

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

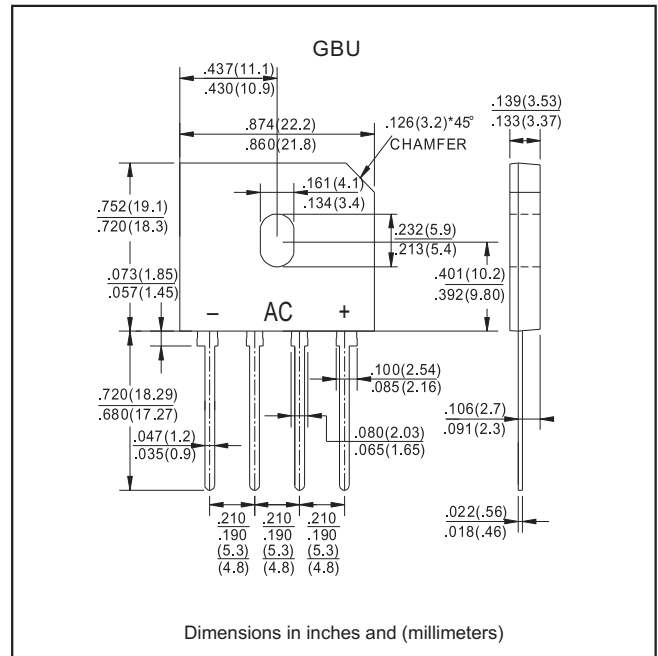
Features

- 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.

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

Package outline

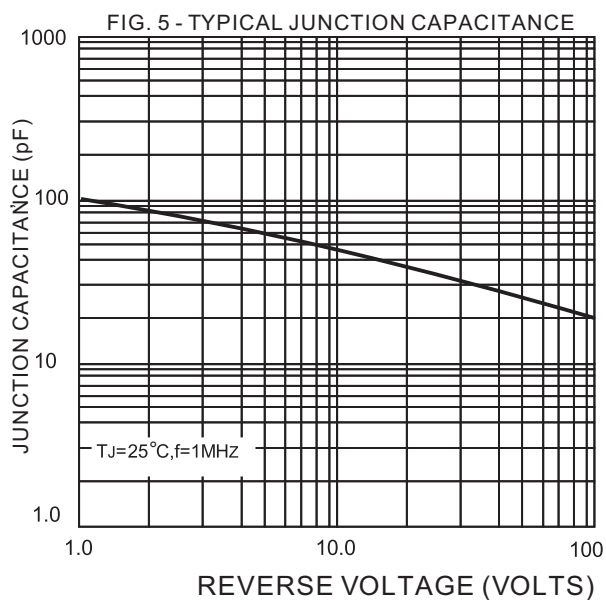
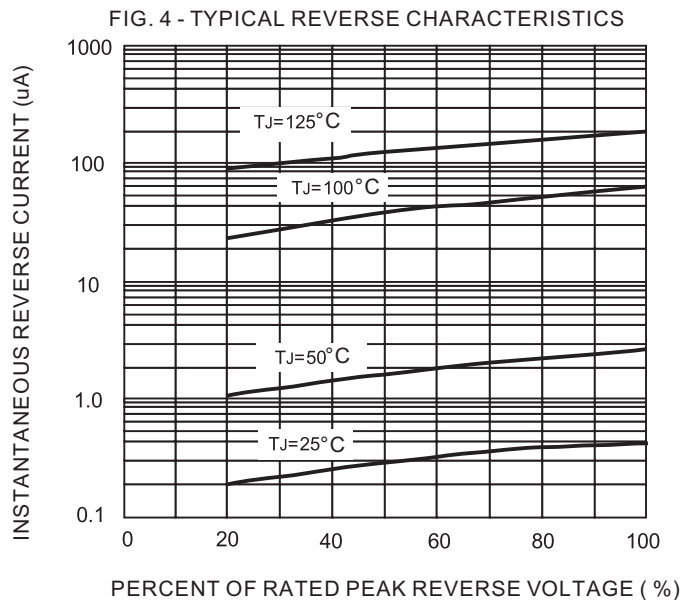
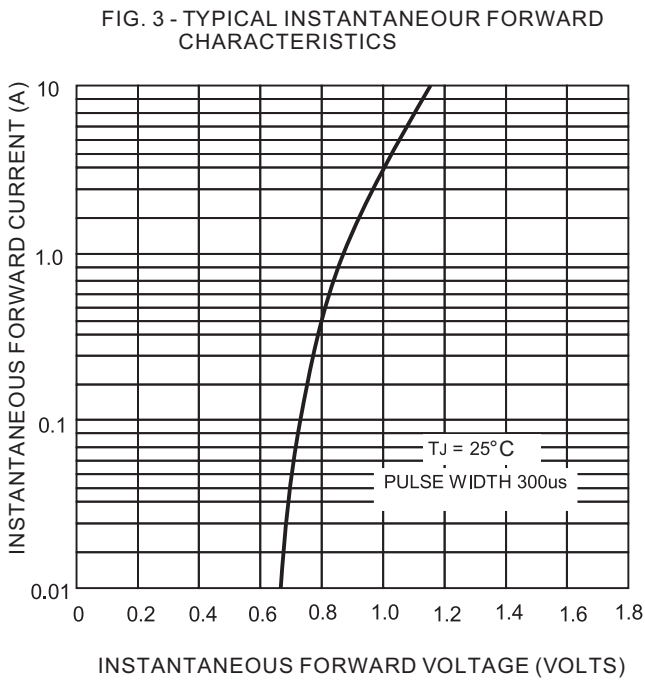
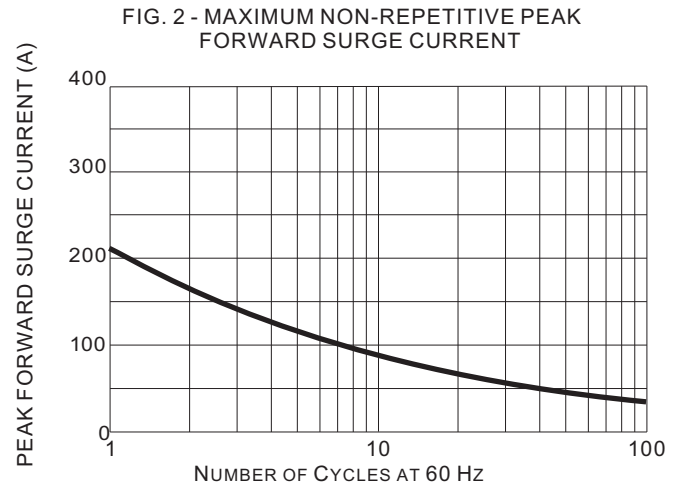
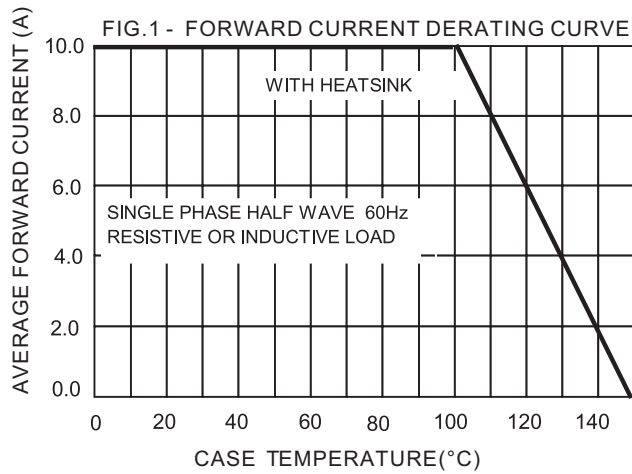


Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

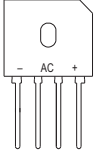
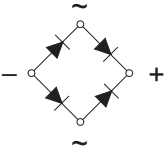
TYPE NUMBER	SYMBOL	GBU 10005	GBU 1001	GBU 1002	GBU 1004	GBU 1006	GBU 1008	GBU 1010	UNITS
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V _{RWM}								
DC Blocking Voltage	V _{DC}								
RMS Reverse Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)@T _C =90°C	I _{F(AV)}	10.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	210							A
Forward Voltage per element @I _F =5.0A @I _F =10.0A	V _{FM}	1.1 1.2							V
Peak Reverse Current At Rated DC Blocking Voltage @T _J =25°C T _J =125°C	I _R	5.0 200							uA
I ² t Rating for fusing (t <8.3ms)	I ² t	183							A ² s
Dielectric Strength	V _{ids}	2500							V
The proposed installation torque Max torque	T _{or}	5.0 8.0							Kgf.cm
Typical Junction Capacitance (Note 2)	C _J	72							pF
Typical Thermal Resistance	R _{θJA}	22							°C/W
	R _{θJC}	4.0							
	R _{θJL}	5.0							
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to +150							°C

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Rating and characteristic curves



Pinning information

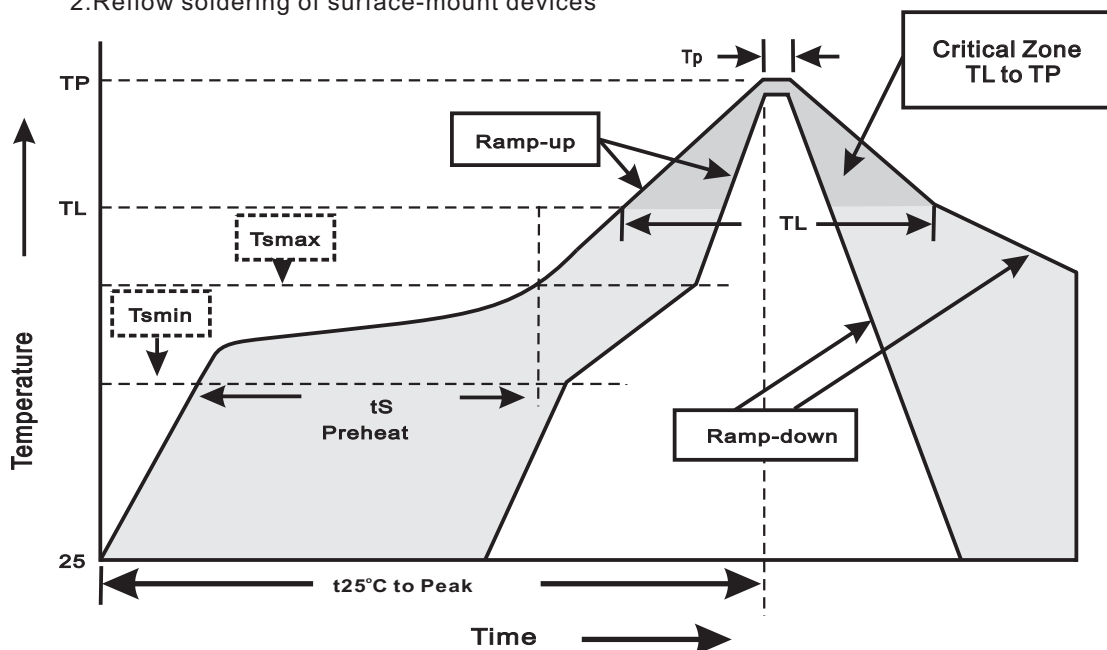
Simplified outline	Symbol
	

Marking

Type number	Marking code
GBU10005	GBU10005
GBU1001	GBU1001
GBU1002	GBU1002
GBU1004	GBU1004
GBU1006	GBU1006
GBU1008	GBU1008
GBU1010	GBU1010

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{min}) -Temperature Max(T _{max}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{max} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes