PowSemi

GBJ20005 Thru GBJ2010

SINGLE PHASE 20.0 AMP GLASS PASSIVATED BRIDGE RECTIFIER

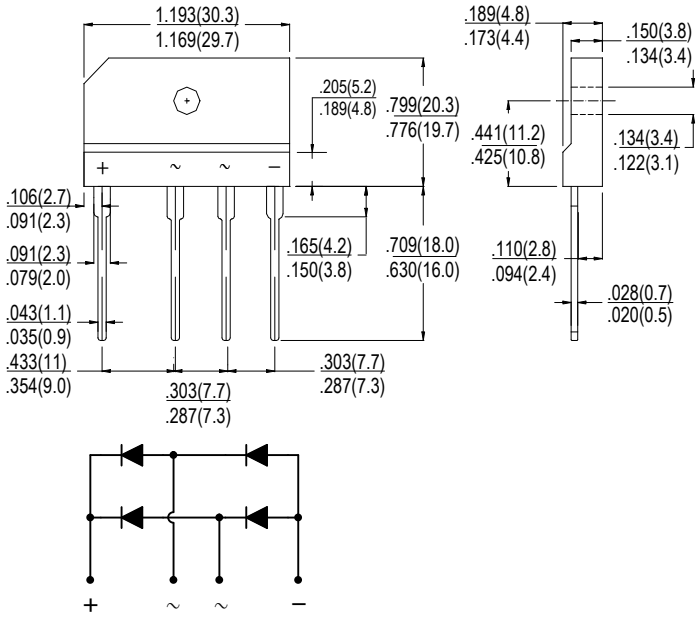
Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

Mechanical Data

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

GBJ



dimensions in inches and millimeters

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.
Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER (NOTE 1)	SYMBOL	GBJ 20005	GBJ 2001	GBJ 2002	GBJ 2004	GBJ 2006	GBJ 2008	GBJ 2010	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 (Note 2)@T_C=90℃	IF(AV)	20.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	240							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	239.04							A^2s
Forward Voltage per element @IF=10A @IF=20A	V_{FM}	1.0 1.1							V
Peak Reverse Current @T_A=25℃ At Rated DC Blocking Voltage @T_A=125℃	I_R	5.0 500							uA
Typical Junction Capacitance per leg	C_J	65							pF
Between junction and ambient, Without heatsink	$R_{\theta JA}$	22							℃/W
Between junction and case, With heatsink	$R_{\theta JC}$	1.5							℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55to+150							℃

Note:Unit case mounted on aluminum piate heatsink.

Fig. 1 Output Current Derating Curve

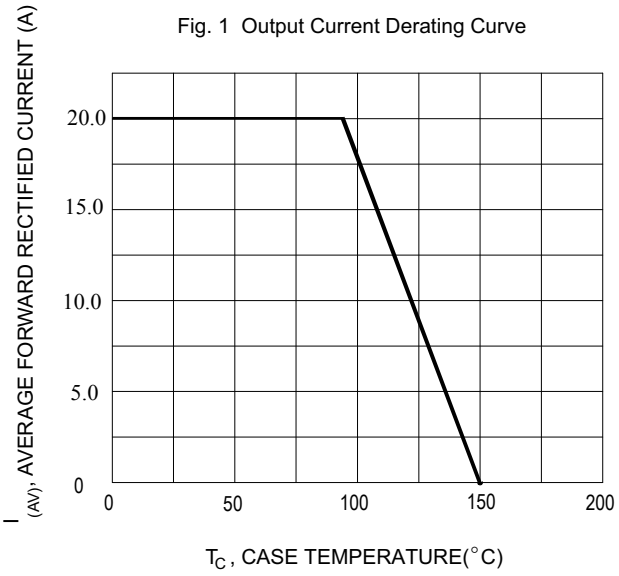


Fig. 2 Typical Forward Characteristics (per leg)

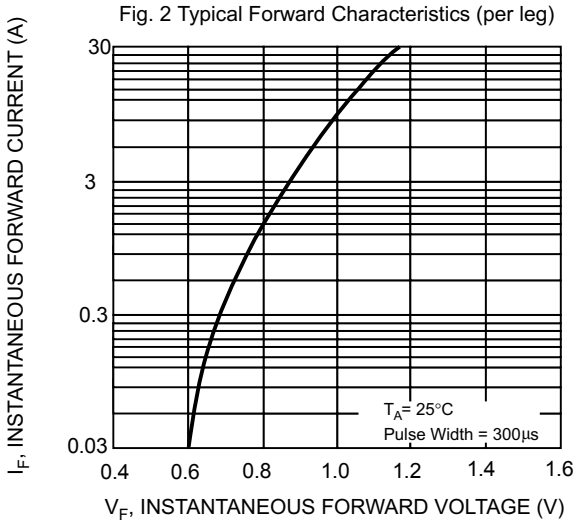


Fig. 3 Maximum Peak Forward Surge Current (per leg)

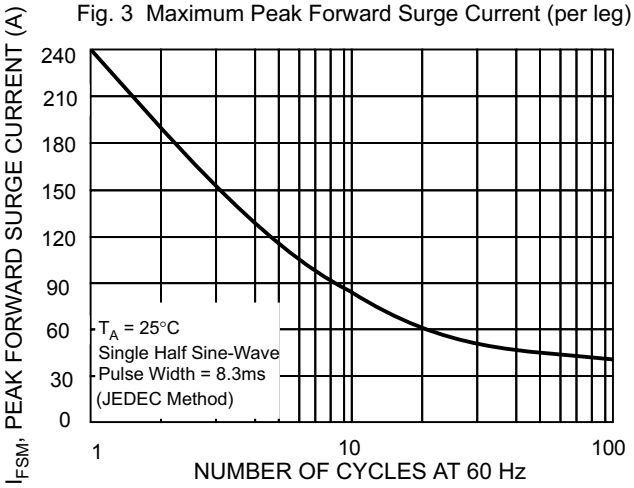


Fig. 4 Typical Junction Capacitance

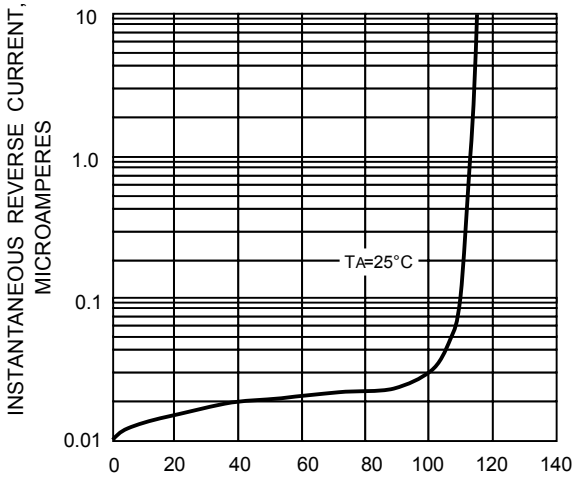


FIG.5 TYPICAL REVERSE CHARACTERISTICS