

## Bridge Rectifier

### Features

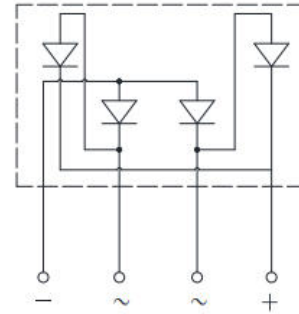
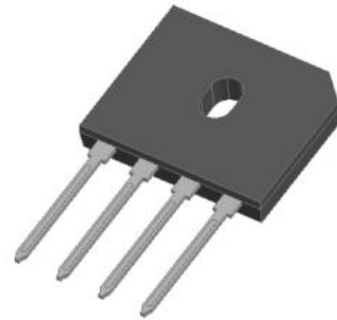
- UL recognition, file #E230084
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, power supply, switching mode power supply, adapter, audio equipment, and home appliances applications.

### Mechanical Data

- **Package:** GBU  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body



### ■ Maximum Ratings ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBU4005A	GBU401A	GBU402A	GBU404A	GBU406A	GBU408A	GBU410A
Device marking code			GBU4005A	GBU401A	GBU402A	GBU404A	GBU406A	GBU408A	GBU410A
Repetitive peak reverse voltage	$V_{RRM}$	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load	With heatsink $T_c=108^{\circ}\text{C}$	IO	A	4.0					
	Without heatsink $T_a=25^{\circ}\text{C}$			2.3					
Surge(non-repetitive)forward current @60Hz half sine wave, 1 cycle, $T_j=25^{\circ}\text{C}$	IFSM	A	150						
Current squared time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^{\circ}\text{C}$ , Rating of per diode	$I^2t$	$\text{A}^2\text{s}$	93						
Storage temperature	$T_{stg}$	$^{\circ}\text{C}$	-55 ~+150						
Junction temperature	$T_j$	$^{\circ}\text{C}$	-55 ~+150						
Dielectric strength @ terminals to case, AC 1 minute	$V_{dis}$	KV	2						
Mounting torque @ recommend torque: 5kg · cm	Tor	kg · cm	8						

### ■ Electrical Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

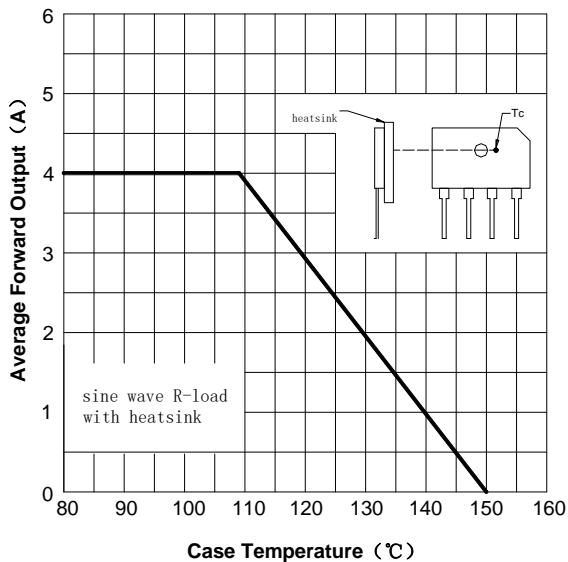
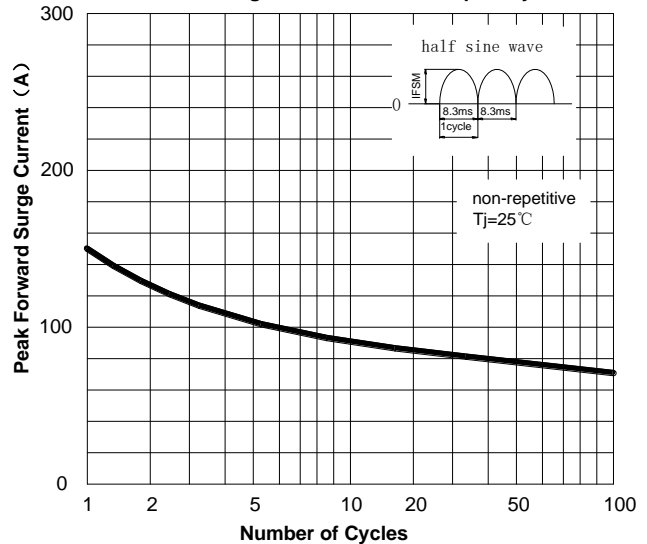
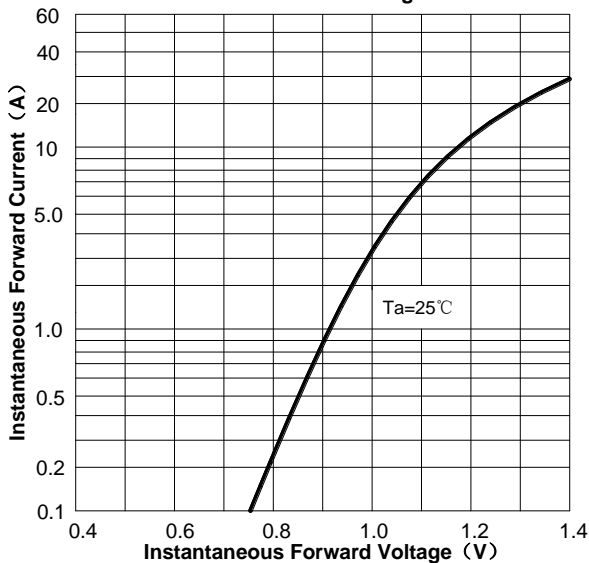
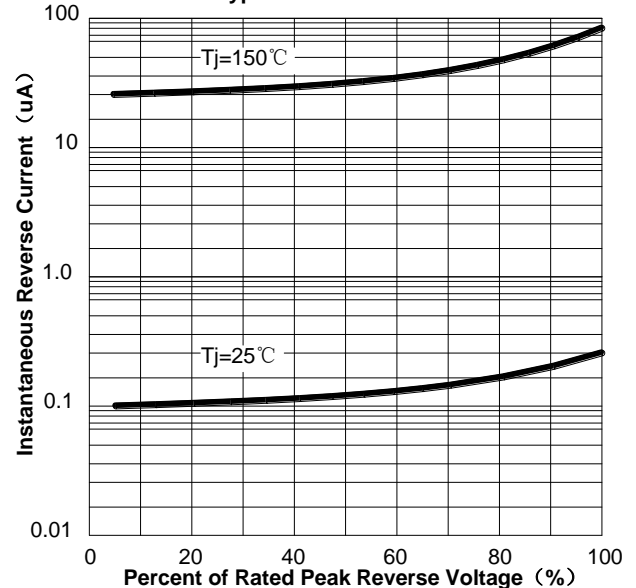
PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GBU4005A	GBU401A	GBU402A	GBU404A	GBU406A	GBU408A	GBU410A
Maximum instantaneous forward voltage drop per diode	$V_F$	V	$I_{FM}=2.0\text{A}$	1.00						
Maximum DC reverse current at rated DC blocking voltage per diode	$I_{RRM}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	5						

**Thermal Characteristics** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

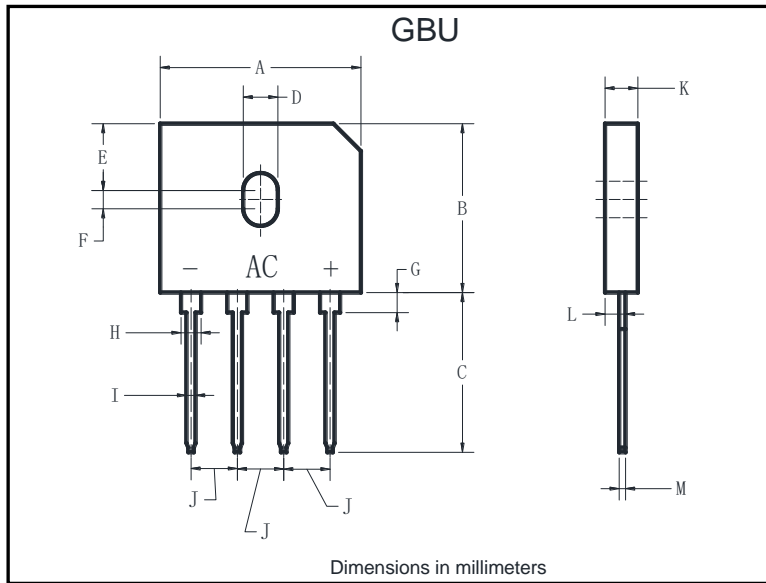
PARAMETER		SYMBOL	UNIT	GBU4005A	GBU401A	GBU402A	GBU404A	GBU406A	GBU408A	GBU410A
Thermal Resistance	Between junction and ambient, Without heatsink	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	26.0						
	Between junction and case, With heatsink	$R_{\theta J-C}$		5.5						

**Ordering Information (Example)**

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GBU4005A THRU GBU410A	B1	Approximate 3.96	20	1000	2000	TUBE

**Characteristics (Typical)**
**FIG1:  $I_o$ - $T_c$  Curve**

**FIG2: Surge Forward Current Capability**

**FIG3: Forward Voltage**

**FIG4: Typical Reverse Characteristics**


■ **Outline Dimensions**



GBU		
Dim	Min	Max
A	21.80	22.30
B	18.30	18.80
C	17.50	18.00
D	3.50	4.10
E	7.40	7.90
F	1.65	2.16
G	1.91	2.54
H	2.06	2.54
I	1.02	1.27
J	4.83	5.33
K	3.30	3.56
L	2.40	2.66
M	0.46	0.56

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