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.

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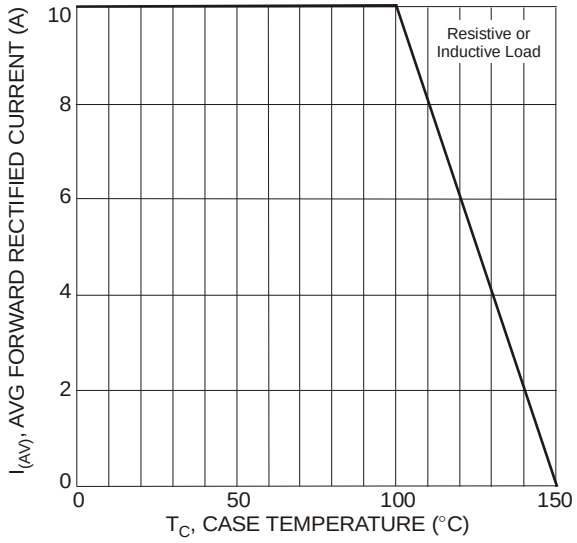

Figure 1 Forward Current Derating Curve

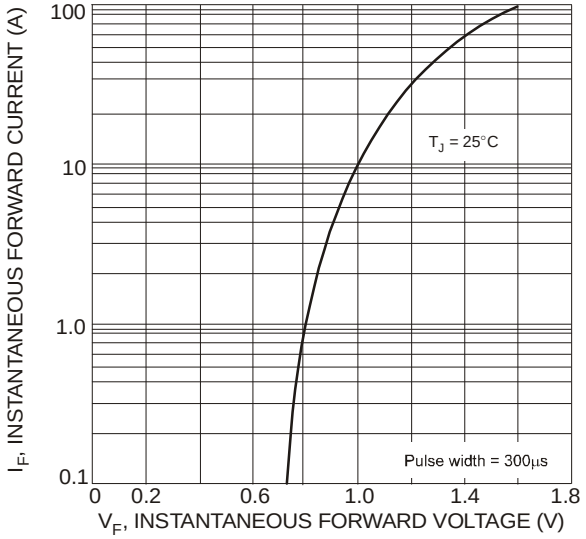

Figure 2 Typical Forward Characteristics, per element

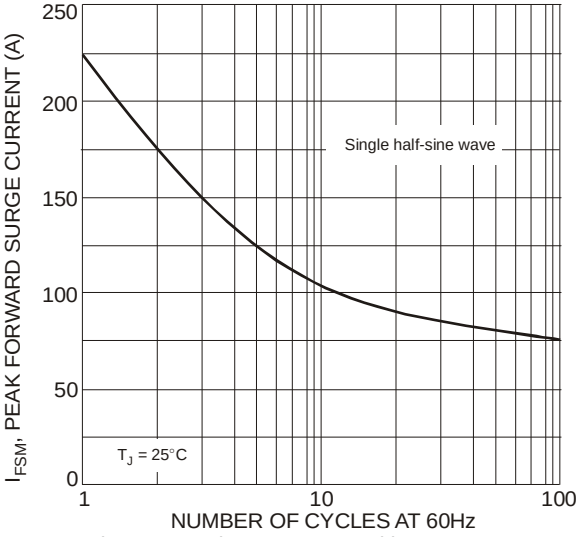

Figure 3 Maximum Non-Repetitive Surge Current

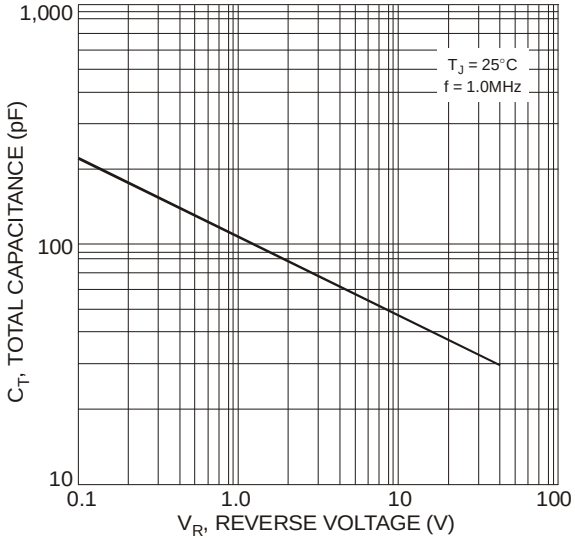

Figure 4 Typical Total Capacitance, per element

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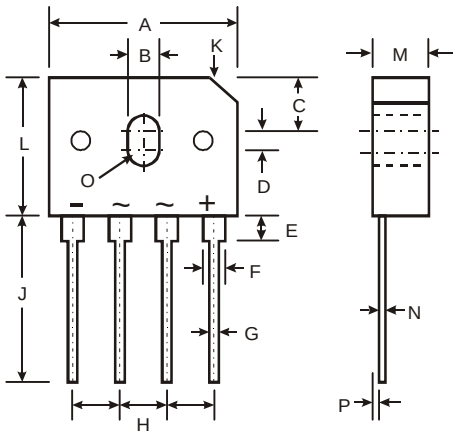
Package Outline Dimensions

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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