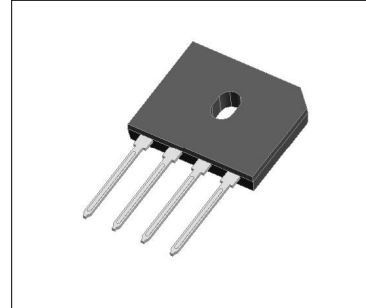


Bridge Rectifiers

GBU10005—GBU1010

Features

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Glass passivated chip junction
- ◆ High forward surge capability



Mechanical Data

Case: GBU Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 260°C/10 seconds

Mounting Position: Any

Maximum Ratings & Electrical Characteristics

Ratings at $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	GBU 10005	GBU 1001	GBU 1002	GBU 1004	GBU 1006	GBU 1008	GBU 1010	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average forward rectified output current $T_C = 80^\circ\text{C}$ With heatsink $T_A = 25^\circ\text{C}$ Without heatsink	$I_{F(AV)}$	10.0 3.2							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175							A
Rating for fusig ($t < 8.3\text{ms}$)	I^2t	127							A^2sec
Maximum instantaneous forward voltage dropper leg at 5A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_J = 25^\circ\text{C}$	5.0						IR	uA
	$T_J = 125^\circ\text{C}$	500							

Thermal Characteristics

Typical thermal resistance per leg (Note 1)	$R_{\theta JA(2)}$	25	°C/W
	$R_{\theta JL(1)(3)}$	2.3	
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Note

- (1) Unit case mounted on aluminum plate heatsink
- (2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

Bridge Rectifiers

GBU10005—GBU1010

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

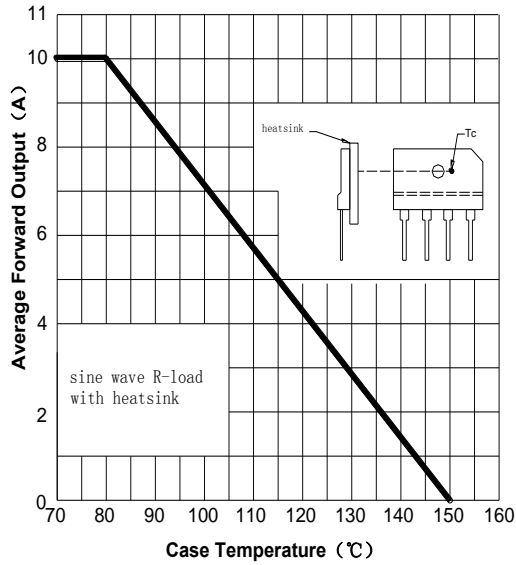


Fig.1-Forward Current Derating Curve

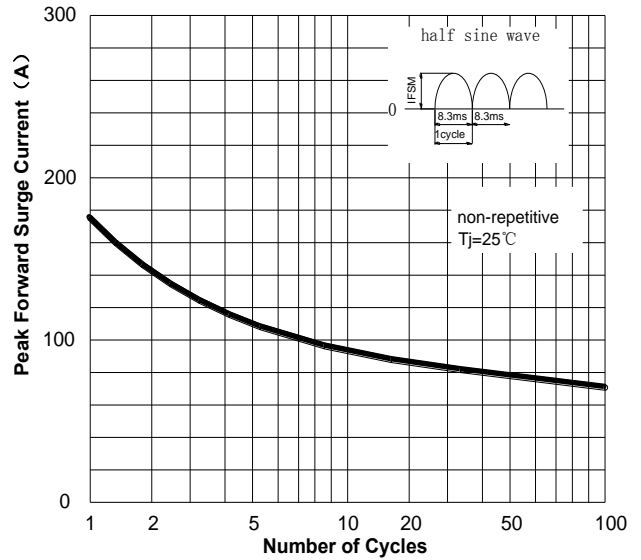


FIG2: Surge Forward Current Capability

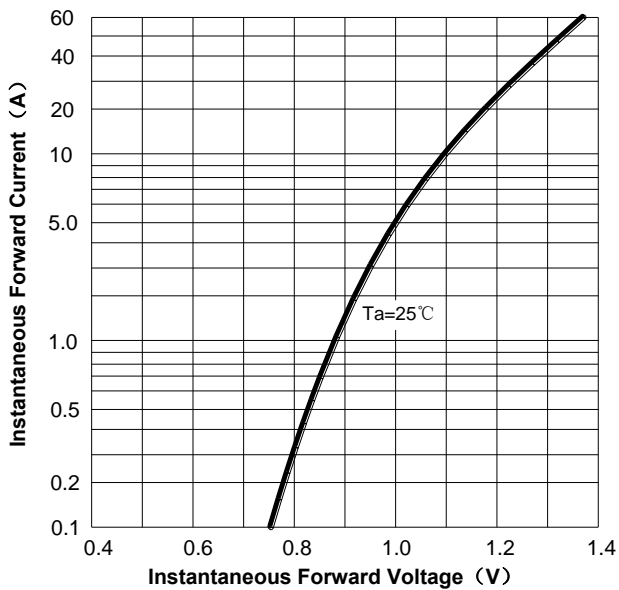


Fig.3- Typical Forward Voltage Characteristic

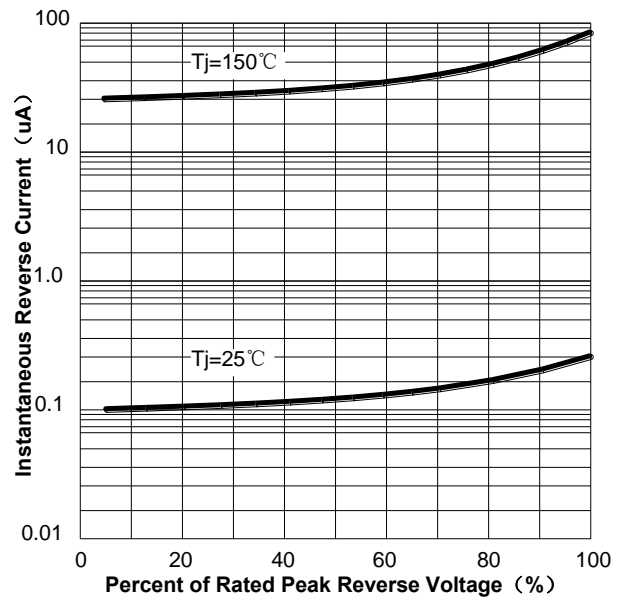
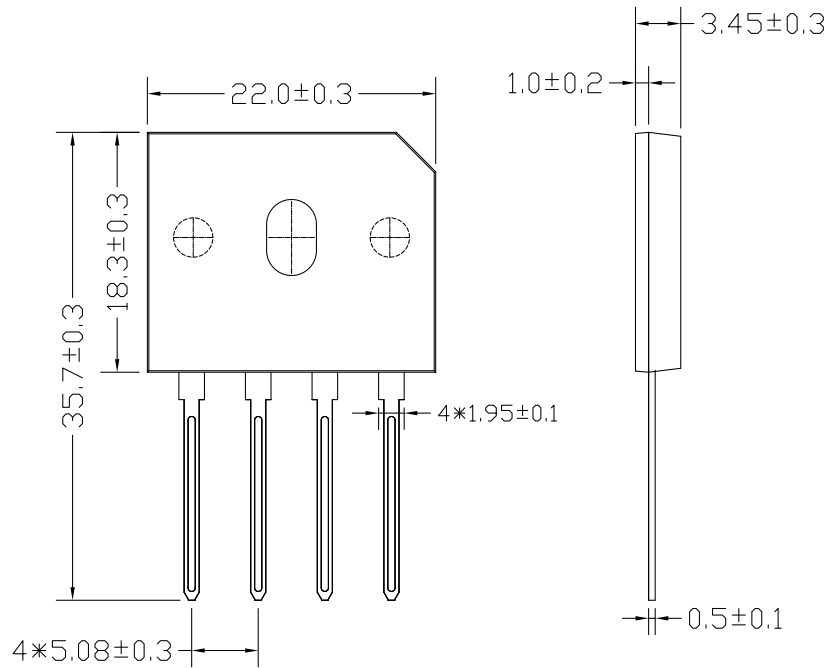


FIG4: Typical Reverse Characteristics

Bridge Rectifiers

GBU10005—GBU1010

Package Outline Dimensions(unit:mm)



Ordering Information

Part No.	Marking	Package
GBU10005	GBU10005	GBU
GBU1001	GBU1001	GBU
GBU1002	GBU1002	GBU
GBU1004	GBU1004	GBU
GBU1006	GBU1006	GBU
GBU1008	GBU1008	GBU
GBU1010	GBU1010	GBU