

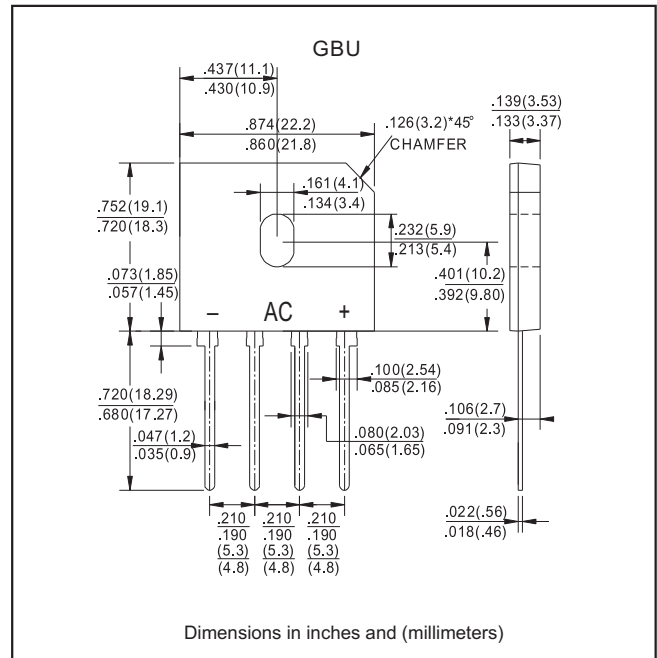
### Features

- 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

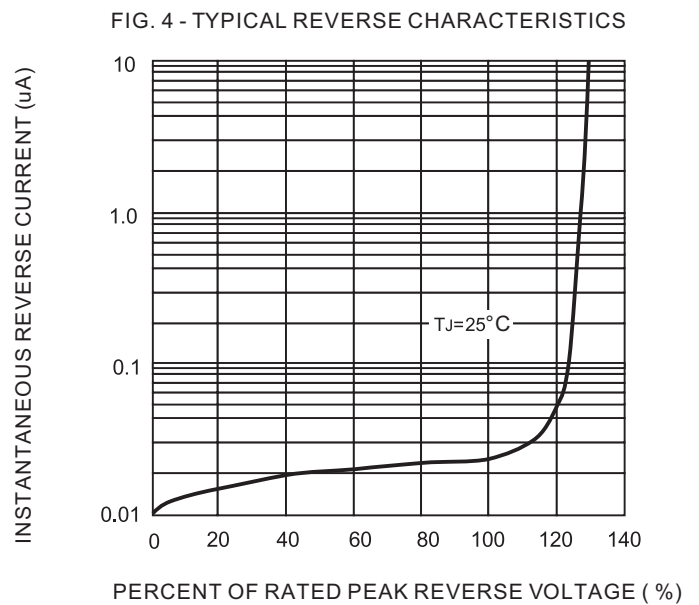
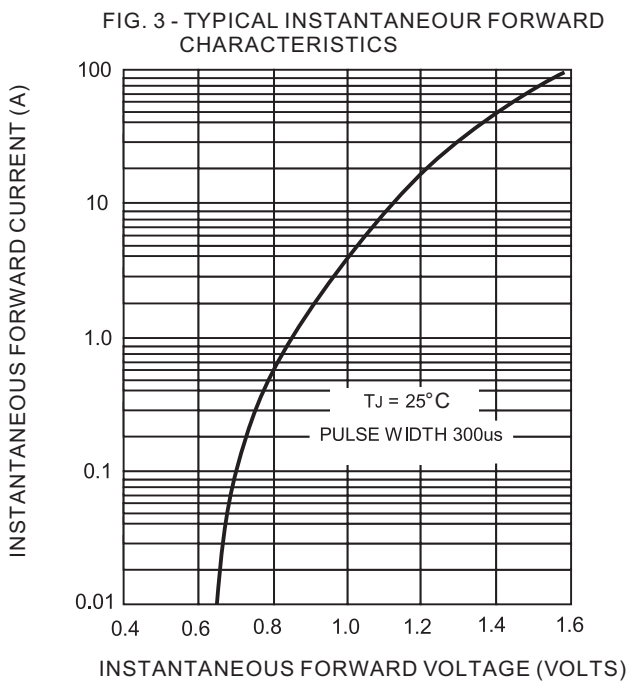
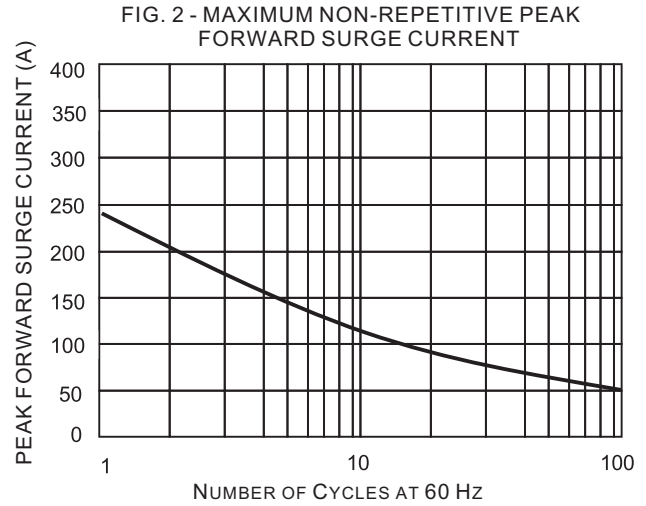
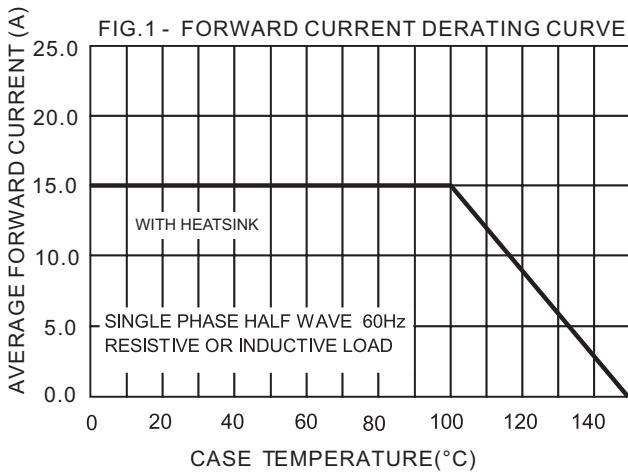


### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

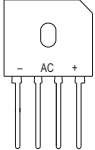
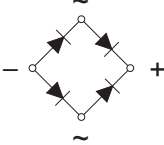
TYPE NUMBER	SYMBOL	GBU 15005	GBU 1501	GBU 1502	GBU 1504	GBU 1506	GBU 1508	GBU 1510	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$								V
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	
DC Blocking Voltage	$V_{DC}$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)@ $T_c=90^\circ\text{C}$	$I_{F(AV)}$	15.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	240							A
Forward Voltage per element @ $I_F=7.5\text{A}$ @ $I_F=15.0\text{A}$	$V_{FM}$	1.1 1.2							V
Peak Reverse Current At Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$	5.0 200							$\mu\text{A}$
$I^2t$ Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	239							$\text{A}^2\text{s}$
Dielectric Strength	$V_{ids}$	2500							V
The proposed installation torque Max torque	Tor	5.0 8.0							Kgf.cm
Typical Junction Capacitance (Note 2)	$C_J$	72							pF
Typical Thermal Resistance	$R_{\theta JA}$	22							$^\circ\text{C/W}$
	$R_{\theta JC}$	4.0							
	$R_{\theta JL}$	5.0							
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

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

**Rating and characteristic curves**



**Pinning information**

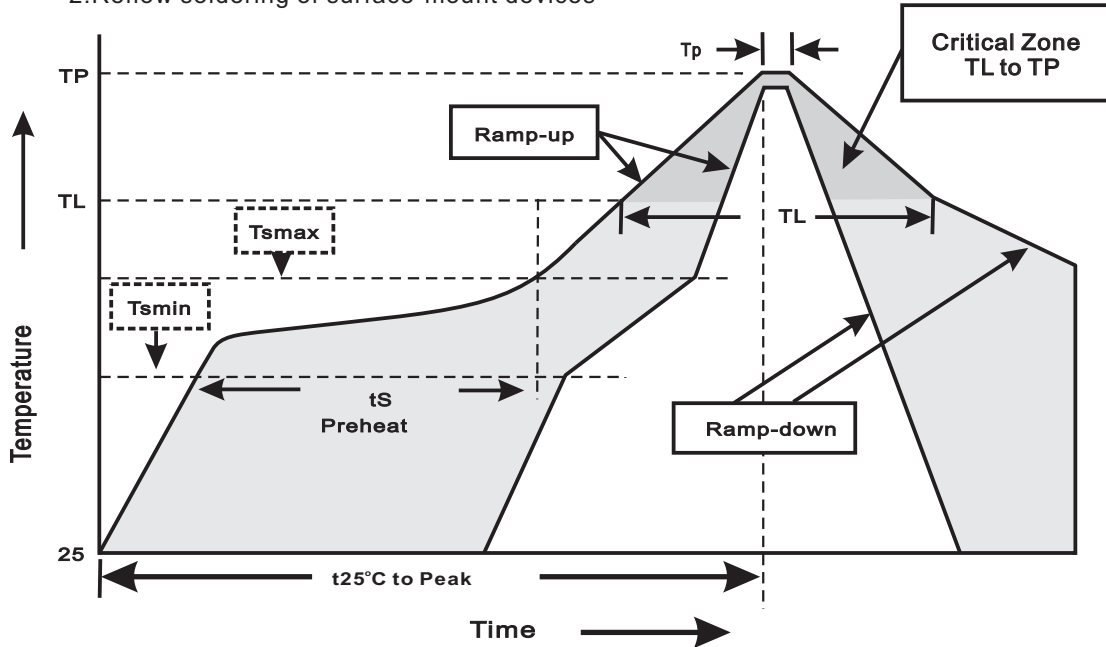
Simplified outline	Symbol
	

**Marking**

Type number	Marking code
GBU15005	GBU15005
GBU1501	GBU1501
GBU1502	GBU1502
GBU1504	GBU1504
GBU1506	GBU1506
GBU1508	GBU1508
GBU1510	GBU1510

**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(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes