Technical Data
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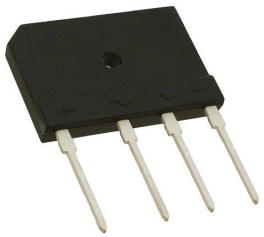
GBJ8005-GBJ810

Single-Phase 8.0A Glass Passivated Bridge Rectifier

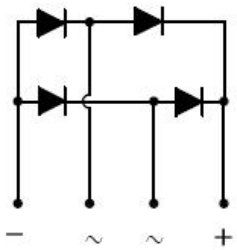


GBJ

Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: GBJ, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Lead Free: For RoHS / Lead Free Version
- Weight: 6.8 grams(approx)

Maximum Ratings @T_A=25°C unless otherwise specified

Type Number	Symbol	GBJ 8005	GBJ 801	GBJ 802	GBJ 804	GBJ 806	GBJ 808	GBJ 810	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{DC}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average forward rectified output current (Note 1) @T_C=90°C	$I_{F(AV)}$	8.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	127.09							A^2s

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Electrical Characteristics@T_A=25°C unless otherwise specified

Type Number	Symbol	GBJ 8005	GBJ 801	GBJ 802	GBJ 804	GBJ 806	GBJ 808	GBJ 810	Units
Forward Voltage (per element) @I_F =4A @I_F =8A	V_F	1.0 1.1							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	5.0 200							μA
Dielectric Strength	V_{ids}	2500							V
The proposed installation torque Max torque	T_{or}	Typ. 5.0 Max 8.0							Kgf.cm
Typical Junction Capacitance(per leg) (Note 2)	C_J	45							pF

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Type Number	Symbol	GBJ 8005	GBJ 801	GBJ 802	GBJ 804	GBJ 806	GBJ 808	GBJ 810	Units
Between junction and ambient, Without heatsink	$R_{\theta JA}$	24							°C/W
Between junction and case, With heatsink	$R_{\theta Jc}$	2.0							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

Note: 1. Unit case mounted on aluminum piate heatsink.
2. Measured at 1.0 MHz and applied reverse voltage of 5.0V D.C.

Ratings and Characteristics Curves

Fig. 1 Output Current Derating Curve

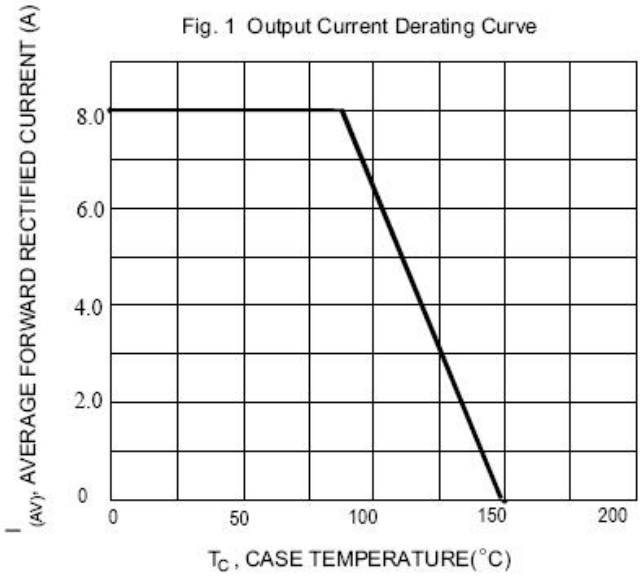

Fig. 2 Typical Forward Characteristics (per leg)

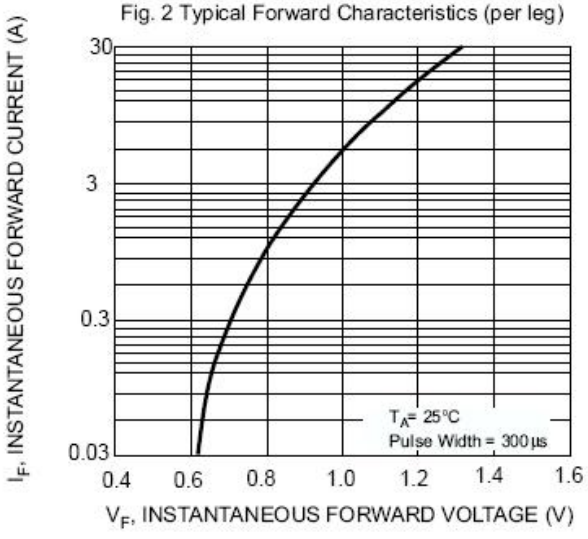

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Fig. 3 Maximum Peak Forward Surge Current (per leg)

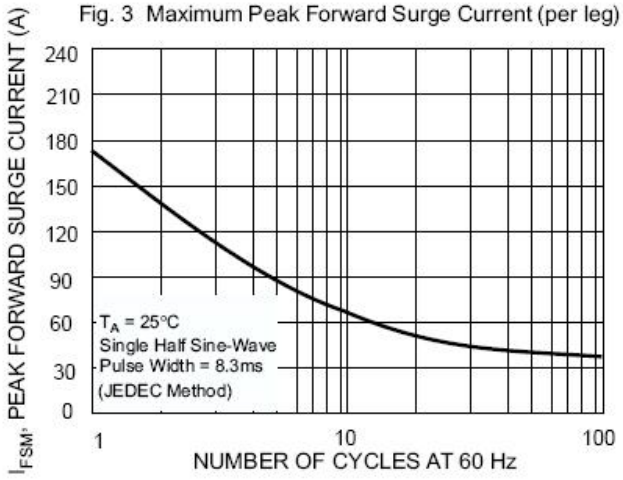


Fig. 4 Typical Reverse Leakage Current(per leg)

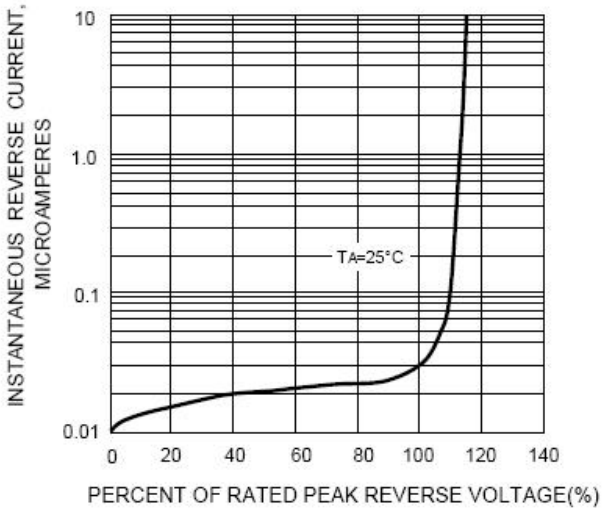
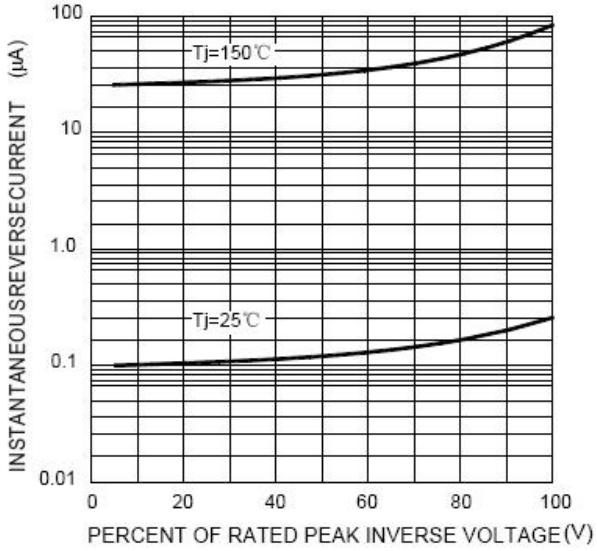


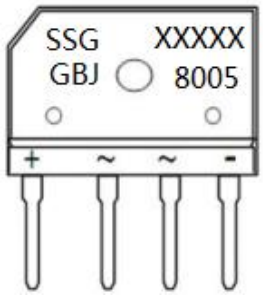
FIG.5 TYPICAL REVERSE CHARACTERISTICS



Ordering Information

Device	Package	Plating	Shipping
GBJ8005 THRU GBJ810	GBJ(Pb-Free)	Pure Sn	15pcs / tube

Marking Diagram



Where XXXXX is YYWWL

SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number
GBJ8005	= Type Number

Cautions: Molding resin
Epoxy resin UL:94V-0

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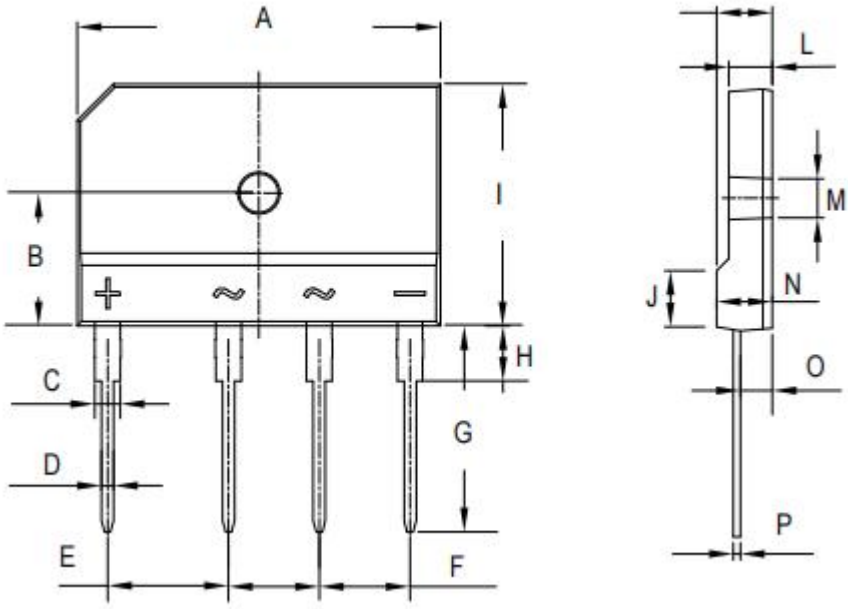
Mechanical Dimensions GBJ (Inches/Millimeters)



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	29.7	30.3	1.169	1.193
B	10.8	11.2	0.425	0.441
C	1.9	2.3	0.075	0.091
D	0.9	1.1	0.035	0.043
E	9.8	10.2	0.386	0.402
F	7.3	7.7	0.287	0.303
G	17.0	18.0	0.699	0.709
H	3.8	4.2	0.150	0.165
I	19.7	20.3	0.776	0.799
J	4.8	5.2	0.189	0.205
K	4.4	4.8	0.173	0.189
L	3.4	3.8	0.134	0.150
M	3.1	3.4	0.122	0.134
N	4.4	4.8	0.173	0.189
O	2.4	2.8	0.094	0.110
P	0.5	0.7	0.020	0.028

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