

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





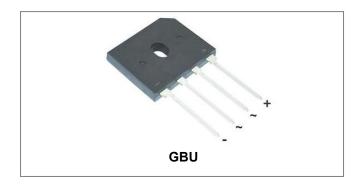








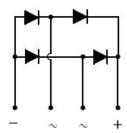
# GBU4005 THRU GBU410 Single-Phase 4.0A Glass Passivated Bridge Rectifier



#### **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
  - Delevitor es acord
- Polarity: as marked on caseMounting 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 4005	GBU 401	GBU 402	GBU 404	GBU 406	GBU 408	GBU 410	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> 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 (Note 1) @T <sub>A</sub> = 40°C	lo	4.0						Α	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	80						А	

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







#### Electrical Characteristics:@TA=25°C unless otherwise specified

Type Number	Symbol	GBU 4005	GBU 401	GBU 402	GBU 404	GBU 406	GBU 408	GBU 410	Units
Forward Voltage (per element)	V <sub>F</sub>	1.0 1.1				V			
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C	I <sub>RM</sub>	5.0 500				μA			
Typical Junction Capacitance(per leg) (Note 2)	Сл	65						pF	

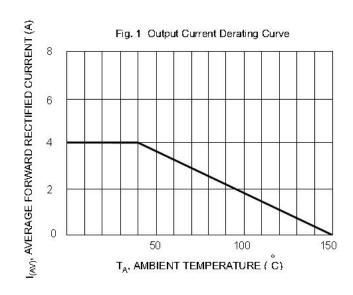
<sup>\*</sup> Pulse width < 300 µs, duty cycle < 2%

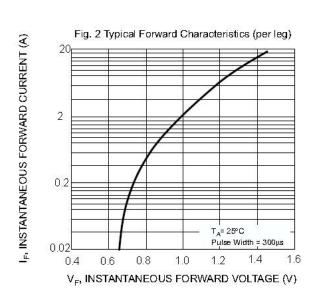
### Thermal-Mechanical Specifications:@T<sub>A</sub>=25°C unless otherwise specified

Type Number	Symbol	GBU 4005	GBU 401	GBU 402	GBU 404	GBU 406	GBU 408	GBU 410	Units
Typical Thermal Resistance (per leg)	R <sub>BJA</sub> 20 R <sub>BJL</sub> 2.2					°C/W			
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150					°C		

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

#### **Ratings and Characteristics Curves**



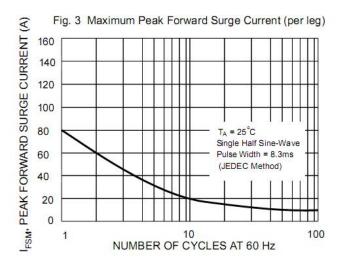


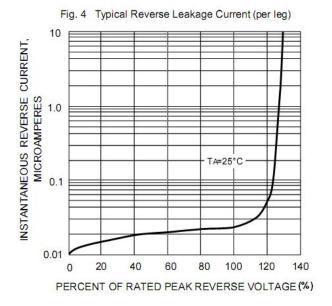
- China Germany Korea Singapore United States
  - http://www.smc-diodes.com sales@ smc-diodes.com •









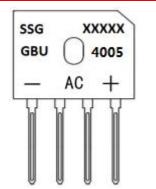


#### **Ordering Information**

D	evice	Package	Plating	Shipping
T	BU4005 HRU BU410	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

 GBU4005
 = Type Number

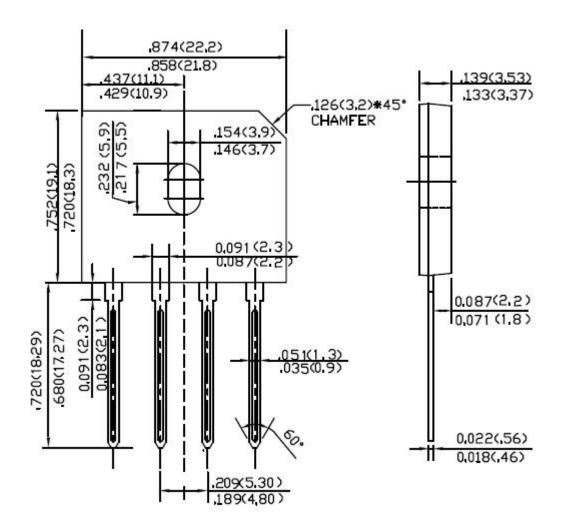
Cautions: Molding resin Epoxy resin UL:94V-0







## **Mechanical Dimensions GBU (Inches/Millimeters)**



<sup>•</sup> http://www.smc-diodes.com - sales@ smc-diodes.com •







#### 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.