

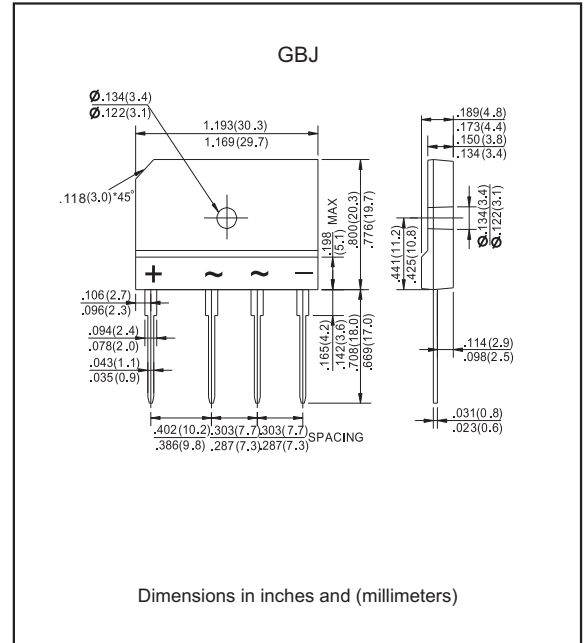
### Features

- 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. GBJ2010-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	$I_{F(AV)}$			20.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	$I_{FSM}$			260	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM} \quad T_J = 125^\circ\text{C}$				500	
Rating for fusing	$t < 8.3 \text{ ms}$	$I^2t$			280	$\text{A}^2\text{s}$
Typical Junction capacitance Per Element	Measured at 1.0MHz and applied reverse voltage of 4.0V DC	$C_J$		60		pF
Typical thermal resistance	Junction to case	$R_{\theta JC}$		0.8		$^\circ\text{C/W}$
Storage temperature		$T_{STG}$	-65		+175	$^\circ\text{C}$

Note: 1. Device mounted on 300mm\*300mm\*1.6mm Cu plate heatsink.

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J, (^\circ\text{C})$
GBJ2005	50	35	50	1.0	-55 to +150
GBJ2001	100	70	100		
GBJ2002	200	140	200		
GBJ2004	400	280	400		
GBJ2006	600	420	600		
GBJ2008	800	560	800		
GBJ2010	1000	700	1000		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=10.0\text{A}$

## Rating and characteristic curves (GBJ2005 THRU GBJ2010)

FIG.1-FORWARD CURRENT DERATING CURVE

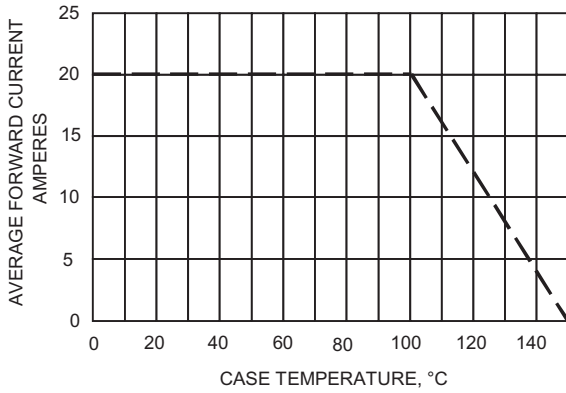


FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

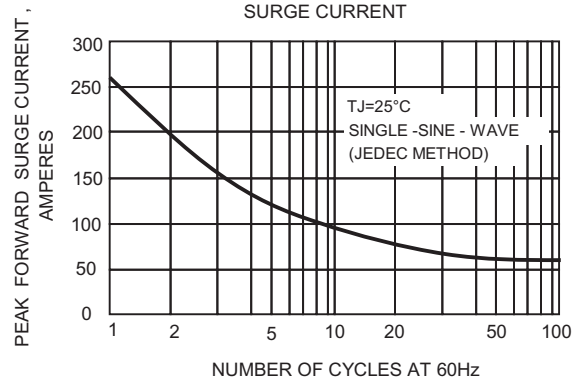


FIG.3-TYPICAL JUNCTION CAPACITANCE

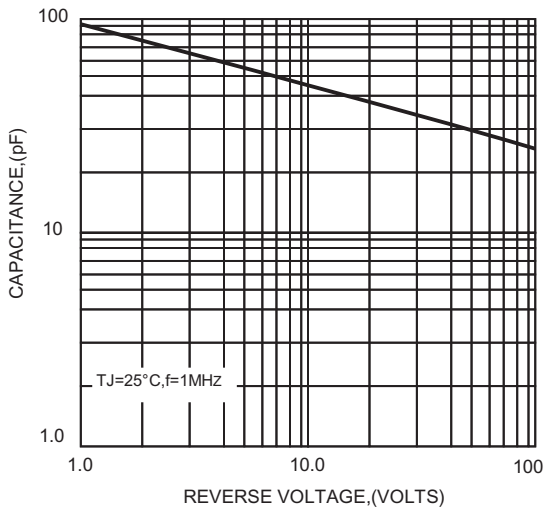


FIG.4-TYPICAL FORWARD CHARACTERISTICS

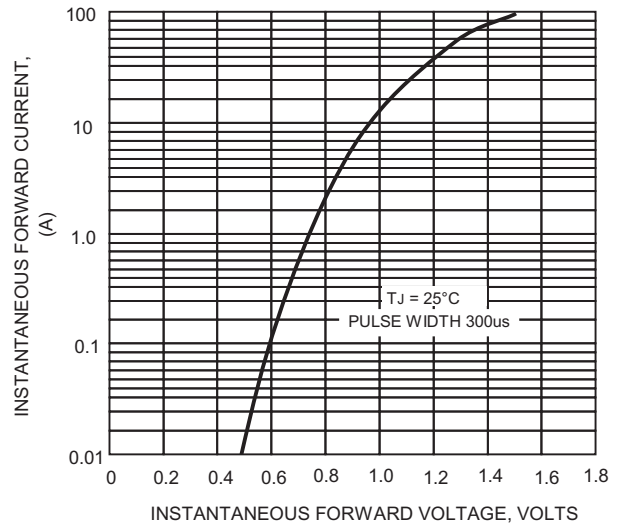
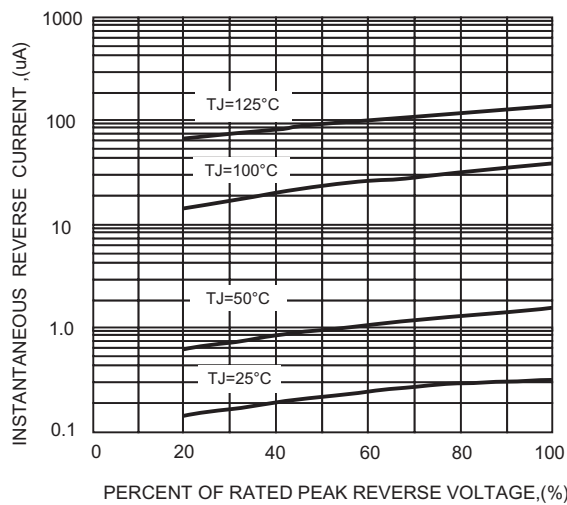
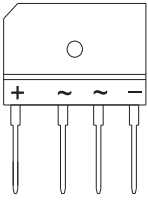
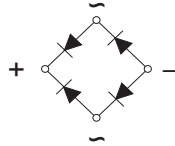


FIG.5-TYPICAL REVERSE CHARACTERISTICS



### Pinning information

Simplified outline	Symbol
	

### Marking

Type number	Marking code
GBJ20005	GBJ20005
GBJ2001	GBJ2001
GBJ2002	GBJ2002
GBJ2004	GBJ2004
GBJ2006	GBJ2006
GBJ2008	GBJ2008
GBJ2010	GBJ2010