

# GBU10A THRU GBU10M

## 10.0A Glass Passivated Single-Phase Bridge Rectifiers-50-1000V

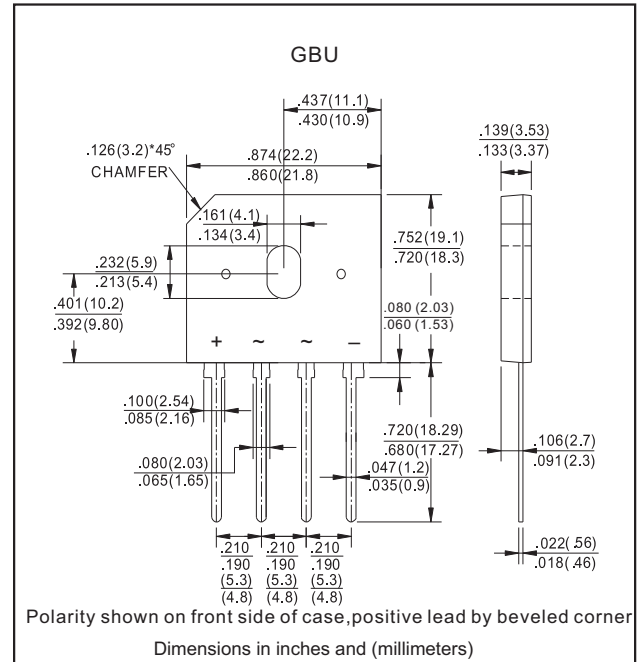
### Features

- Surge overload ratings to 200 amperes peak
- Recommended for non-automatic applications
- Ideal for & save space on printed circuit board
- Applicable for automatic insertion
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product
- Glass passivated chip junctions
- Lead-free parts meet RoHS requirements
- Suffix "-H" indicates Halogen free parts, ex. GBU10A-H

### Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, GBU
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 4.00 gram

### Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	(with heatsink Note 1) at $T_c=100^{\circ}\text{C}$ (without heatsink)	$I_o$			10.0 3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			200	A
Reverse current per diode	$V_R = V_{RRM} T_J = 25^{\circ}\text{C}$	$I_R$			10.0	$\mu\text{A}$
	$V_R = V_{RRM} T_J = 125^{\circ}\text{C}$				500	
$I^2t$ Rating for fusing	$t < 8.3 \text{ ms}$	$I^2t$			200	$\text{A}^2\text{s}$
Typical junction capacitance per diode	Measured at 1.0MHz and applied reverse voltage of 4.0 VDC	$C_J$		70		$\text{pF}$
Typical thermal resistance	Junction to case	$R_{\theta JC}$		2.0		$^{\circ}\text{C/W}$
Storage temperature		$T_{STG}$	-55		+150	$^{\circ}\text{C}$

Note 1. Device mounted on 100mm\*100mm\*1.6mm Cu plate heatsink.

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J, (^{\circ}\text{C})$
GBU10A	50	35	50	1.10	-55 to +150
GBU10B	100	70	100		
GBU10D	200	140	200		
GBU10G	400	280	400		
GBU10J	600	420	600		
GBU10K	800	560	800		
GBU10M	1000	700	1000		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

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

# Rating and characteristic curves (GBU10A THRU GBU10M)

Fig. 1 - Forward Current Derating Curve

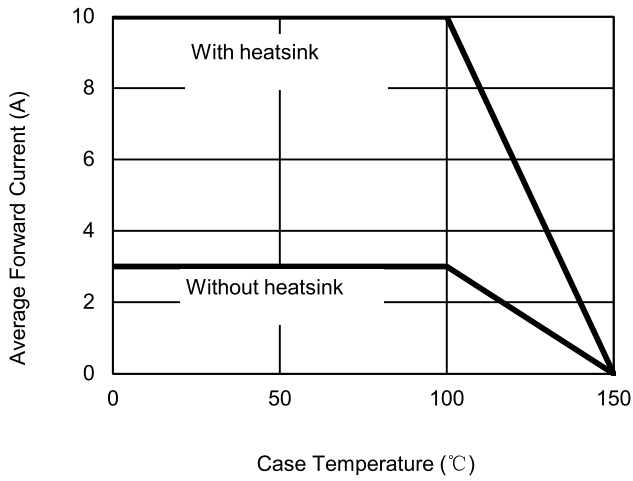


Fig. 2 - Maximum Non-Repetitive Surge Current

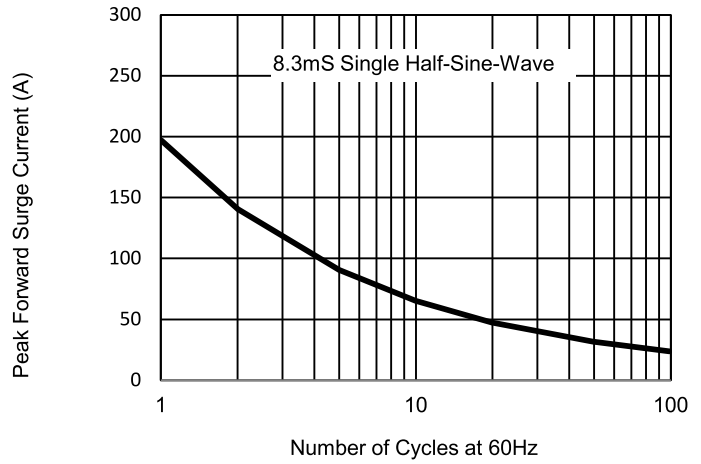


Fig. 3 - Typical Reverse Characteristics

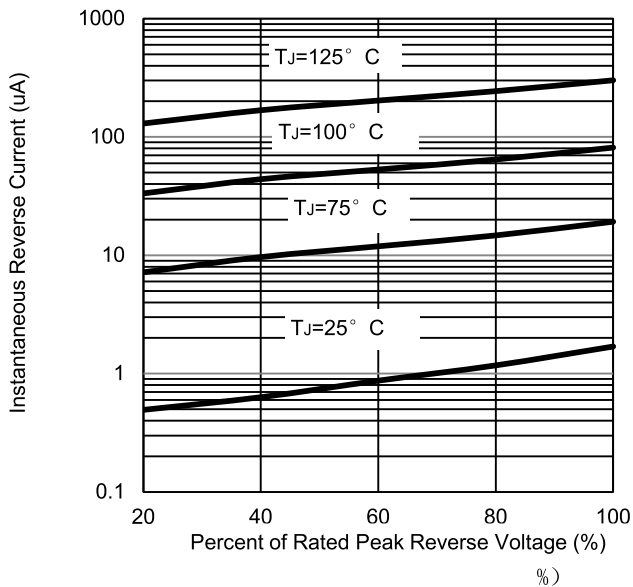


Fig. 4 - Typical Forward Characteristics

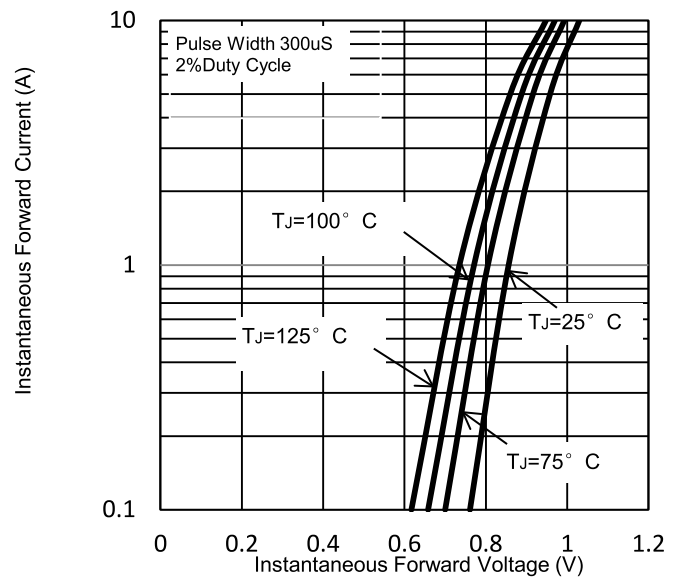
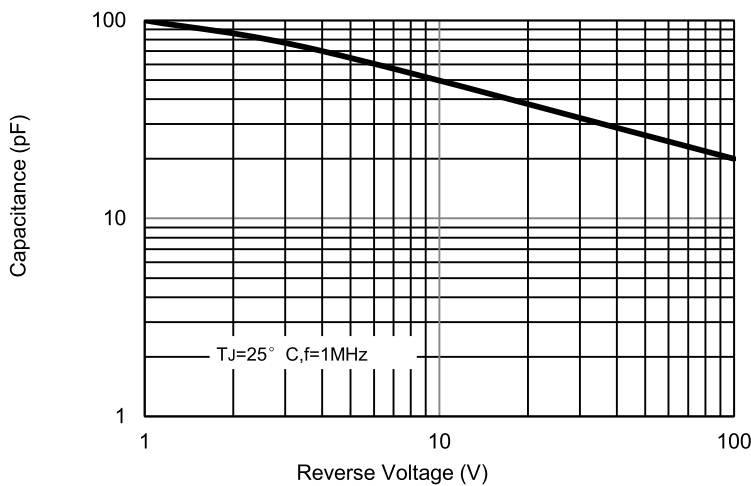
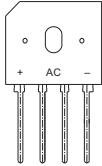
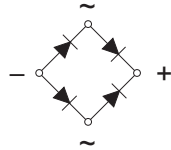


Fig. 5 - Typical Junction Capacitance



# GBU10A THRU GBU10M

## Pinning information

Simplified outline	Symbol
	

## Marking

Type number	Marking code
GBU10A	GBU10A
GBU10B	GBU10B
GBU10D	GBU10D
GBU10G	GBU10G
GBU10J	GBU10J
GBU10K	GBU10K
GBU10M	GBU10M

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