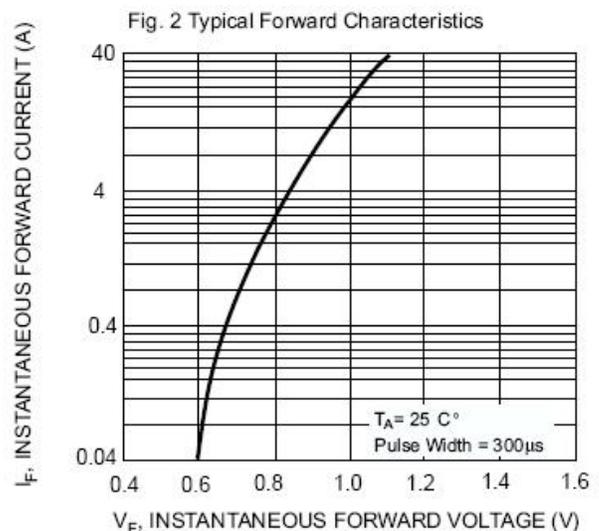
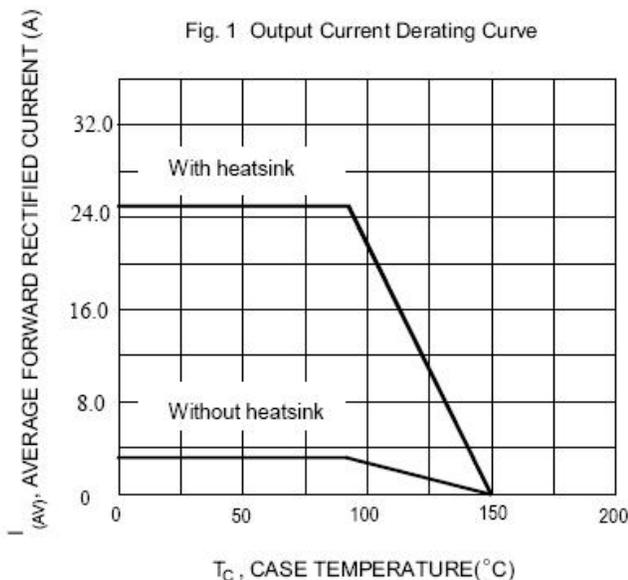
\* Pulse width < 300 μs, duty cycle < 2%

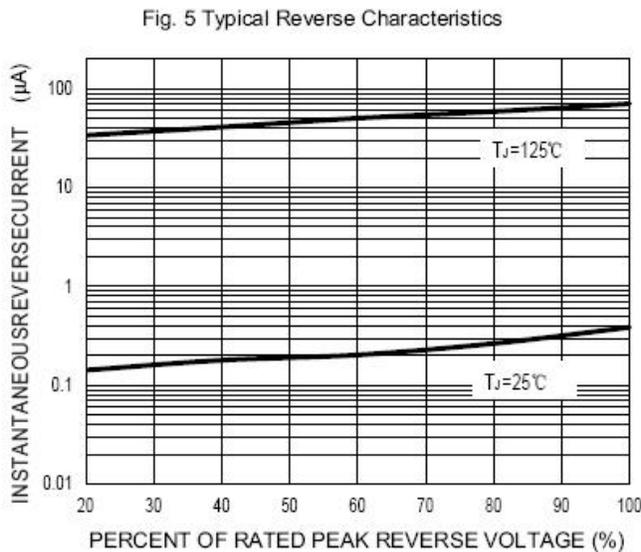
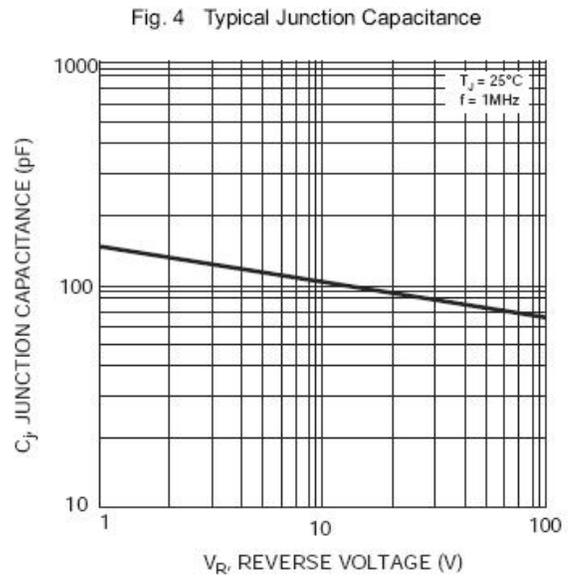
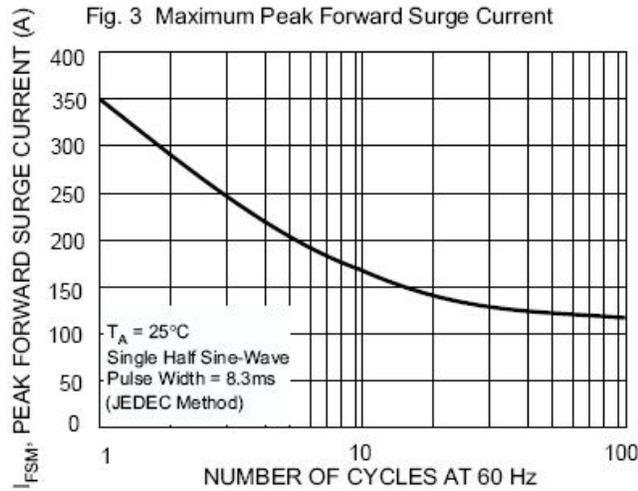
**Thermal-Mechanical Specifications: @T<sub>A</sub>=25°C unless otherwise specified**

| Type Number                             | Symbol                            | GBU 25005 | GBU 2501 | GBU 2502 | GBU 2504 | GBU 2506    | GBU 2508 | GBU 2510 | Units |      |
|---|-----------------------------------|-----------|----------|----------|----------|-------------|----------|----------|-------|------|
| Typical Thermal Resistance              | R <sub>θJA</sub>                  |           |          |          |          | 28          |          |          |       | °C/W |
|   | R <sub>θJC</sub>                  |           |          |          |          | 8.7         |          |          |       |      |
|   | R <sub>θJL</sub>                  |           |          |          |          | 5.3         |          |          |       |      |
| Operating and Storage Temperature Range | T <sub>J</sub> , T <sub>STG</sub> |           |          |          |          | -55 to +150 |          |          |       | °C   |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

**Ratings and Characteristics Curves**



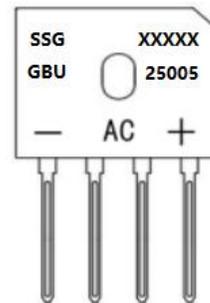


### Ordering Information

| Device                      | Package          | Plating | Shipping     |
|-----------------------------|------------------|---------|--------------|
| GBU25005<br>THRU<br>GBU2510 | GBU<br>(Pb-Free) | Pure Sn | 20pcs / tube |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

### Marking Diagram

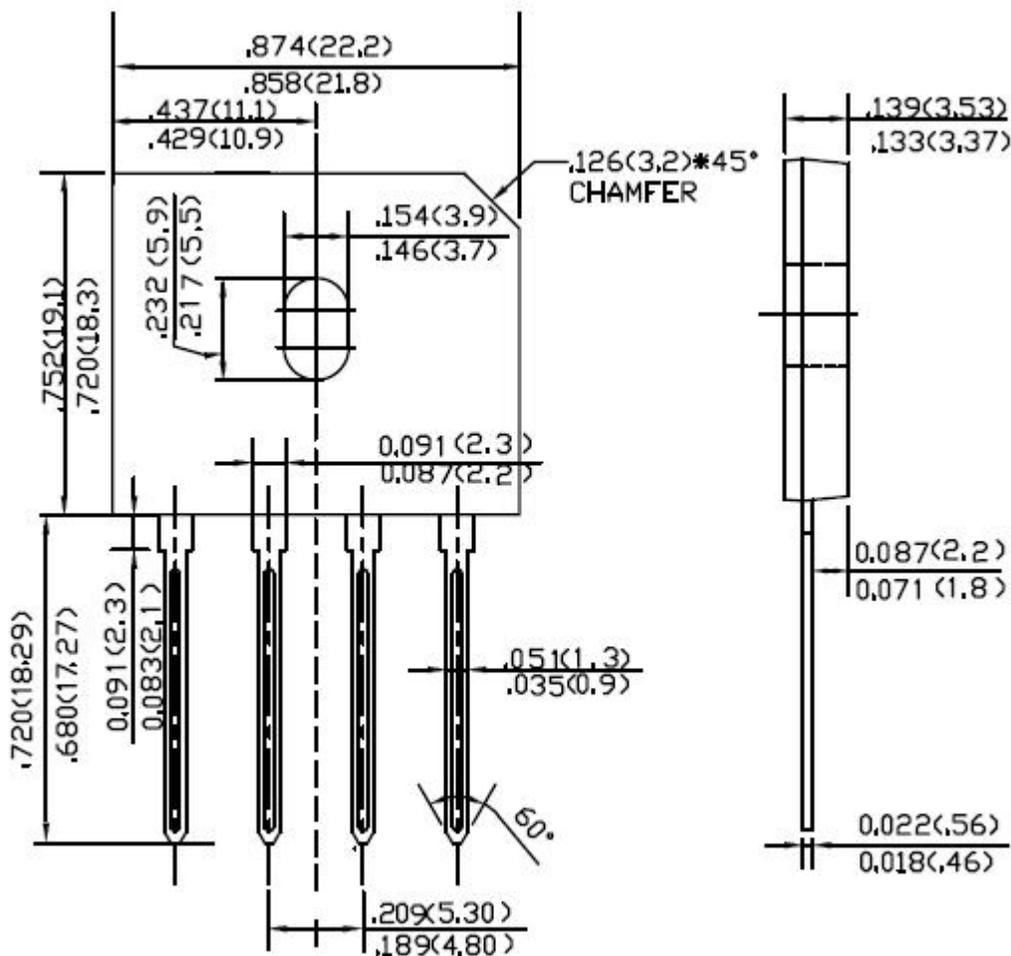


Where XXXXX is YYWWL

SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number  
GBU25005 = Type Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

### Mechanical Dimensions GBU (Inches/Millimeters)



**Technical Data  
Data Sheet N2278, Rev. -**



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