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GBU8005 - GBU810

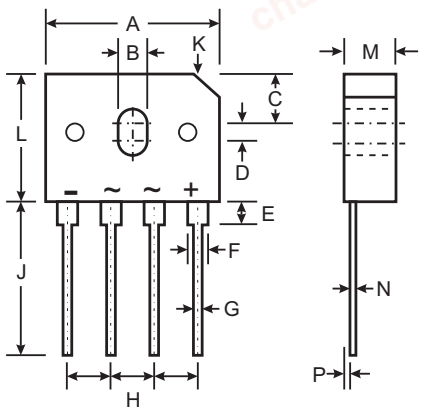
8.0A GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500VRMS
- Low Reverse Leakage Current
- Surge Overload Rating to 200A 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: Finish — Tin. Solderable per MIL-STD-202, Method 208 e3
- 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**
A	21.8	22.3
B	3.5	4.1
C	7.4	7.9
D	1.65	2.16
E	2.25	2.75
F	1.95	2.35
G	1.02	1.27
H	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
P	0.76	1.0
All Dimensions in mm		

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

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

Characteristic	Symbol	GBU 8005	GBU 801	GBU 802	GBU 804	GBU 806	GBU 808	GBU 810	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Forward Rectified Current (Note 1) @ T_C = 100°C	$I_{(AV)}$	8.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200							A
Forward Voltage (per element) @ I_F = 4.0A	V_{FM}	1.0							V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 125°C	I_R	5.0 500							μA
I^2t Rating for Fusing (t < 8.3ms) (Note 2)	I^2t	166							A^2s
Typical Total Capacitance per Element (Note 3)	C_T	130							pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	2.2							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150							°C

Notes:
1. Unit mounted on 50 x 50 x 1.6mm copper plate heatsink.
2. Non-repetitive, for t > 1.0ms and < 8.3ms.
3. Per element, 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.*

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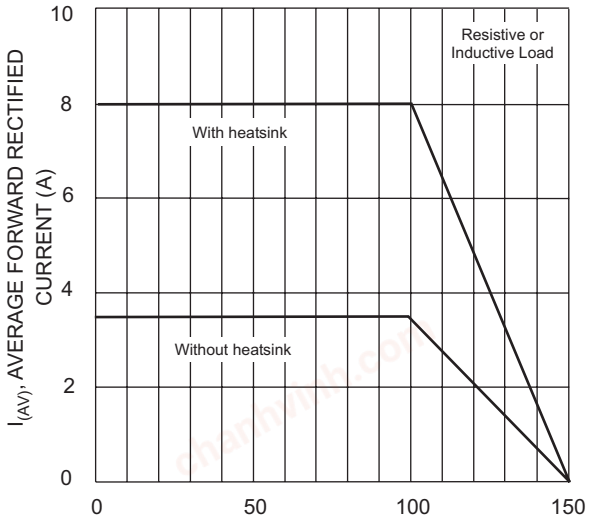


Fig. 1 Forward Current Derating Curve

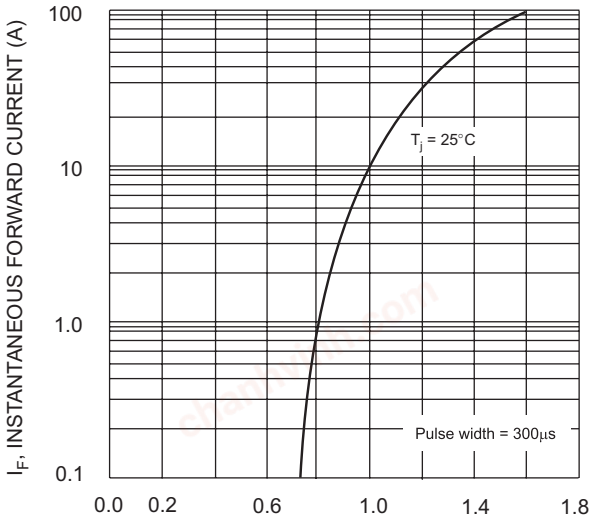


Fig. 2 Typical Forward Characteristics, per element

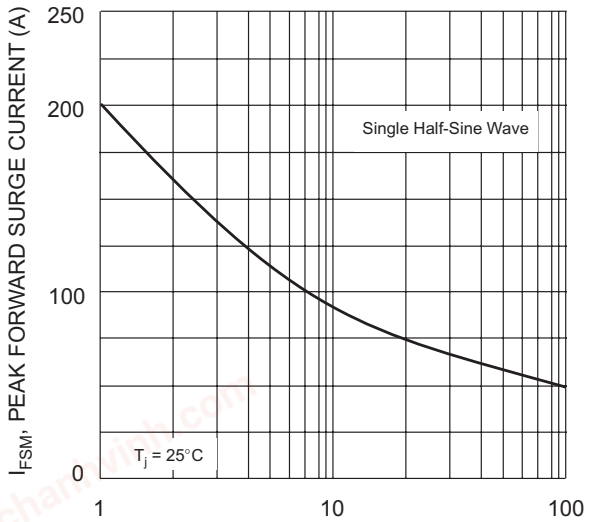


Fig. 3 Maximum Non-Repetitive Surge Current

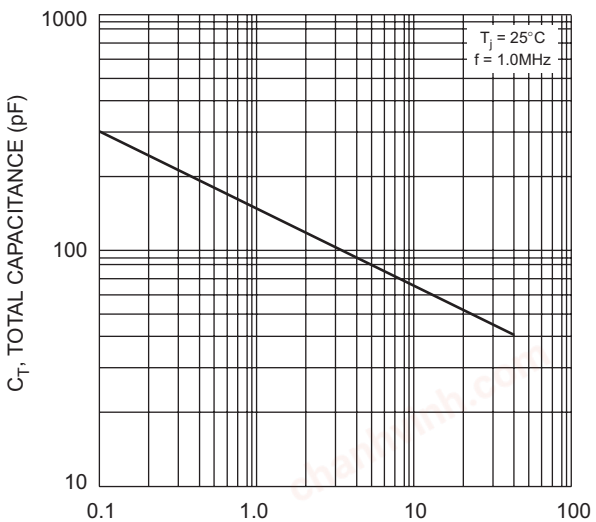


Fig. 4 Typical Total Capacitance, per element

Ordering Information (Note 5)

Device	Packaging	Shipping
GBU8005	GBU	20/Tube
GBU801	GBU	20/Tube
GBU802	GBU	20/Tube
GBU804	GBU	20/Tube
GBU806	GBU	20/Tube
GBU808	GBU	20/Tube
GBU810	GBU	20/Tube

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

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