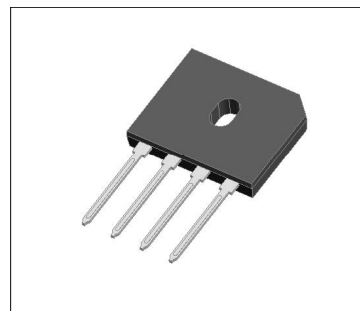


# Bridge Rectifiers

# GBU8005—GBU810

## 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 TA = 25°C unless otherwise specified

Parameter	Symbol	GBU 8005	GBU 801	GBU 802	GBU 804	GBU 806	GBU 808	GBU 810	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 $T_C = 60\text{ }^\circ\text{C}$ (1) $T_A = 40\text{ }^\circ\text{C}$ (2)	$I_{F(AV)}$	8.0					3.9			A	
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150									A
Rating for fusig (t<8.3ms)	$I^2t$	93.4									A <sup>2</sup> sec
Maximum instantaneous forward voltage dropper leg at 3A	VF	1.0									V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_J = 25\text{ }^\circ\text{C}$	5.0									uA
	$T_J = 125\text{ }^\circ\text{C}$	500									

## Thermal Characteristics

Typical thermal resistance per leg (Note 1)	$R_{\theta JA(2)}$	20	°C/W
	$R_{\theta JL(1)(3)}$	4.0	
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

# GBU8005—GBU810

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

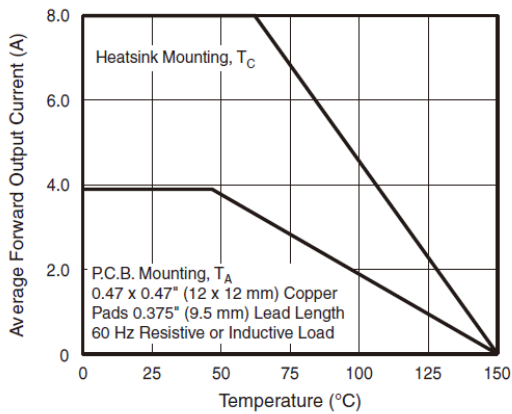


Figure 1. Derating Curve Output Rectified Current

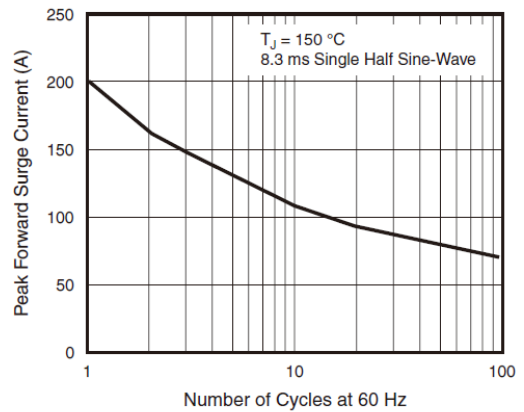


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

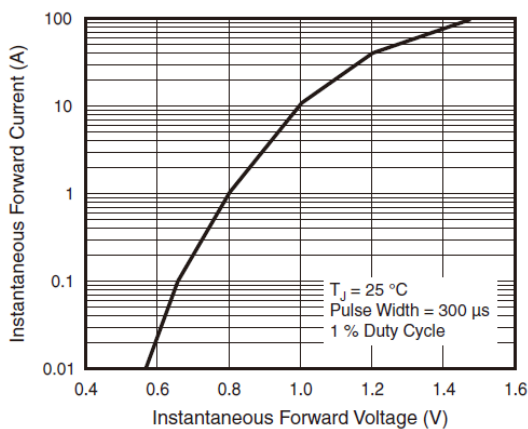


Figure 3. Typical Forward Characteristics Per Diode

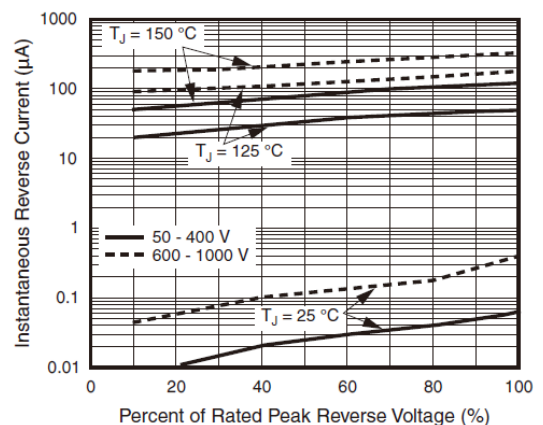


Figure 4. Typical Reverse Leakage Characteristics Per Diode

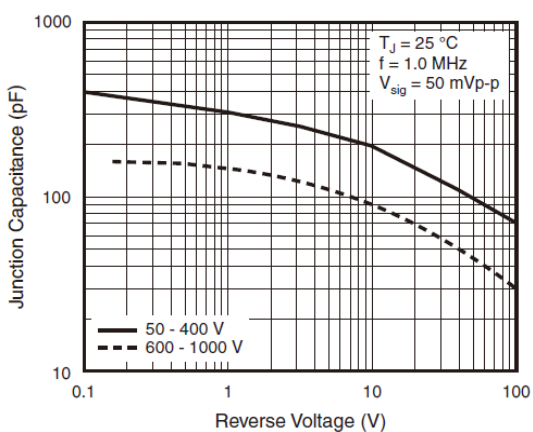


Figure 5. Typical Junction Capacitance Per Diode

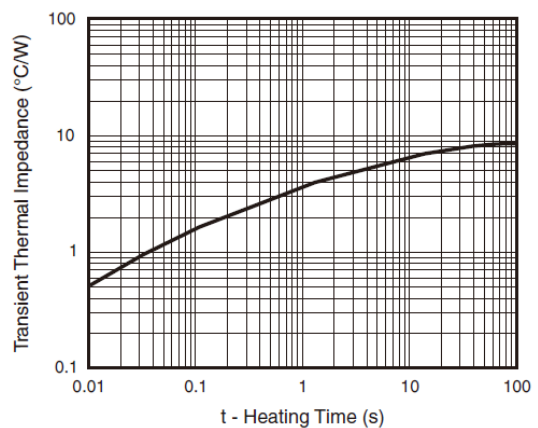
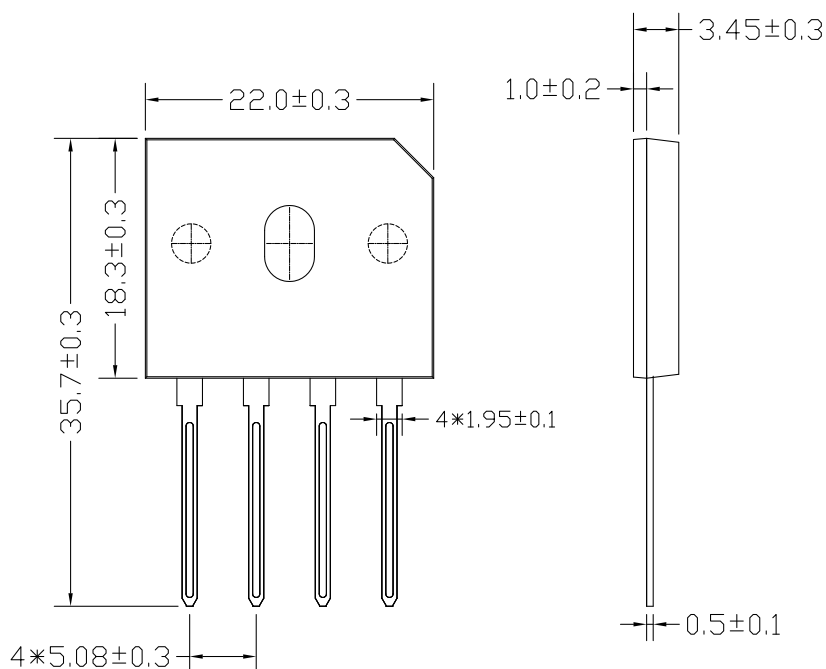


Figure 6. Typical Transient Thermal Impedance Per Diode

## Bridge Rectifiers

## GBU8005—GBU810

### Package Outline Dimensions(unit:mm)



### Ordering Information

Part No.	Marking	Package
GBU8005	GBU8005	GBU
GBU801	GBU801	GBU
GBU802	GBU802	GBU
GBU804	GBU804	GBU
GBU806	GBU806	GBU
GBU808	GBU808	GBU
GBU810	GBU810	GBU