

# GBU4005 - GBU410

# 4.0A GLASS PASSIVATED BRIDGE RECTIFIER

### **Features**

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500VRMS
- Low Reverse Leakage Current
- Surge Overload Rating to 150A Peak
- Ideal for Printed Circuit Board Applications
- **UL Listed Under Recognized Component** Index, File Number E94661
- Lead Free Finish, RoHS Compliant (Note 4)

## **Mechanical Data**

- Case: GBU
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Plated Leads. Solderable per MIL-STD-202, Method 208 (e3)
- Lead Free Plating (Tin Finish)
- Polarity: Marked on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Ordering Information: See Last Page
- Marking: Date Code and Type Number
- Weight: 6.6 grams (approximate)

GBU					
Dim	Min	Max			
Α	21.8	22.3			
В	3.5	4.1			
С	7.4	7.9			
D	1.65	2.16			
E	2.25	2.75			
F	1.95	2.35			
G	1.02	1.27			
Н	4.83	5.33			
J	17.5	18.0			
K	3.2 X 45°				
L	18.3	18.8			
M	3.30	3.56			
N	0.46	0.56			
Р	0.76	1.0			
All Dimensions in mm					

### **Maximum Ratings and Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

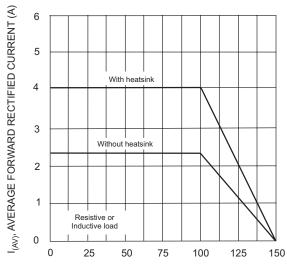
Single phase, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	GBU 4005	GBU 401	GBU 402	GBU 404	GBU 406	GBU 408	GBU 410	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Forward Rectified Current (Note 1) @ T <sub>C</sub> = 100°C		4.0						Α	
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		150					Α		
Forward Voltage (per element) @ I <sub>F</sub> = 2.0A	V <sub>FM</sub>				1.0				V
		5.0 50					μА		
I <sup>2</sup> t Rating for Fusing (Note 2)		93					A <sup>2</sup> s		
Typical Total Capacitance per Element (Note 3)		80					pF		
Typical Thermal Resistance Junction to Case (Note 1)		2.2					°C/W		
Operating and Storage Temperature Range		-55 to +150				°C			

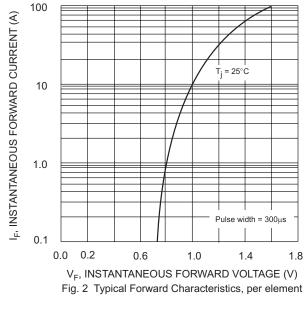
Notes: 1. Unit mounted on 50mm x 50mm x 1.6mm copper plate heatsink.

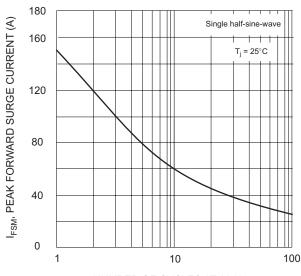
- 2. Non-repetitive, for t > 1.0ms and < 8.3ms.
- 3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.





 $T_C$ , CASE TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve





NUMBER OF CYCLES AT 60 Hz
Fig. 3 Maximum Non-Repetitive Surge Current

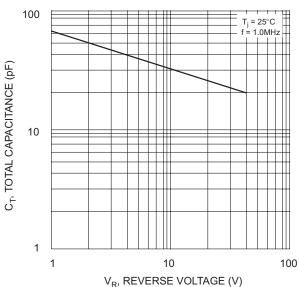


Fig. 4 Typical Total Capacitance, per element

# Ordering Information (Note 5)

Device	Packaging	Shipping
GBU4005	GBU	20/Tube
GBU401	GBU	20/Tube
GBU402	GBU	20/Tube
GBU404	GBU	20/Tube
GBU406	GBU	20/Tube
GBU408	GBU	20/Tube
GBU410	GBU	20/Tube

Notes: 5. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf



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