

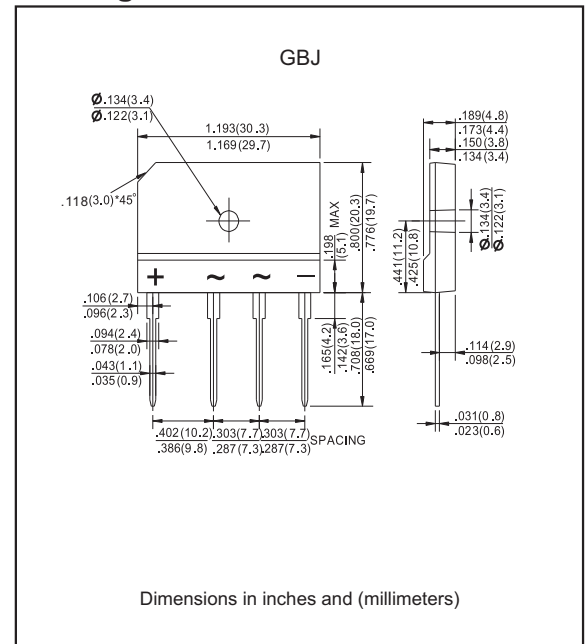
Features

- 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	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM}$ $T_J = 125^{\circ}\text{C}$				500	
Rating for fusing	$t < 8.3$ ms	I^2t			280	A^2s
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		$^{\circ}\text{C}/\text{W}$
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

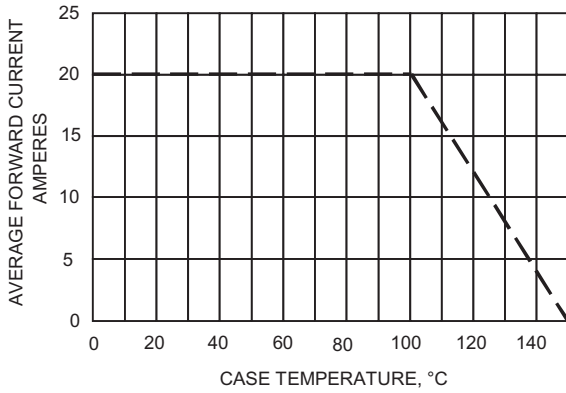


FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

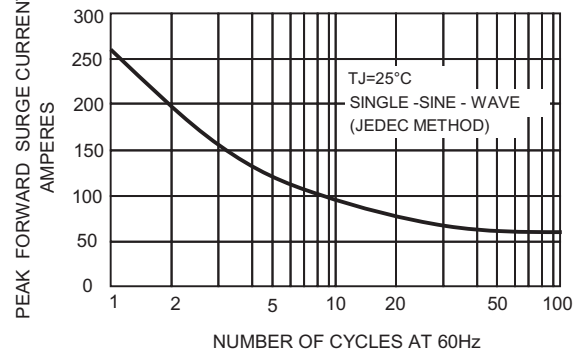


FIG.3-TYPICAL JUNCTION CAPACITANCE

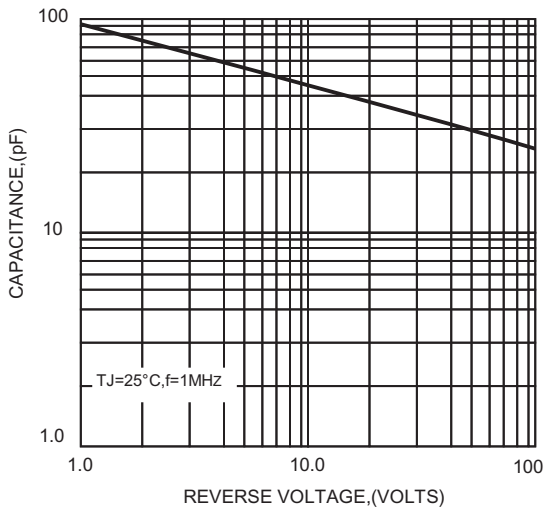


FIG.4-TYPICAL FORWARD CHARACTERISTICS

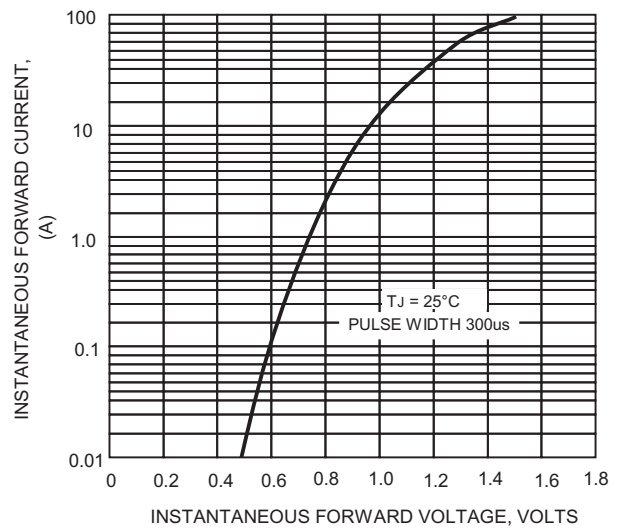
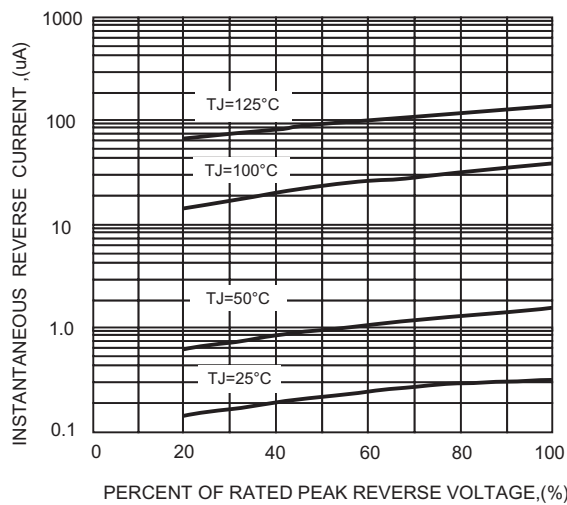
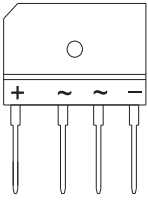
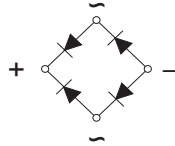


FIG.5-TYPICAL REVERSE CHARACTERISTICS



Pinning information

Simplified outline	Symbol
	

Marking

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