

GBJ10005 - GBJ1010

10A GLASS PASSIVATED BRIDGE RECTIFIER

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-65 to +150

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V_{RMS}
- Low Reverse Leakage Current
- Surge Overload Rating to 170A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- Lead Free Finish/RoHS Compliant (Note 4)

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Mechanical Data

- Case: GBJ
- 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 @3
- Lead Free Plating (Tin Finish).
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Marking: Type Number
- Weight: 6.6 grams (approximate)

GBJ			
Dim	Min	Max	
Α	29.70	30.30	
В	19.70	20.30	
С	17.00	18.00	
D	3.80	4.20	
E	7.30	7.70	
G	9.80	10.20	
Н	2.00	2.40	
I	0.90	1.10	
J	2.30	2.70	
K	3.0 X 45°		
L	4.40	4.80	
M	3.40	3.80	
N	3.10	3.40	
Р	2.50	2.90	
R	0.60	0.80	
S	10.80	11.20	
All Dimensions in mm			

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

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

GBJ GBJ GBJ GBJ GBJ Symbol Unit Characteristic 10005 1001 1002 1004 1006 1008 1010 Peak Repetitive Reverse Voltage V_{RRM} Working Peak Reverse Voltage V_{RWM} 50 100 200 400 600 800 1000 ٧ DC Blocking Voltage RMS Reverse Voltage $V_{R(RMS)}$ 70 140 280 420 560 700 ٧ Average Forward Rectified Output Current 10 Α I_{O} @ $T_C = 110^{\circ}C$ Non-Repetitive Peak Forward Surge Current, 8.3 ms single I_{FSM} 170 Α half-sine-wave superimposed on rated load Forward Voltage per element @ $I_F = 5.0A$ V_{FM} 1.05 V Peak Reverse Current $@T_C = 25^{\circ}C$ 10 I_R μΑ @ $T_C = 125^{\circ}C$ 500 at Rated DC Blocking Voltage I2t Rating for Fusing (t < 8.3ms) (Note 1) I²t 120 A²s

Notes: 1. Non-repetitive, for t > 1.0ms and < 8.3ms.

Operating and Storage Temperature Range

Typical Total Capacitance per Element (Note 2)

Typical Thermal Resistance, Junction to Case (Note 3)

- 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
- 3. Thermal resistance from junction to case per element. Unit mounted on 150 x 150 x 1.6mm copper plate heat sink.
- 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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 $R_{\theta JC}$

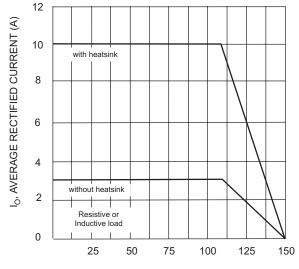
Tj, TSTG

рF

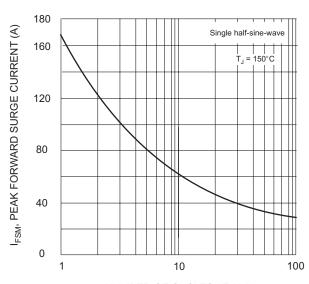
C/W

٥С

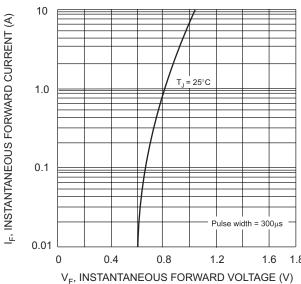




T_C, CASE TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve



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



V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics (per element)

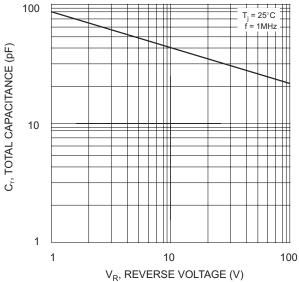
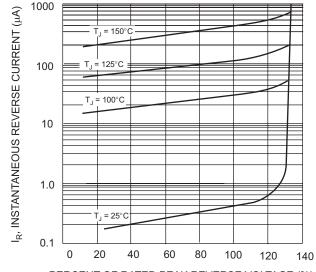


Fig. 4 Typical Total Capacitance, Per Element



PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 5 Typical Reverse Characteristics



Ordering Information (Note 5)

Device	Packaging	Shipping
GBJ10005-F	GBJ	15/Tube
GBJ1001-F	GBJ	15/Tube
GBJ1002-F	GBJ	15/Tube
GBJ1004-F	GBJ	15/Tube
GBJ1006-F	GBJ	15/Tube
GBJ1008-F	GBJ	15/Tube
GBJ1010-F	GBJ	15/Tube

Notes: 5. For packaging details, visit our website at http://www.diodes.com/datasheets/ap2008.pdf.

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