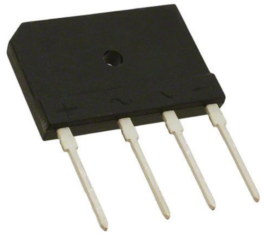
Technical Data
Data Sheet N1793, Rev. B

GBJ10005-GBJ1010

Single-Phase 10.0A Glass Passivated Bridge Rectifier

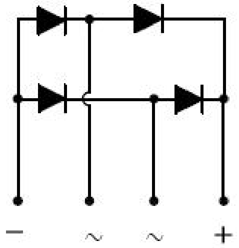


GBJ

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 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	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 rectified output current (with heatsink)@T_C = 100˚C (without heatsink)@T_A = 25˚C	$I_{F(AV)}$	10 3.5							A
Peak Forward Surge Current,8.3ms single half-sine-wave superimposed on rated load (JEDEC method) @T_J = 25˚C @T_J = 125˚C	I_{FSM}	240 192							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	239							A^2s

Electrical Characteristics@T_A=25˚C unless otherwise specified

Type Number	Symbol	GBJ 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	Units
Forward Voltage (per element) @I_F =5A @I_F =10A	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 1)	C_J	70							pF

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

Thermal-Mechanical Specifications:

Type Number	Symbol	GBJ 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	Units
Typical Thermal Resistance Junction	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	22 3 5							˚C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							˚C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 5.0V D.C.

Ratings and Characteristics Curves

Fig. 1 Output Current Derating Curve

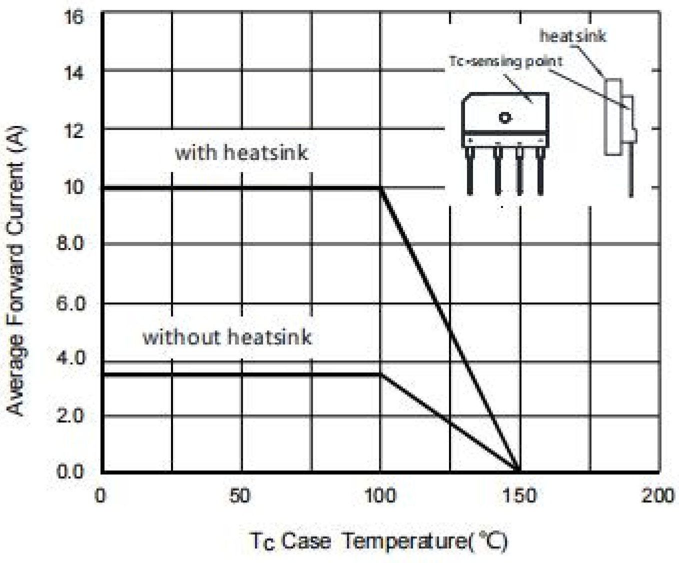


Fig. 2 Typical Forward Characteristics

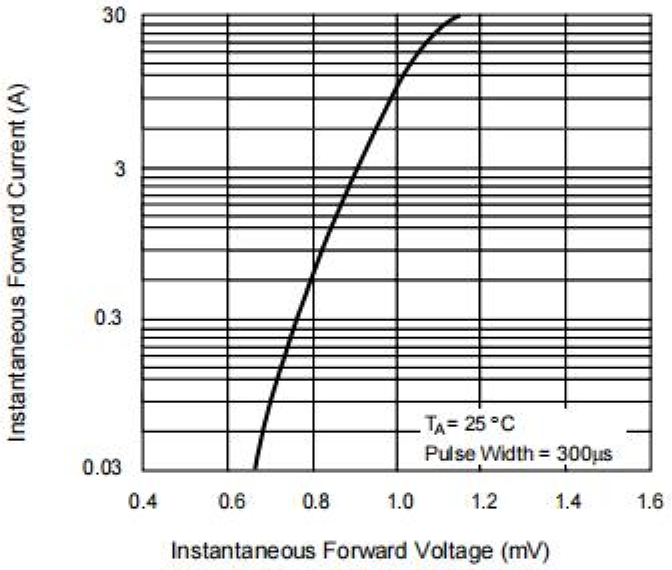


Fig. 3 Forward Surge Current Capability

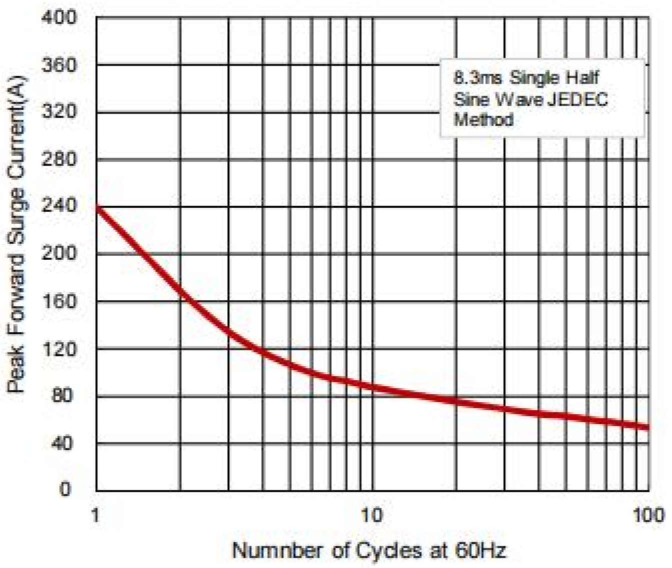
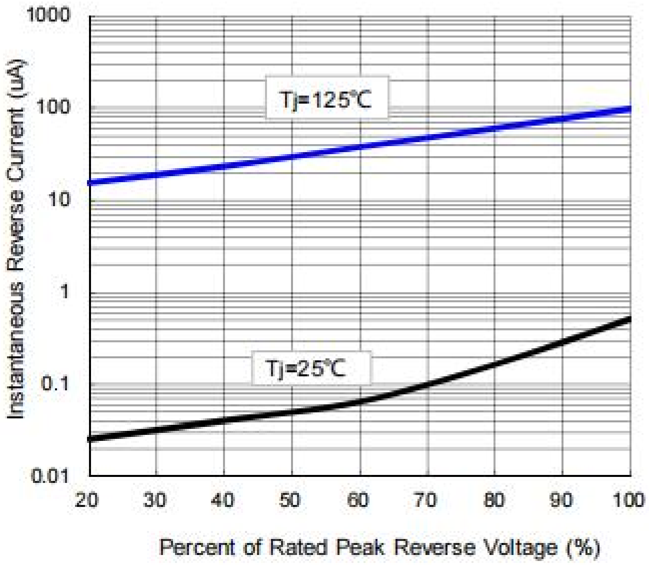


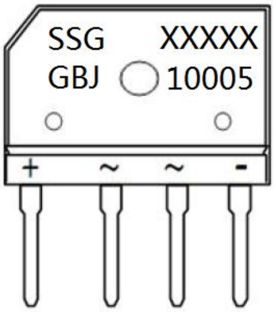
Fig. 4 Typical Reverse Chracteristics



Ordering Information

Device	Package	Plating	Shipping
GBJ10005 THRU GBJ1010	GBJ(Pb-Free)	Pure Sn	15pcs / tube

Marking Diagram

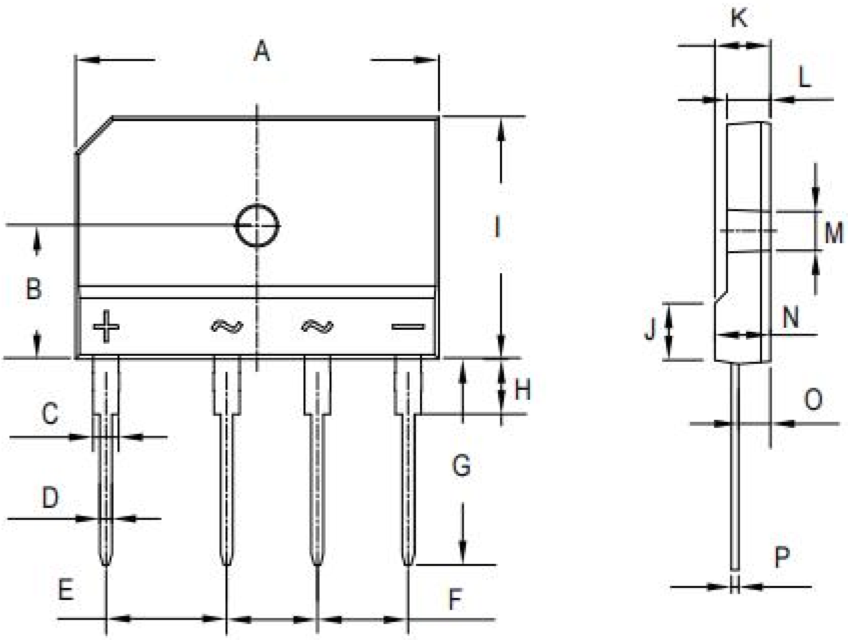


Where XXXXX is YYWWL

SSG = SSG
YY = Year
WW = Week
L = Lot Number
GBJ10005 = Type Number

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

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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