

# GBJ10005 THRU GBJ1010



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HORNBY ELECTRONIC

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 10.0 AMPERE

### FEATURES

- Low forward voltage drop, high current capability
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Reliable low cost construction utilizing molded plastic technique

### MECHANICAL DATA

Case: Molded plastic, GBJ

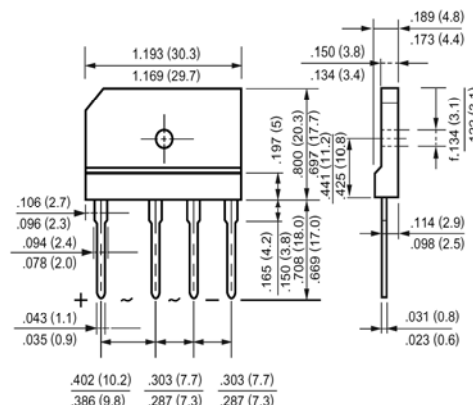
Epoxy: UL 94V-0 rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.23ounce, 6.6gram

GBJ



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	GBJ10005	GBJ1001	GBJ1002	GBJ1004	GBJ1006	GBJ1008	GBJ1010	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current with Heatsink at $T_C=110^\circ\text{C}$	$I_{(AV)}$	10.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	170							Amp
Maximum Forward Voltage Drop per Element at 5.0A DC and 25°C	$V_F$	1.05							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 500							uAmp
Typical Junction Capacitance (Note 1)	$C_J$	55							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	1.4							°C/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150							°C

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance fromn Junction to Case with Device Mounted on 150mm x 150mm x 1.6mmCu Plate Heatsink.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

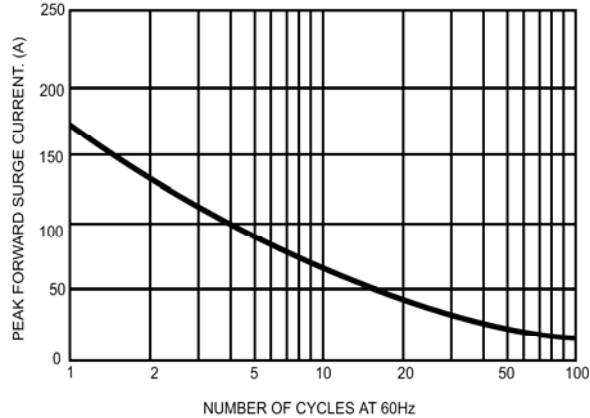


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

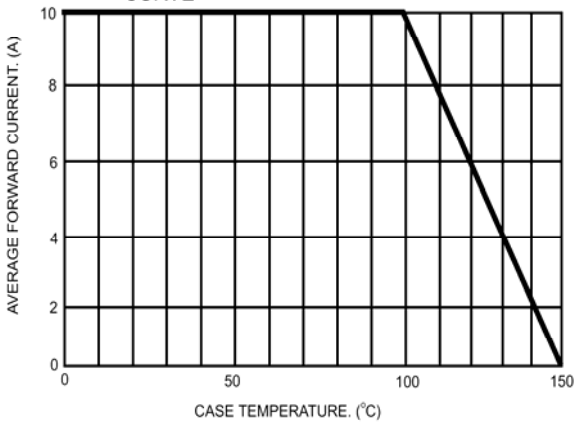


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

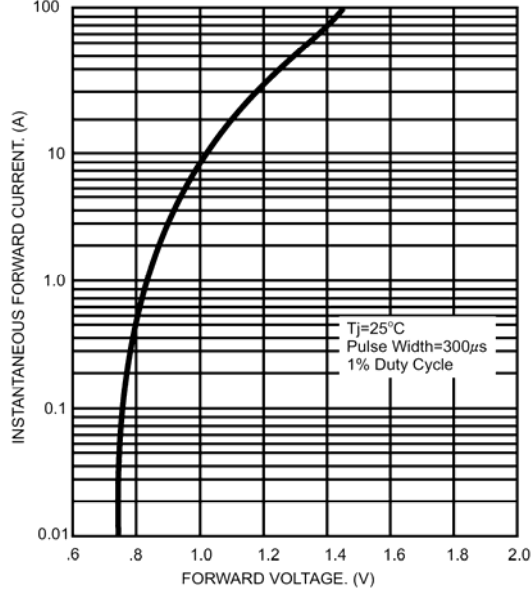


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

