



GBJ8A thru GBJ8M

Glass Passivated Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 8.0 Amperes

Features

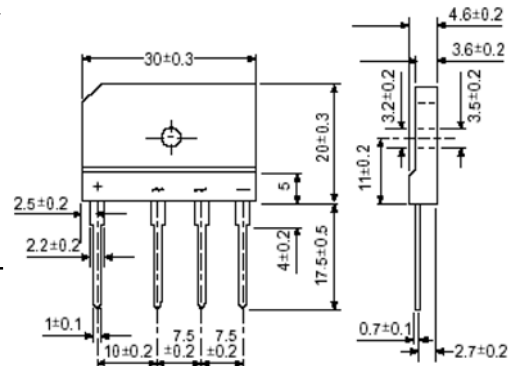
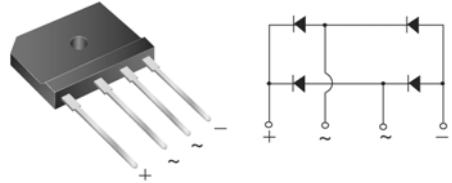
- ◆ Glass passivated junction
- ◆ Ideal for printed circuit board
- ◆ Reliable low cost construction
- ◆ Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Surge overload rating to 170 amperes peak
- ◆ High case dielectric strength of 2500V_{RMS}

Mechanical Data

- ◆ Case: GBJ(5S)
Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Leads solderable per MILSTD-750 Method 2026
- ◆ High temperature soldering guaranteed:
260°C/10 seconds, 0.375 (9.5mm) lead length,
5lbs.(2.3kg) tension
- ◆ Weight: 0.24 ounce, 6.8 grams
- ◆ Mounting torque: 8.17 in. lbs. max.

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, Industrial Automation applications



Package outline dimensions in millimeters

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	GBJ8A	GBJ8B	GBJ8D	GBJ8G	GBJ8J	GBJ8K	GBJ8M	Units
Maximum repetitive 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 output current (See Fig.2)	$I_{F(AV)}$	8.0							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	180							Amps
Rating for fusing (t<8.3ms)	I^2t	120							A ² sec
Maximum instantaneous forward voltage drop per leg at 4.0A	V_F	1.0							Volt
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	5.0 250.0							uA
Typical thermal resistance per leg (Note 2)	$R_{\theta JC}$	1.6							°C/W
Dielectric strength (Terminals to case, AC 1 minute)	V_{ISO}	2500							Volts
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

- Notes:**
1. Unit case mounted on AL plate heatsink
 2. Unit mounted on P.C.B. with 4"x0.06" (100x100x1.6mm) copper pads and 0.375" (9.5mm) lead length
 3. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

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

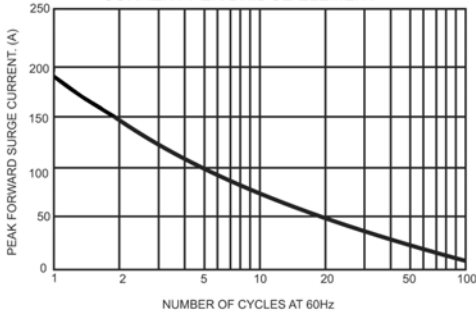


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

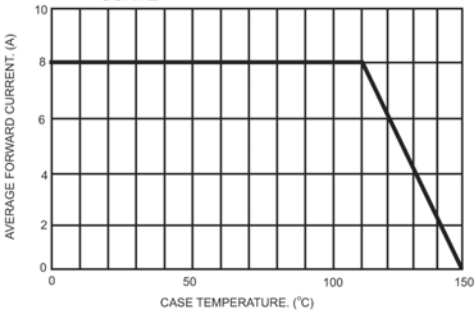


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

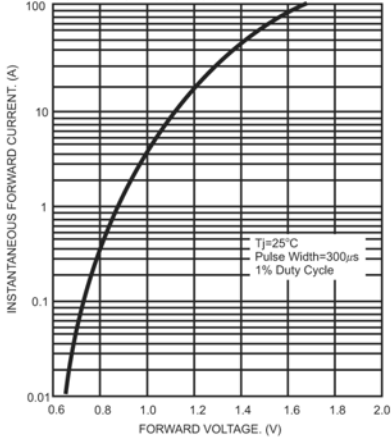


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

