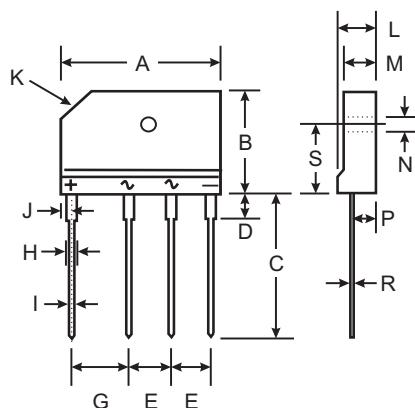


Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500VRMS
- 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)**

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 (E3)
- 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
A	29.70	30.30
B	19.70	20.30
C	17.00	18.00
D	3.80	4.20
E	7.30	7.70
G	9.80	10.20
H	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
P	2.50	2.90
R	0.60	0.80
S	10.80	11.20

All Dimensions in mm

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	GBJ 8005	GBJ 801	GBJ 802	GBJ 804	GBJ 806	GBJ 808	GBJ 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	$V_{R(\text{RMS})}$	35	70	140	280	420	560	700	V
Average Forward Rectified Output Current @ $T_C = 110^\circ\text{C}$	I_O				8.0				A
Non-Repetitive Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}				170				A
Forward Voltage per element @ $I_F = 4.0\text{A}$	V_{FM}				1.0				V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$	I_R				5.0	500			μA
I^2t Rating for Fusing ($t < 8.3\text{ms}$) (Note 1)	I^2t				120				A^2s
Typical Total Capacitance per Element (Note 2)	C_T				55				pF
Typical Thermal Resistance Junction to Case (Note 3)	$R_{\theta JC}$				1.6				$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}				-65 to +150				$^\circ\text{C}$

Notes:

1. Non-repetitive, for $t > 1.0\text{ms}$ and $< 8.3\text{ms}$.
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 100 x 100 x 1.6mm aluminum plate heat sink.
4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

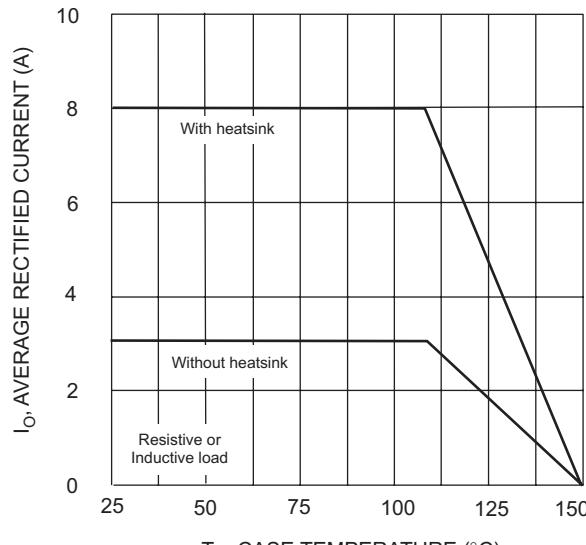


Fig. 1 Forward Current Derating Curve

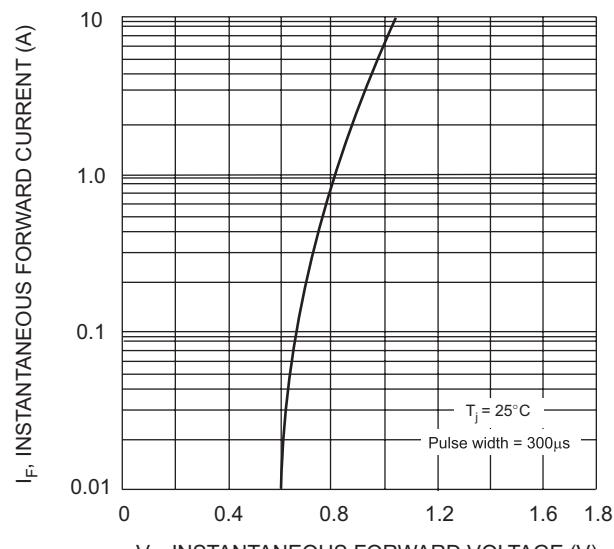


Fig. 2 Typical Forward Characteristics (per element)

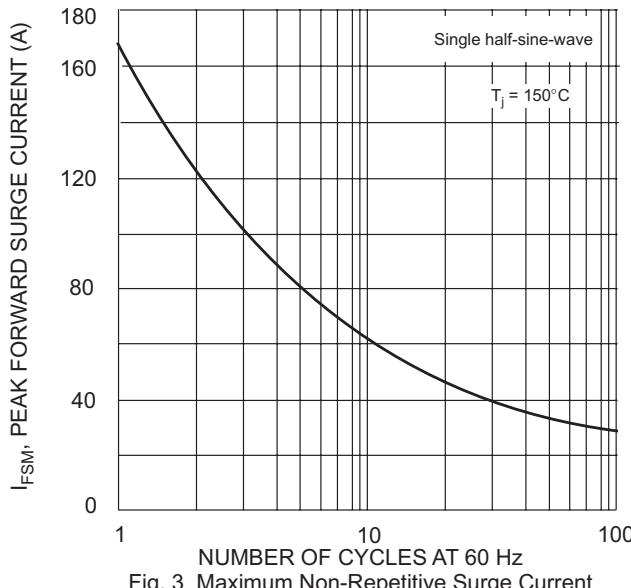


Fig. 3 Maximum Non-Repetitive Surge Current

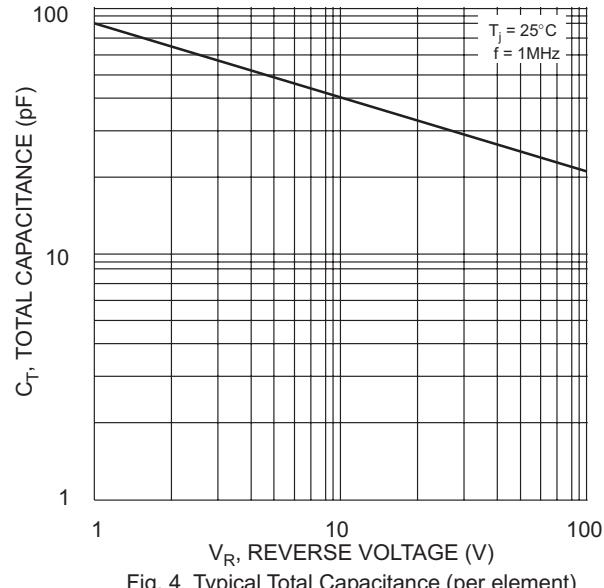


Fig. 4 Typical Total Capacitance (per element)

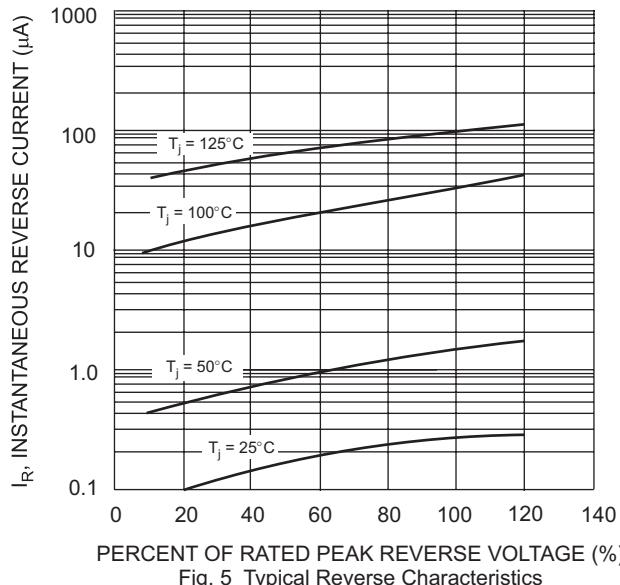


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 5)

Device	Packaging	Shipping
GBJ8005-F	GBJ	15/Tube
GBJ801-F	GBJ	15/Tube
GBJ802-F	GBJ	15/Tube
GBJ804-F	GBJ	15/Tube
GBJ806-F	GBJ	15/Tube
GBJ808-F	GBJ	15/Tube
GBJ810-F	GBJ	15/Tube

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

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