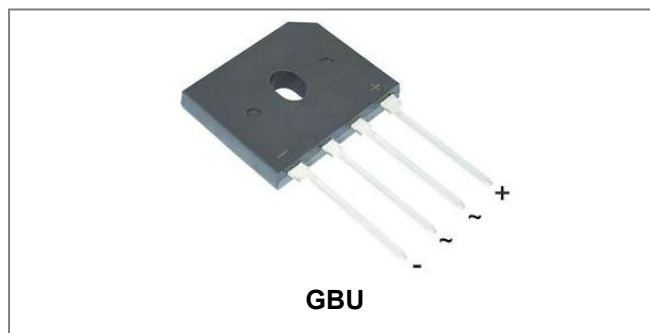


EGBU1001 THRU EGBU1006

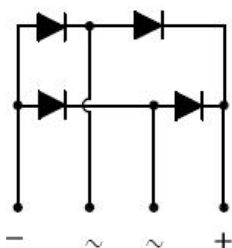
SINGLE PHASE 10.0AMP SUPER FAST GLASS PASSIVATED BRIDGE RECTIFIER



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 and Electrical Characteristics @T_A=25°C unless otherwise specified

| Type Number | Symbol | EGBU 1001 | EGBU 1002 | EGBU 1004 | EGBU 1006 | Unit |
|--|------------------------------------|-----------|-----------|-----------|-----------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_{DC} | 100 | 200 | 400 | 600 | V |
| RMS Reverse Voltage | V_{RMS} | 70 | 140 | 280 | 420 | V |
| Average forward rectified output current (Note1) @T _C =90°C | I_o | 10.0 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 170 | | | | A |
| I ² t Rating for fusing (t <8.3ms) | I ² t | 120 | | | | A ² s |

Electrical Characteristics:

| Type Number | Symbol | EGBU 1001 | EGBU 1002 | EGBU 1004 | EGBU 1006 | Unit |
|---|----------|------------|-----------|-----------|-----------|---------|
| Forward Voltage (per element) @ $I_F = 5A$ | V_F | 0.95 | | 1.25 | 1.7 | V |
| Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 125^\circ C$ | I_{RM} | 5.0 500 | | | | μA |
| Maximum reverse recovery time (Note 2) | T_{RR} | 35 | | | | ns |
| Typical Junction Capacitance(per leg) (Note 3) | C_J | 70 | | | | pF |

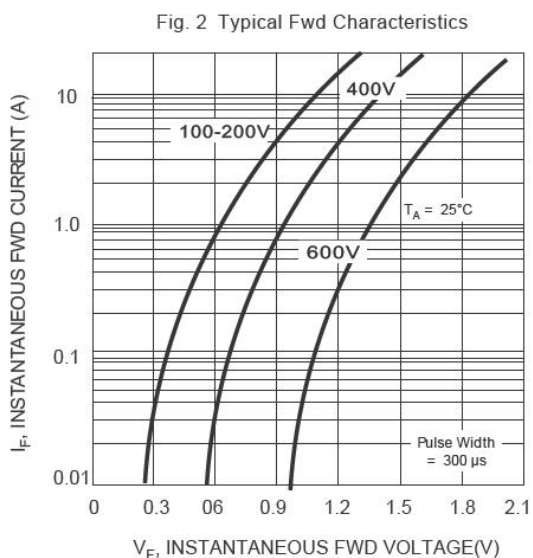
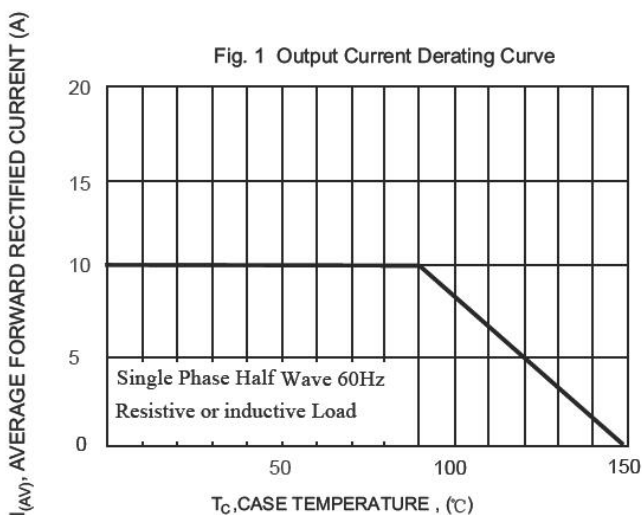
* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

| Type Number (Note1) | Symbol | EGBU 1001 | EGBU 1002 | EGBU 1004 | EGBU 1006 | Unit |
|---|------------------------------------|-------------|-----------|-----------|-----------|--------------|
| Typical Thermal Resistance (per leg) (Note 4) | $R_{\theta JA}$ $R_{\theta JL}$ | 30.9 7.3 | | | | $^\circ C/W$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | $^\circ C$ |
| Case Style | | GBU | | | | |

- Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
 2. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1A, I_{rr}=0.25A$.
 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
 4. Device mounted on 50mm x 50mm x 1.6mm Cu Plate Heatsink.

Ratings and Characteristics Curves



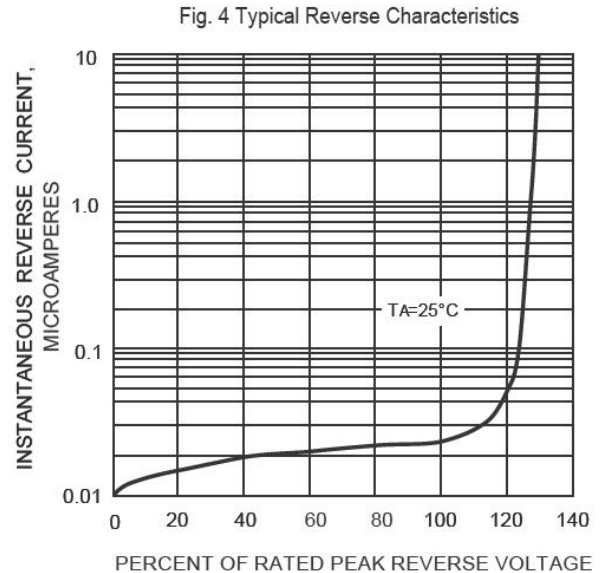
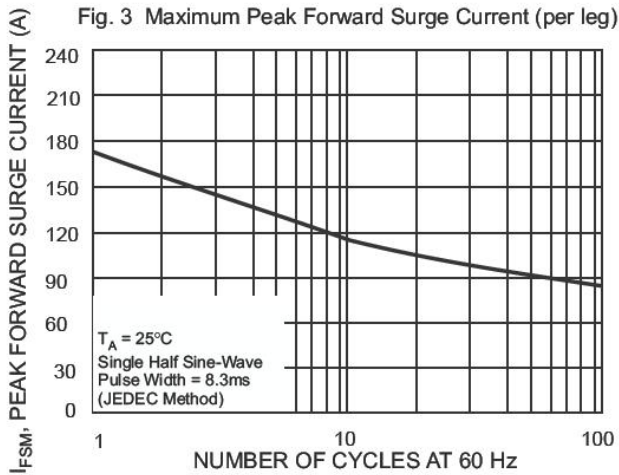
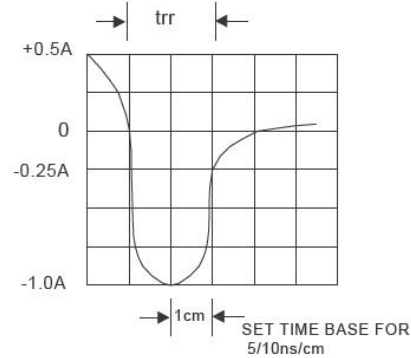
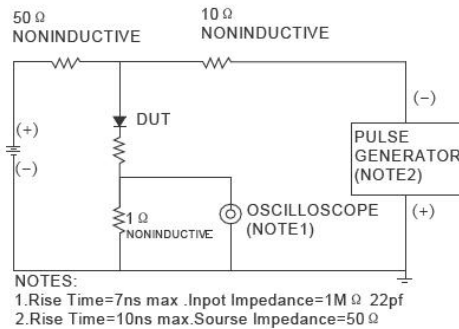


FIG.5 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

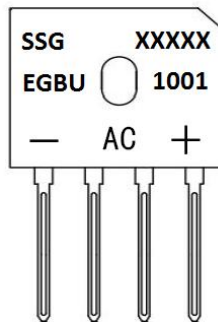


Ordering Information

| Device | Package | Plating | Shipping |
|------------------------------|------------------|---------|--------------|
| EGBU1001 THRU EGBU1006 | GBU (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

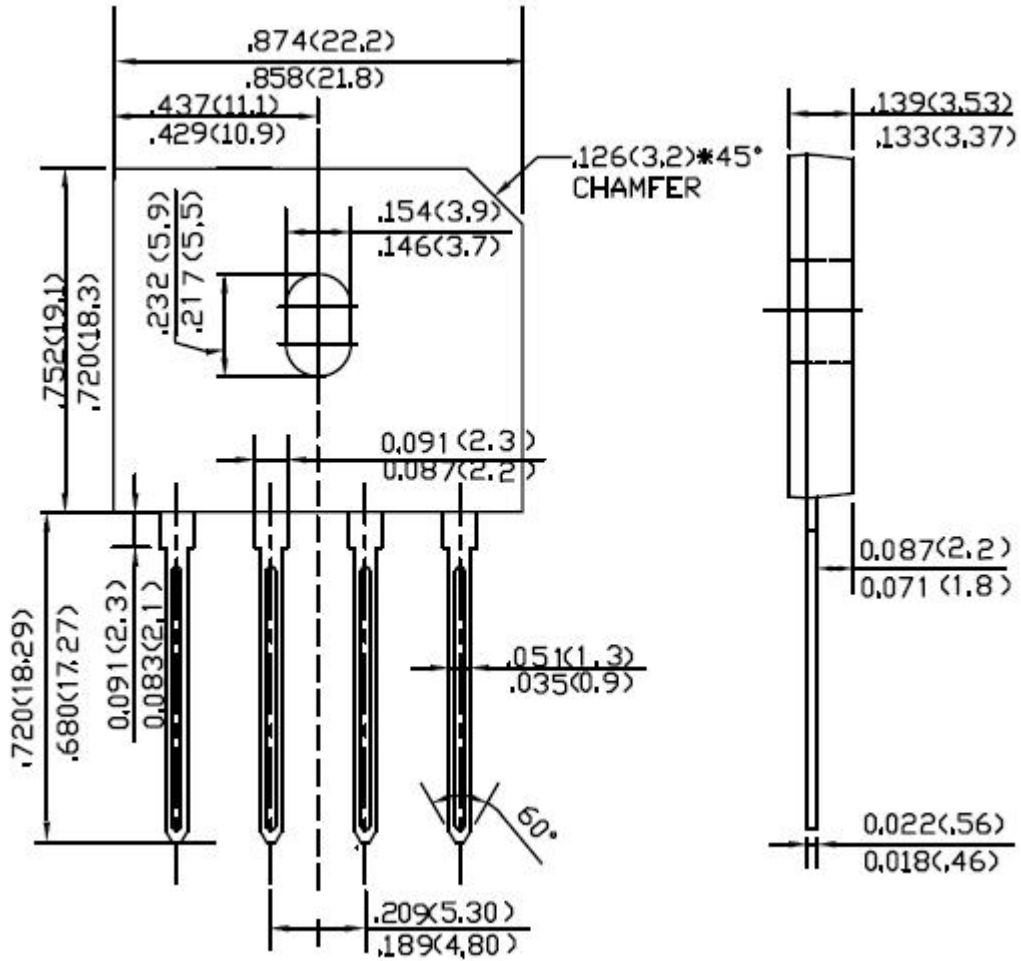


Where XXXXX is YYWWL

SSG = SSG
YY = Year
WW = Week
L = Lot Number
EGBU1001 = Type Number

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

Mechanical Dimensions GBU (Inches/Millimeters)





Technical Data
Data Sheet N1927, Rev. -



DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.