

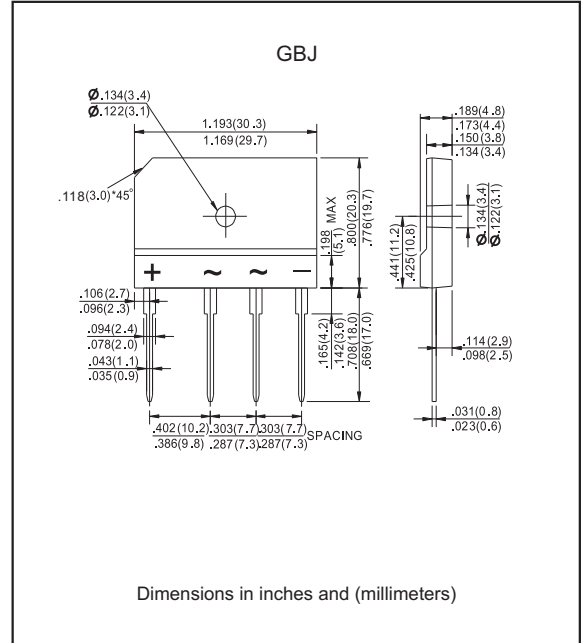
Features

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Glass passivated chip junction.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free parts, ex. GBJ1010-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, GBJ
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Maximum average forward rectified current	with heatsink Note 1	$I_{F(AV)}$			10.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			220	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM} \quad T_J = 125^\circ\text{C}$				500	
Rating for fusing	$t < 8.3 \text{ ms}$	I^2t			200	A^2s
Typical Junction capacitance Per Element	Measured at 1.0MHz and applied reverse voltage of 4.0V DC	C_J		55		pF
Typical thermal resistance	Junction to case	$R_{\theta JC}$		1.4		$^\circ\text{C/W}$
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

Note: 1. Device mounted on 150mm*150mm*1.6mm Cu plate heatsink.

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature $T_J, (^\circ\text{C})$
GBJ10005	50	35	50	1.0	-55 to +150
GBJ1001	100	70	100		
GBJ1002	200	140	200		
GBJ1004	400	280	400		
GBJ1006	600	420	600		
GBJ1008	800	560	800		
GBJ1010	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=5.0\text{A}$

Rating and characteristic curves (GBJ10005 THRU GBJ1010)

FIG.1-FORWARD CURRENT DERATING CURVE

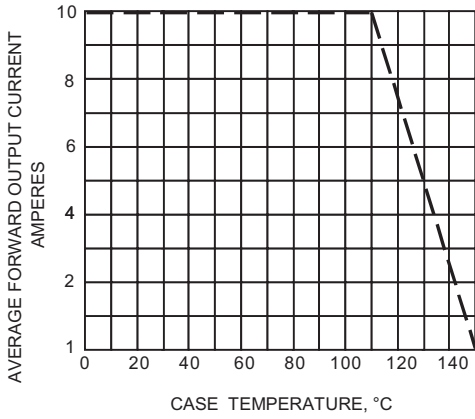


FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

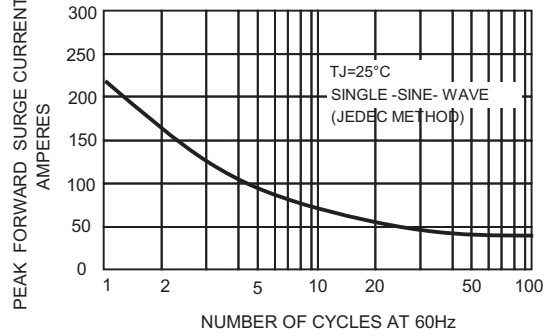


FIG.3-TYPICAL JUNCTION CAPACITANCE

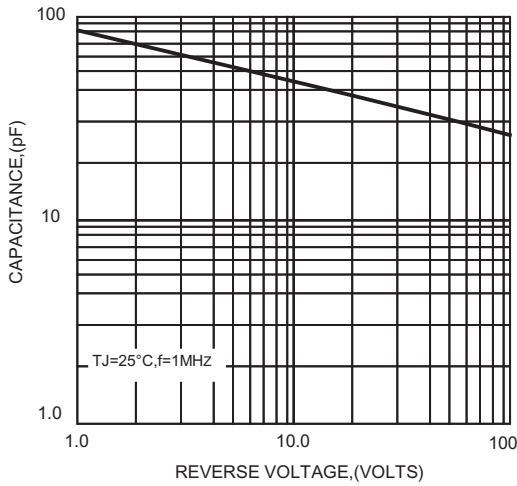


FIG.4-TYPICAL FORWARD CHARACTERISTICS

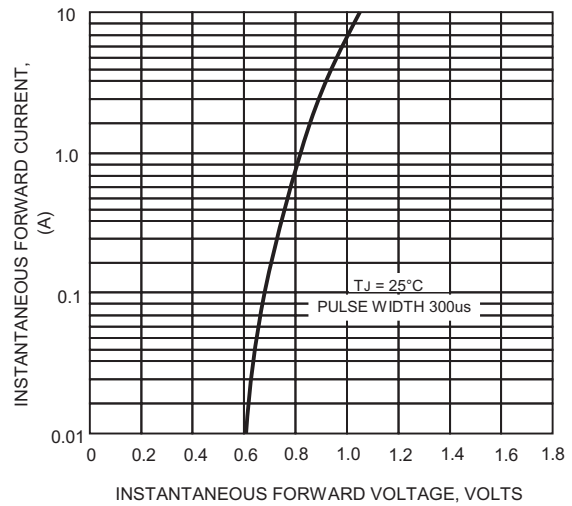
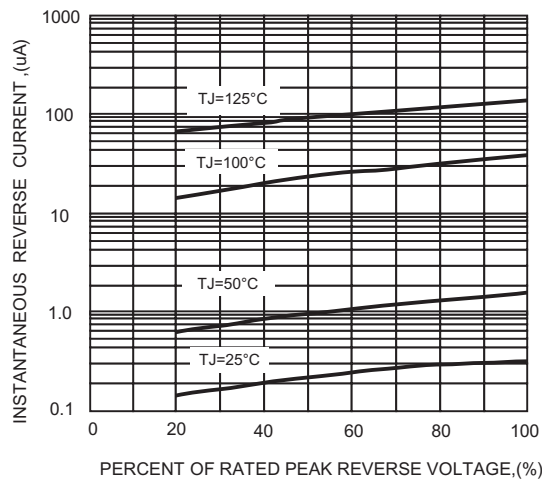
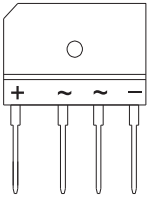
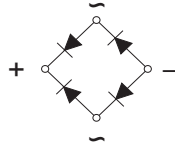


FIG.5-TYPICAL REVERSE CHARACTERISTICS



Pinning information

Simplified outline	Symbol
	

Marking

Type number	Marking code
GBJ10005	GBJ10005
GBJ1001	GBJ1001
GBJ1002	GBJ1002
GBJ1004	GBJ1004
GBJ1006	GBJ1006
GBJ1008	GBJ1008
GBJ1010	GBJ1010