

GBJ10005 THRU GBJ1010

Glass Passivated Bridge Rectifiers
Reverse Voltage - 50 to 1000 V
Forward Current - 10 A

Features

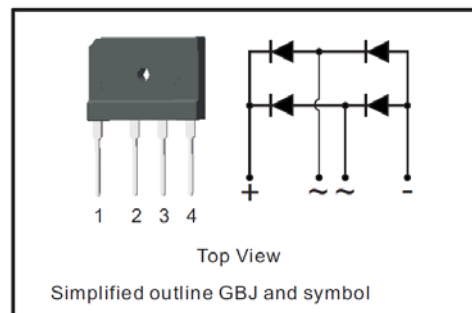
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has U/L
- The flammability classification 94V-0

Mechanical data

- Case: Molded plastic, GBJ
- Mounting Position: Any

PINNING

PIN	DESCRIPTION
1	Output Anode (+)
2	Input Pin (~)
3	Input Pin (~)
4	Output Cathode (-)



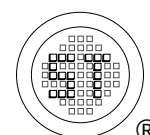
Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	GBJ 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	Units
	Marking	GBJ 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	-
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current with Heatsink ²⁾	$I_{(AV)}$	10							A
Peak Forward Surge Current, 8.3 ms Single Half-Sine -Wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							A
I^2t Rating for Fusing at $t \leq 8.3$ ms	I^2t	166							A ² S
Maximum Forward Voltage at 5 A DC	V_F	1							V
Maximum Reverse Current at $T_J = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J = 125^\circ\text{C}$	I_R	5 500							μA
Typical Junction Capacitance ¹⁾	C_j	70							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	35							$^\circ\text{C/W}$
Typical Thermal Resistance ²⁾	$R_{\theta JC}$	2.5							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 150							$^\circ\text{C}$

¹⁾ Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

²⁾ Device mounted on 150mm*150mm*1.6mm Cu Plate Heat sink



Electrical characteristic curves

Fig.1 FORWARD CURRENT DERATING CURVE

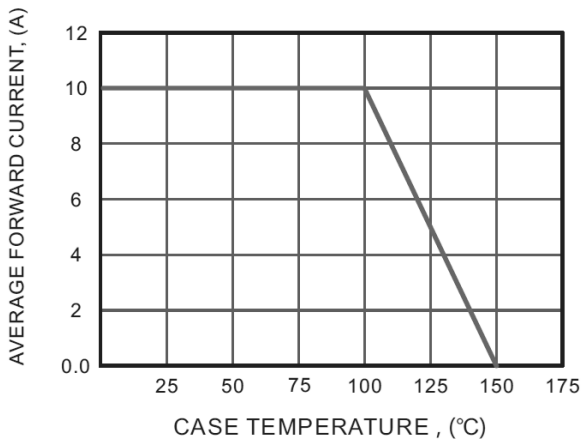


Fig.2 Typical Reverse Characteristics

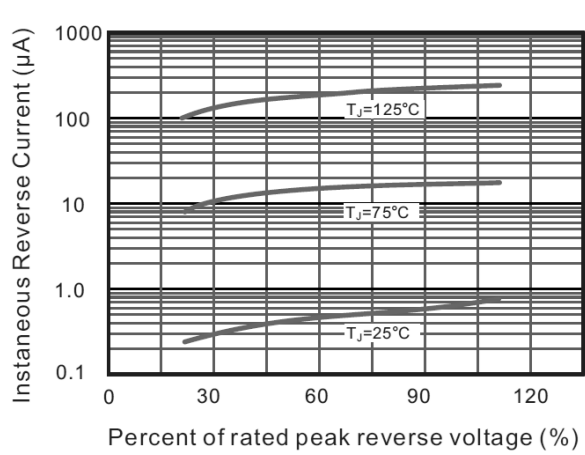


Fig.3 Typical Forward Characteristics

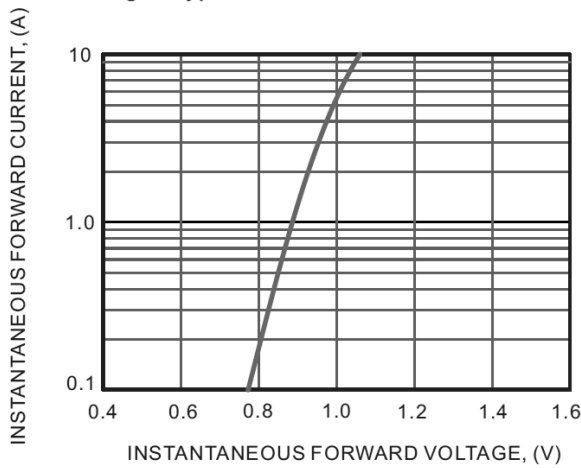


Fig.4 Typical Junction Capacitance

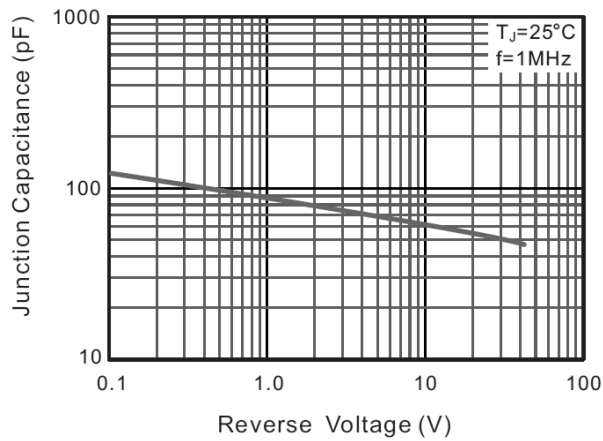
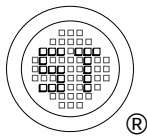
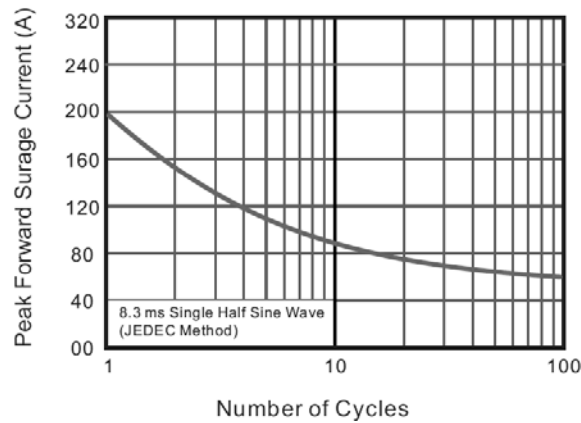


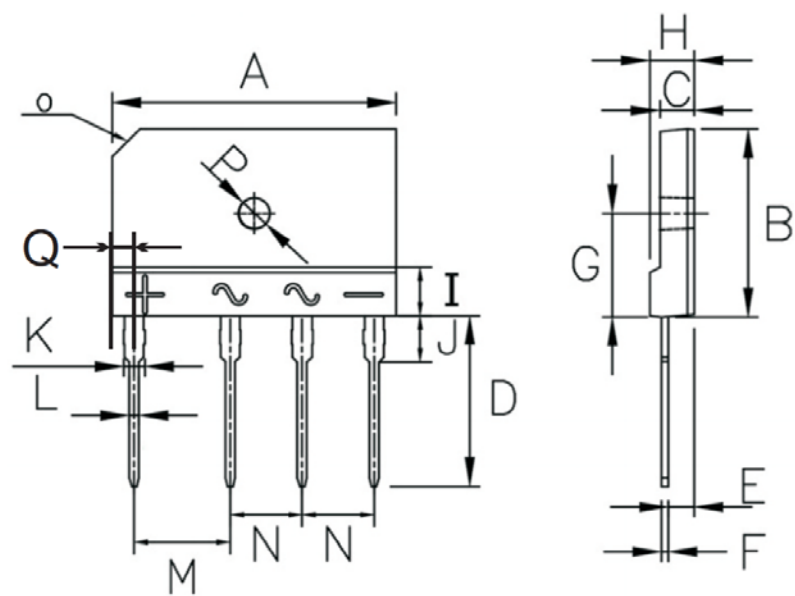
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



GBJ10005 THRU GBJ1010

Package Outline Dimensions

GBJ



Unit		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
MM	Max	30.30	20.30	3.80	18.00	2.90	0.80	11.2	4.80	5.80	4.20	2.40	1.15	10.20	7.70	C3.0	Φ3.6	2.7
	Min	29.70	19.70	3.40	17.00	2.50	0.55	10.8	4.40	4.80	3.80	2.00	0.90	9.8	7.30		Φ3.0	2.3
Mil	Max	1193	799	150	709	114	31	441	189	228	165	94	45	402	303	C118	Φ142	106
	Min	1169	776	134	669	98	22	425	173	189	150	79	35	386	287		Φ118	90

Marking information

"XXXXXXXX" = Part No.
"YYWW" = Date Code Marking
"Y" = Year (ex: 19 = 2019)
"W" = Week (ex: 09 = the 9th week of the year)
Font type: Arial

