

### GLASS PASSIVATED BRIDGE SINGLE-PHASE BRIDGE RECTIFIERS

**VOLTAGE** 50 to 1000 Volts  
**CURRENT** 20 Amperes

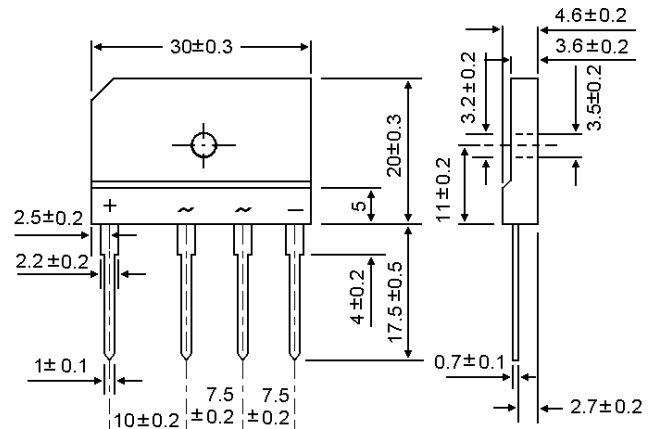
Case Style GBJ

#### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High case dielectric strength of 2500 V<sub>RMS</sub>
- \* Ideal for printed circuit boards
- \* Glass passivated chip junction
- \* High surge current capability
- \* High temperature soldering guaranteed:  
260°C/10 seconds, 0.375 (9.5mm) lead length,  
5lbs. (2.3Kg) tension

#### MECHANICAL DATA

- \* Case: Molded plastic body
- \* Terminal: Plated leads solderable per MIL-STD-750, Method 2026
- \* Mounting Position: Any (Note 3)
- \* Mounting Torque: 8 in-lbs max.  
Weight: 0.26 oz., 7.0g



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- \* Rating at 25 °C ambient temperature unless otherwise specified
- \* Single phase, half wave, 60Hz, resistive or inductive load.
- \* For capacitive load derate current by 20 %

Characteristic	Symbo l	GBJ20A	GBJ20B	GBJ20D	GBJ20G	GBJ20J	GBJ20K	GBJ20M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectifier Forward Current @ T <sub>C</sub> =87 @ T <sub>A</sub> =25	I <sub>F(AV)</sub>	20 <sup>(1)</sup> 3.5 <sup>(2)</sup>							A
Non-Repetitive Peak Surge Current 8.3 ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	240							A
Forward Voltage (per element) (I <sub>F</sub> = 10 Amp)	V <sub>FM</sub>	1.05							V
Peak Reverse Current ( Rated DC Voltage, T <sub>C</sub> = 25 ) ( Rated DC Voltage, T <sub>C</sub> = 125 )	I <sub>R</sub>	10 250							uA
I <sup>2</sup> t Rating for Fusing( t<8.3 ms)	I <sup>2</sup> t	240							A <sup>2</sup> s
Typical Junction Capacitance per element	C <sub>j</sub>	140							pF
Maximum Thermal Resistance per leg	R <sub>θJA</sub> R <sub>θJA</sub>	22 <sup>(2)</sup> 1.5 <sup>(1)</sup>							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150							

Note: **NOTES:**

1. Unit case mounted on Al plate heatsink
2. Unit mounted on P.C.B. without heatsink
3. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

# GBJ20A thru GBJ20M

FIG-1 FORWARD CURRENT DERATING CURVE

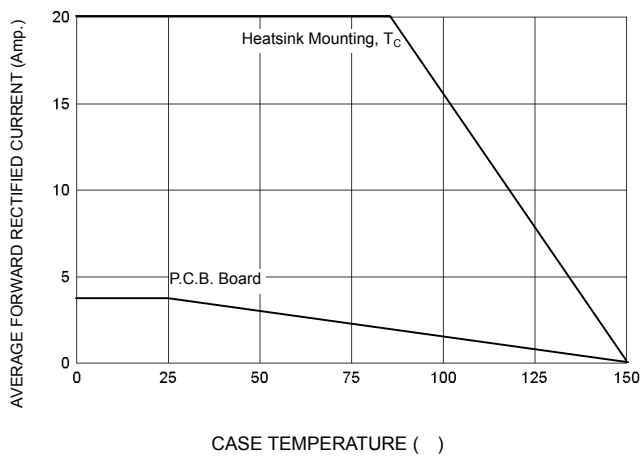


FIG-2 TYPICAL FORWARD CHARACTERISTICS

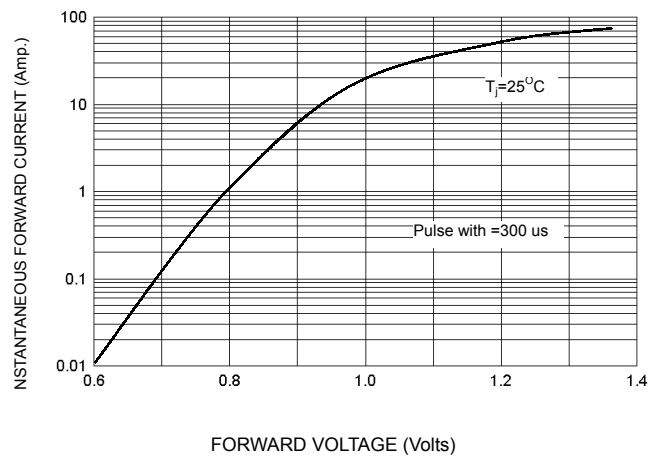


FIG-3 PEAK FORWARD SURGE CURRENT

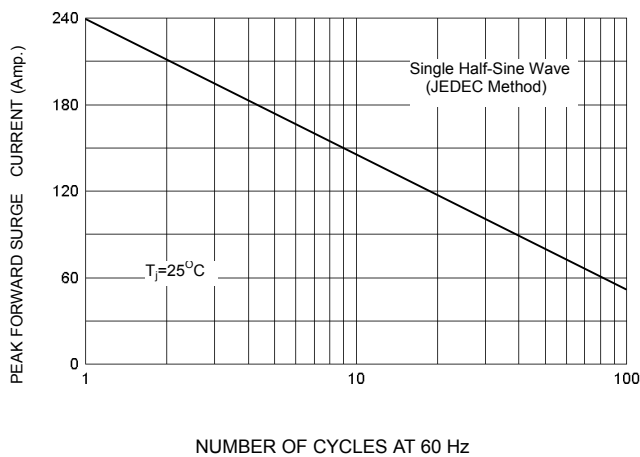


FIG-4 TYPICAL JUNCTION CAPACITANCE

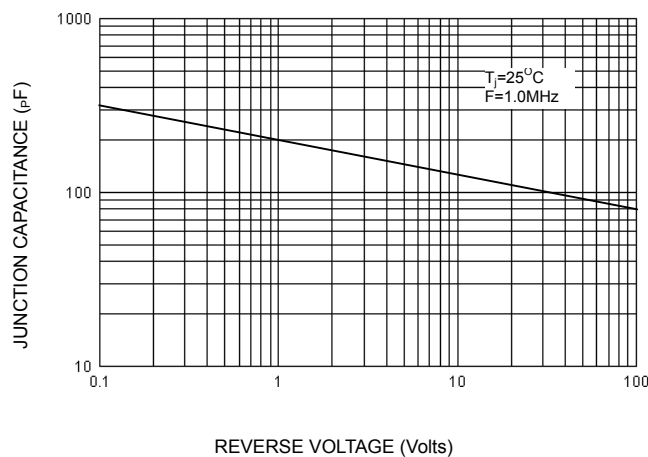


FIG-5 TYPICAL REVERSE CHARACTERISTICS Per leg

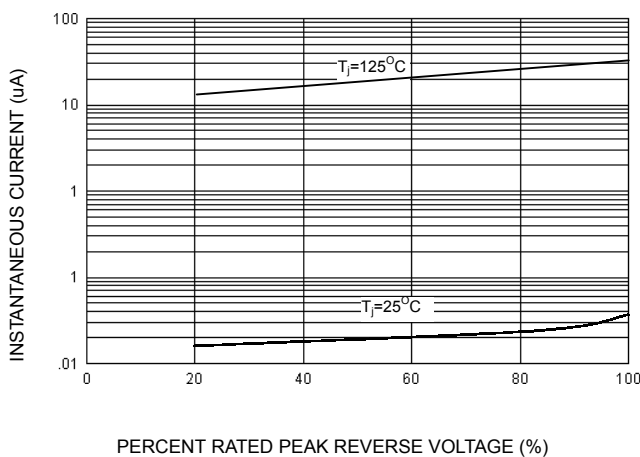


FIG-6 TYPICAL TRANSIENT THERMAL IMPEDANCE

