

GBU6005G-GBU610G

Single-Phase 6.0A Glass Passivated Bridge Rectifier

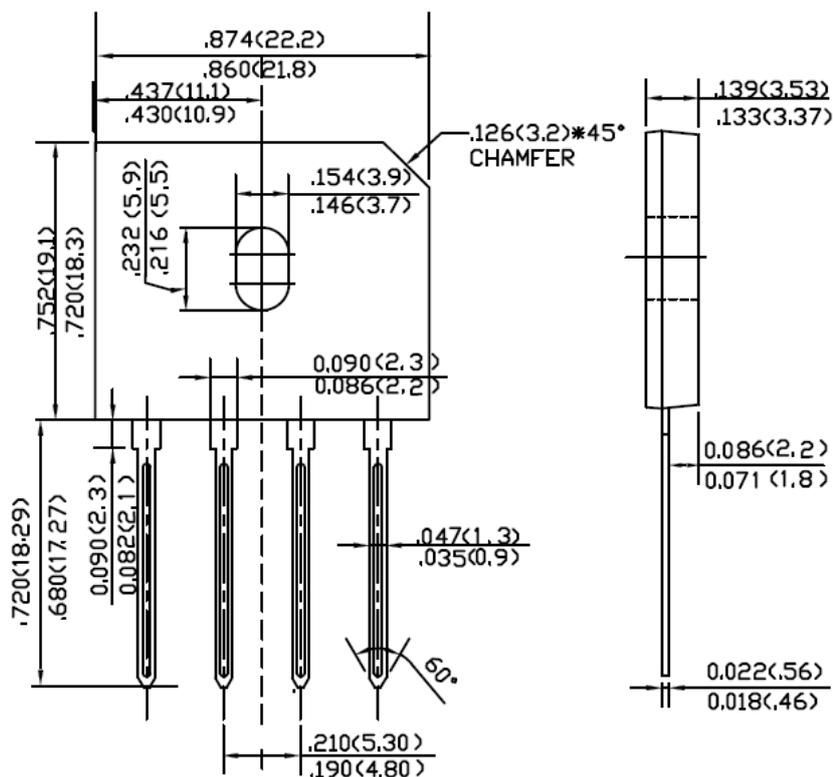
Features:

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

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

Mechanical Dimensions: In Inches/mm



GBU

MARKING, MOLDING RESIN

Marking for Type Number, 1st row SSG YYWWL, 2nd row Type Number
Where YY is the manufacture year
WW is the manufacture week code
L is the wafer's Lot Number

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •



GBU6005G-GBU610G

Technical Data
Data Sheet N1799, Rev. -

Green Products

Maximum Ratings and Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Maximum Ratings:

| Type Number | Symbol | GBU 6005G | GBU 601G | GBU 602G | GBU 604G | GBU 606G | GBU 608G | GBU 610G | Unit |
|---|------------------------------------|-----------|----------|----------|----------|----------|----------|----------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average forward rectified output current (Note 1) @ $T_A = 40^\circ\text{C}$ | I_O | 6.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150 | | | | | | | A |

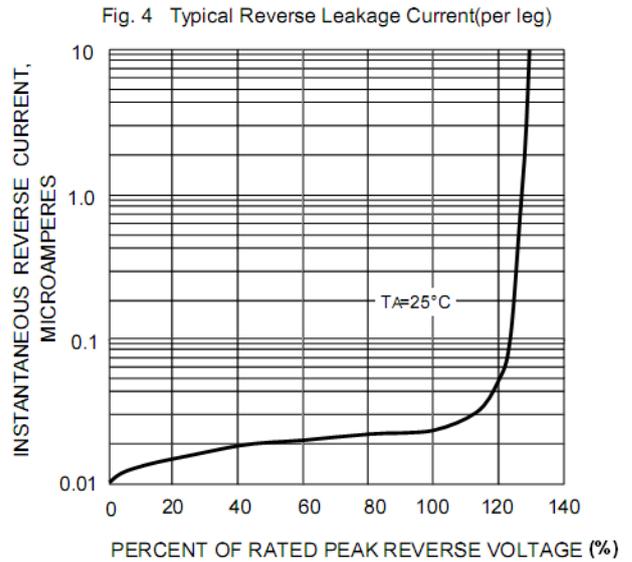
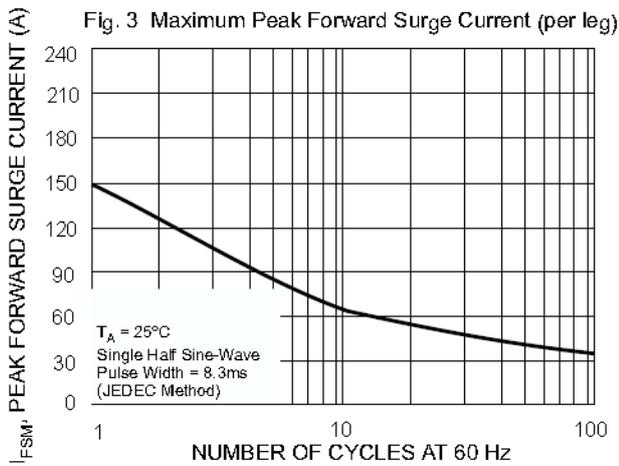
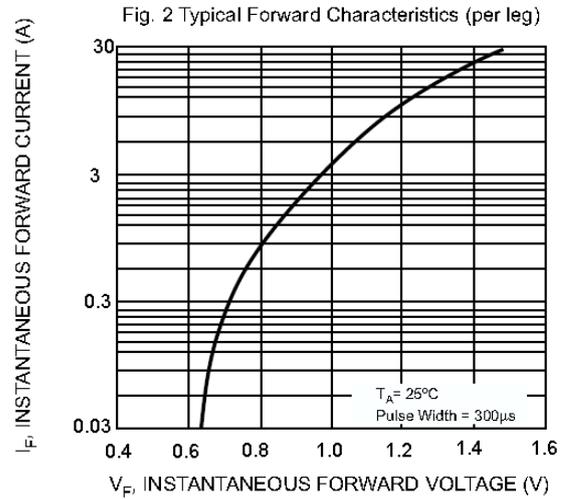
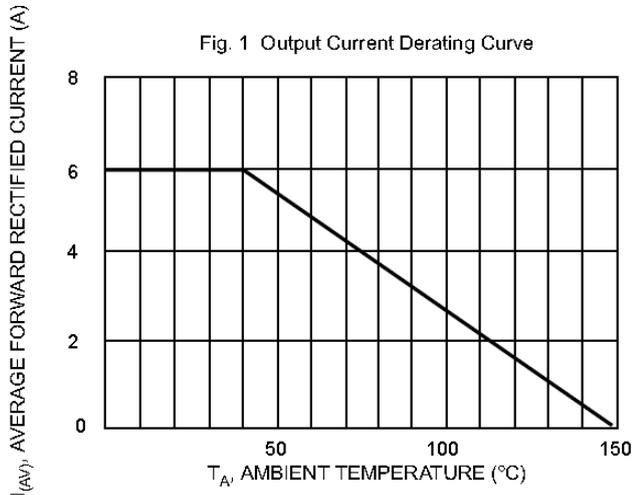
Electrical Characteristics:

| Type Number | Symbol | GBU 6005G | GBU 601G | GBU 602G | GBU 604G | GBU 606G | GBU 608G | GBU 610G | Unit |
|---|----------|------------|----------|----------|----------|----------|----------|----------|---------------|
| Forward Voltage (per element) @ $I_F = 3\text{A}$ @ $I_F = 6\text{A}$ | V_F | 1.0 1.1 | | | | | | | V |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$ | I_{RM} | 5.0 500 | | | | | | | μA |
| Typical Junction Capacitance(per leg) (Note 2) | C_J | 65 | | | | | | | pF |

Thermal-Mechanical Specifications:

| Type Number | Symbol | GBU 6005G | GBU 601G | GBU 602G | GBU 604G | GBU 606G | GBU 608G | GBU 610G | Unit |
|---|------------------------------------|-------------|----------|----------|----------|----------|----------|----------|--------------------|
| Typical Thermal Resistance (per leg) | $R_{\theta JA}$ $R_{\theta JL}$ | 17 2.2 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| Case Style | | GBU | | | | | | | |

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.





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 - Sangdest Microelectronics (Nanjing) Co., Ltd 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 - Sangdest Microelectronics (Nanjing) Co., Ltd 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 - Sangdest Microelectronics (Nanjing) Co., Ltd 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 - Sangdest Microelectronics (Nanjing) Co., Ltd 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 - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

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..