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Diodes Incorporated
GBU10005

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DIODES INCORPORATED

GBU10005 - GBU1010

10A GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V_{RMS}
- Low Reverse Leakage Current
- Surge Overload Rating to 220A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

Mechanical Data

- Case: GBU
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish. 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
- Marking: Date Code and Type Number
- Weight: 4 grams (approximate)

Ordering Information (Note 3)

Part Number	Case	Packaging
GBU10005-GBU1010	GBU	20/Tube

Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at http://www.diodes.com.

Maximum Ratings and Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

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

Characteristic	Symbol	GBU 10005	GBU 1001	GBU 1002	GBU 1004	GBU 1006	GBU 1008	GBU 1010	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 4) @ T_C = +100°C	$I_{(AV)}$	10							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	220							A
Forward Voltage (per element) @ I_F = 5.0A	V_{FM}	1.0							V
Peak Reverse Current at Rated DC Blocking Voltage @ T_C = +25°C @ T_C = +125°C	I_R	5.0 500							μA
I^2t Rating for Fusing (Note 5)	I^2t	200							A^2s
Typical Total Capacitance per Element (Note 6)	C_T	60							pF
Typical Thermal Resistance Junction to Case (Note 4)	$R_{\theta JC}$	2.2							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

Notes: 4. Unit mounted on 100mm x 100mm x 1.6mm copper plate heatsink.
5. Non-repetitive, for t > 1.0ms and < 8.3ms.
6. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

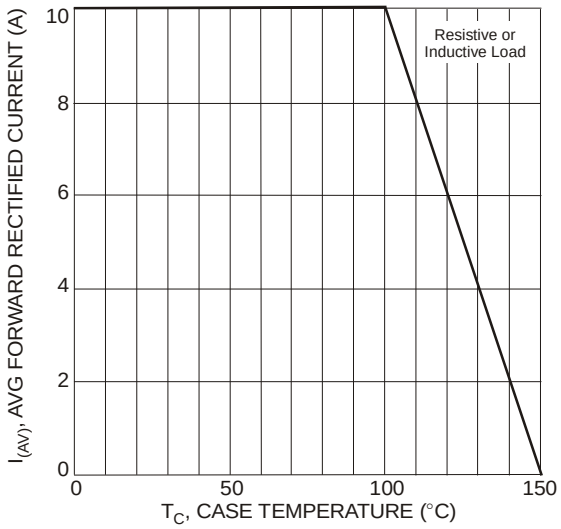


Figure 1 Forward Current Derating Curve

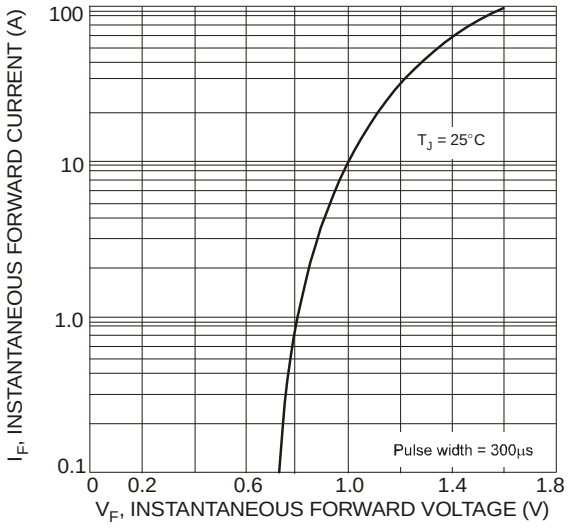


Figure 2 Typical Forward Characteristics, per element

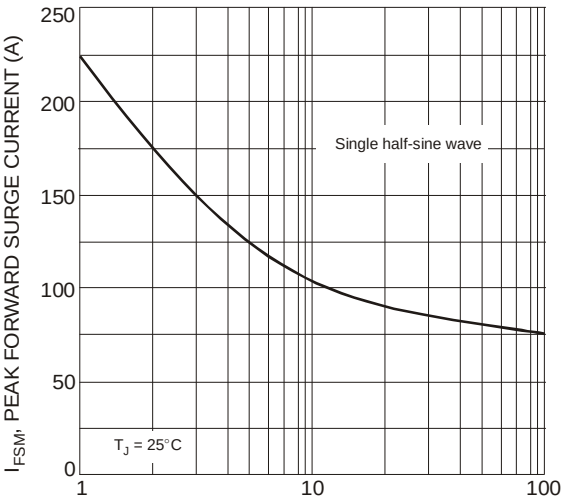


Figure 3 Maximum Non-Repetitive Surge Current

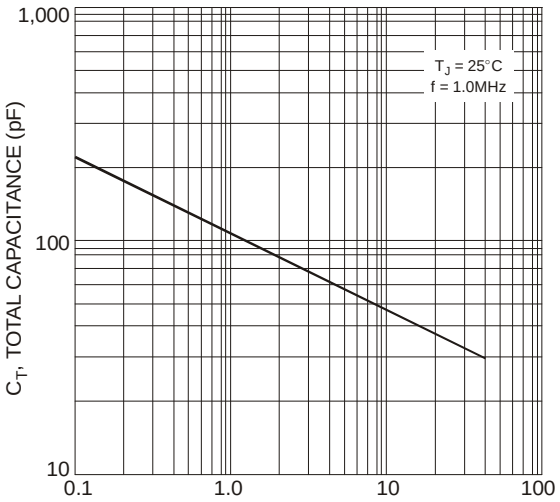
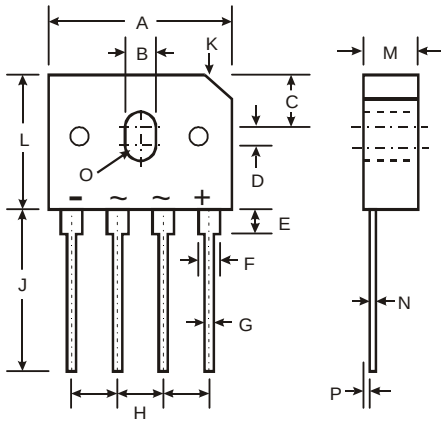


Figure 4 Typical Total Capacitance, per element

Package Outline Dimensions

Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



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
O	1.90R	
P	0.76	1.0
All Dimensions in mm		

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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