BORN SEMICONDUCTOR

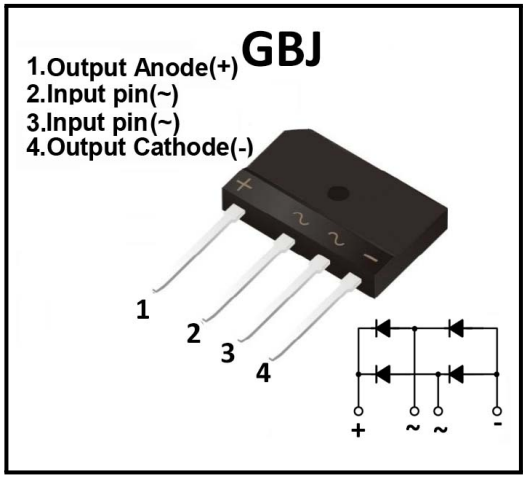
GBJ20005 - GBJ2010/G

Single Phase 20Amp Glass passivated Bridge Rectifiers

Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0
- The G suffix is uses for photoresist chip, otherwise it is a knife scraping chip

Mechanical Data



MECHANICAL DATA

- Case: Molded plastic, GBJ
- Terminals: Plated Leads Solderable perMIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version

Maximum Ratings And Electrical Characteristics (@T_A=25°C unless otherwise noted)

Symbol	Parameter	GBJ 20005	GBJ 2001	GBJ 2002	GBJ 2004	GBJ 2006	GBJ 2008	GBJ 2010	Unit
V_{RRM}	repetitive peak reverse voltage	50	100	200	400	600	800	1000	V
V_{RWM}	Working Peak Reverse Voltage	50	100	200	400	600	800	1000	
V_{RMS}	RMS voltage	35	70	140	280	420	560	700	
V_{DC}	DC blocking voltage	50	100	200	400	600	800	1000	
IF_{AV}	Average Rectified Output Current (Note 1)@T_C=90°C	20.0							A
I_{FSM}	Peak forward surge current, 8.3ms single half sine-wave	240							A
I_t^2	I_t^2 Rating for fusing (t<8.3ms)	239.04							A_S^2
V_{FM}	Forward Voltage @IF=10A per element @IF=20A	1.0 1.10							V
I_R	Peak Reverse Current@T_A=25°C at rated DC blocking voltage @T_A=125°C	5.0 500							uA
C_J	Typical junction capacitance	65							pF
$R_{\theta JA}$	Between junction and ambient, Without heatsink	22							°C/W
$R_{\theta JC}$	Between junction and case, With heatsink	1.1							
T_J	Operation Temperature Range	-55 to +150							°C
T_{STG}	Storage Temperature Range	-55 to +150							

Note:(1)Thermal resistance from junction to case per element. Unit mounted on 75x75x1.6mm aluminum plate heat sink.

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Ratings And Characteristic Curves

Figure 1: Output Current Derating Curve

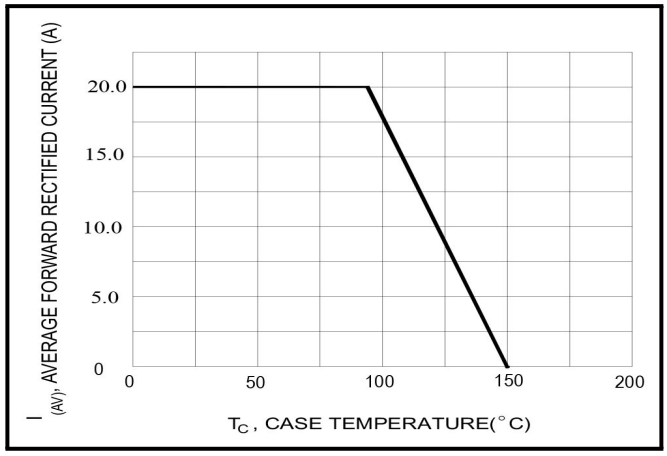


Figure 2: Typical Forward Characteristics (per leg)

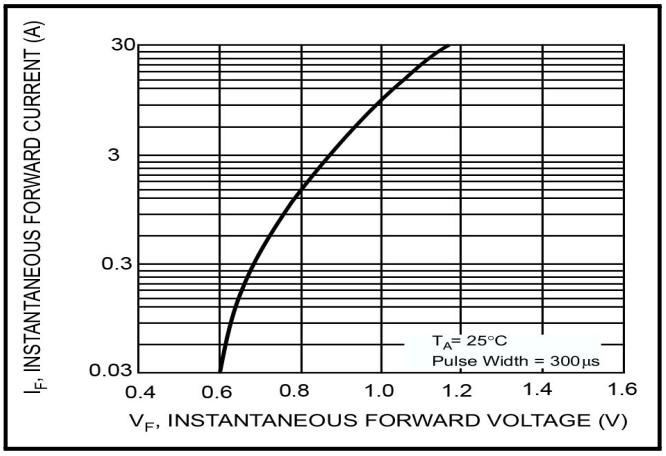


Figure 3:Maximum Peak Forward Surge Current (per leg)

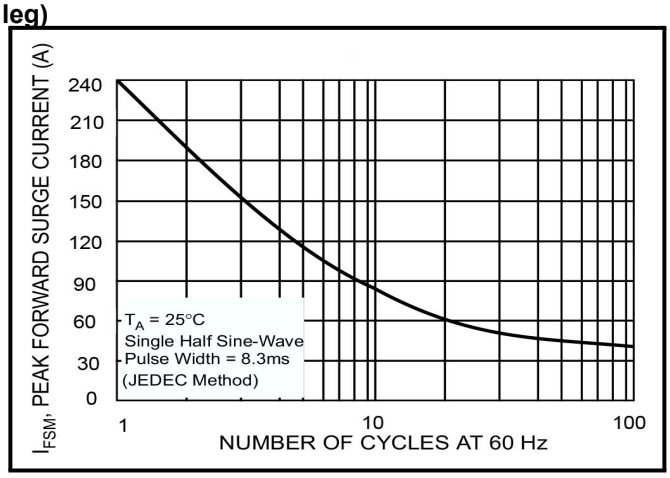


Figure 4:Typical Junction Capacitance

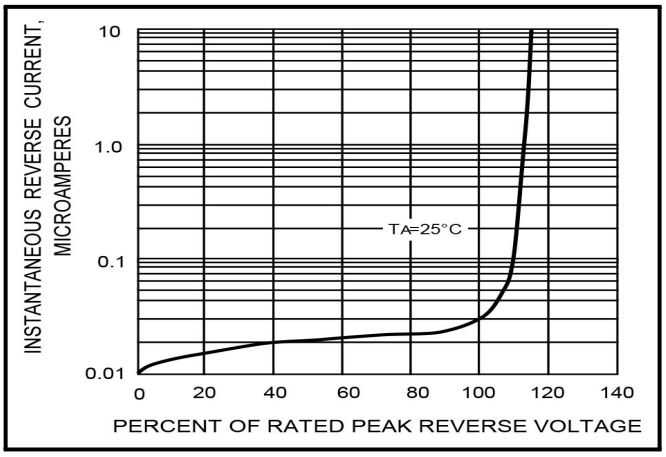
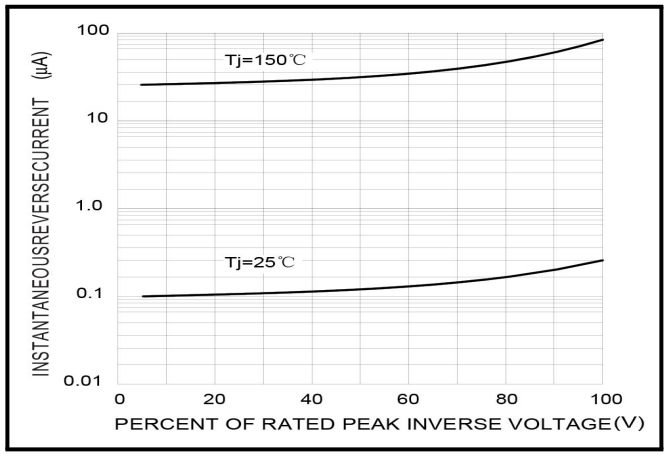


Figure 5:TYPICAL REVERSE CHARACTERISTICS



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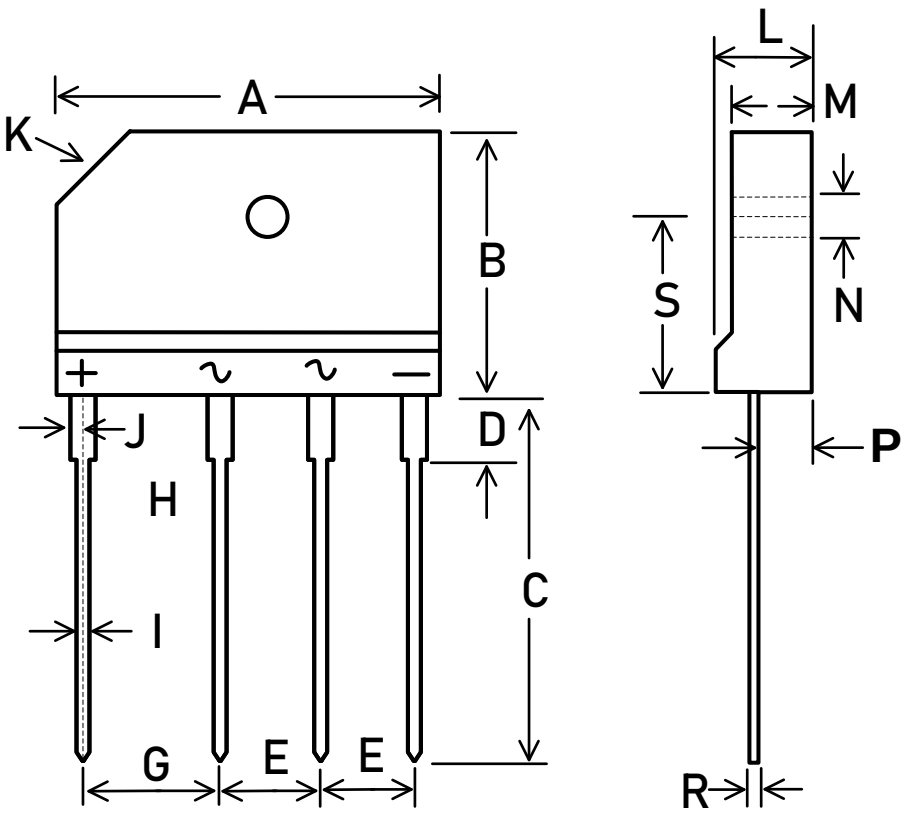
Outline Drawing –GBJ



SYMBOL	MILLIMETER	
	MIN.	MAX.
A	29.70	30.3
B	19.70	20.3
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	3.0x45°	
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

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