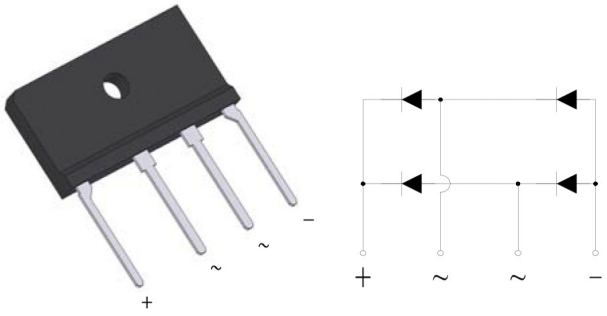
GBJL30J THRU GBJL30M

Glass Passivated Single-Phase Bridge Rectifier
Reverse Voltage - 600V to 1000V
Forward Current - 30.0 Amperes

2018

Features

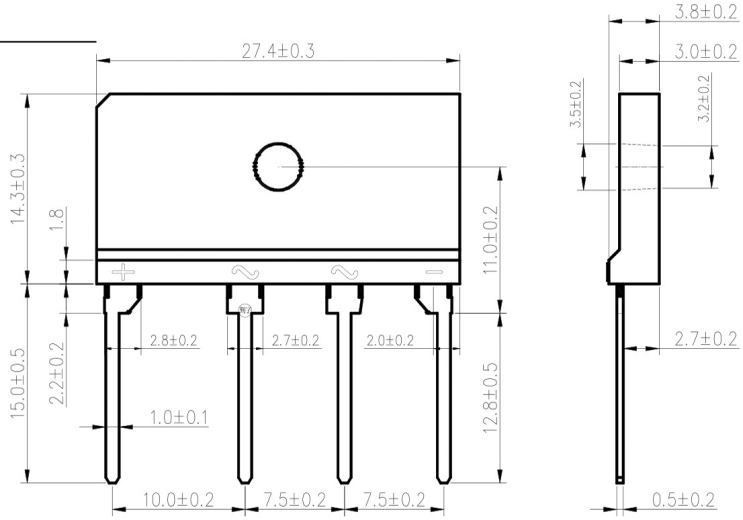
- Thin Single In-Line package;
- Ideal for printed circuit boards;
- Glass Passivated chip junction;
- Low profile package;
- High Surge current capability;
- High case dielectric strength of 2500 V_{RMS};
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;
- Same footprint V.S GBJ package;



RoHS COMPLIANT

Mechanical Data

- Case: GBJL;
  Epoxy meets UL-94V-0 Flammability rating;
- Terminals:Matte tin plated leads, solderable per J-STD-002 and JESD22-B102;
  E3 suffix for customer grade, meet JESD 201;
- High temperature soldering guaranteed:
  Solder Dip 270℃,10seconds;
- Polarity: As marked on body;
- Mounting Torgue: 10cm-kg (8.8inches-lbs) max;
- Recommend Torgue:Mounting Torgue:
  5.7cm-kg (5inches-lbs);



Package Dimensions in mm

Typical Applications

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

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbol	GBJL30J	GBJL30K	GBJL30M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Maximum RMS voltage	V_{RMS}	420	560	700	V
Maximum DC blocking voltage	V_{DC}	600	800	1000	V
Maximum average forward rectified output current at T_C=110℃ / T_A=25℃	$I_{F(AV)}$	30 (1) / 3.6 (2)			Amps
Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	350			Amps
Rating for fusing (t<8.3ms)	I^2t	508			A^2sec
Maximum Instantaneous forward voltage drop per leg at 15A	V_F	1.0			Volt
Maximum DC Reverse Current at Rated DC Blocking Voltage per leg T_A=25℃ / T_A=125℃	I_R	5 / 150			μA
Typical thermal resistance per leg	$R_{\Theta JA}$ / $R_{\Theta JC}$	22 (2) / 2.5 (1)			℃/W
Operating junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150			℃

Notes:

1). Unit case mounted on Al plate heatsink;

2). Units mounted on PCB without heatsink;

3). Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.

RATINGS AND CHARACTERISTICS CURVES

(T_A=25℃ unless otherwise noted)

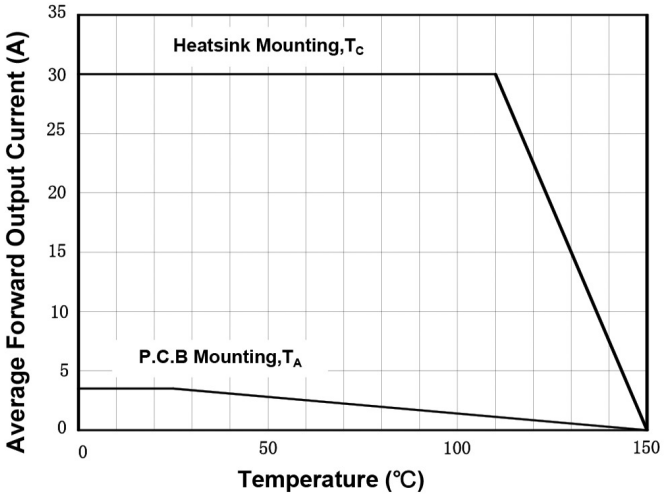


Figure 1. Derating Curve Output Rectified Current

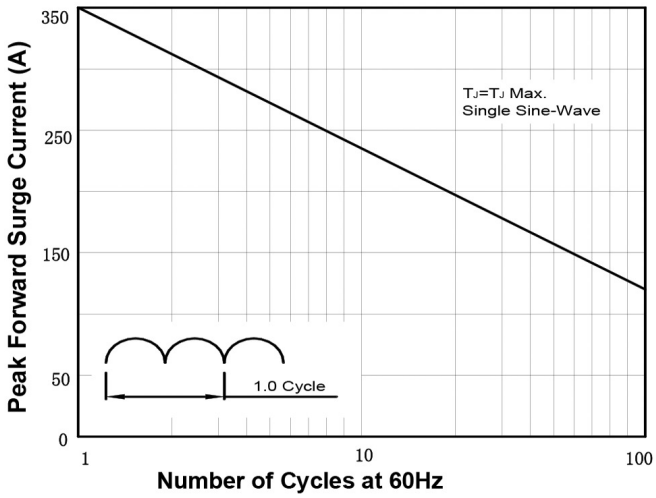


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current per Diode

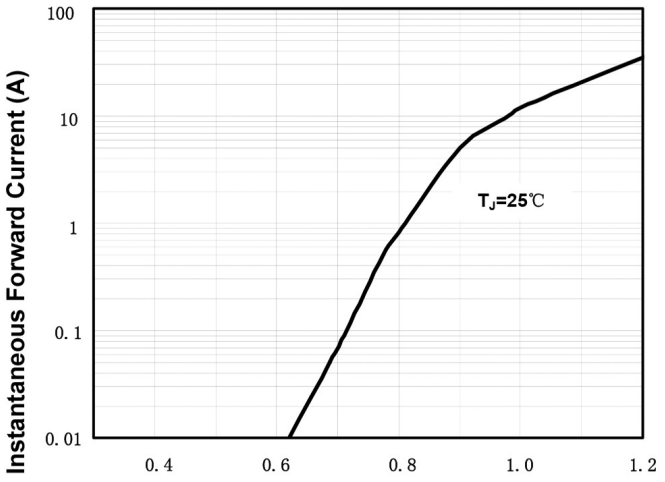


Figure 3. Typical Forward Characteristics Per Diode

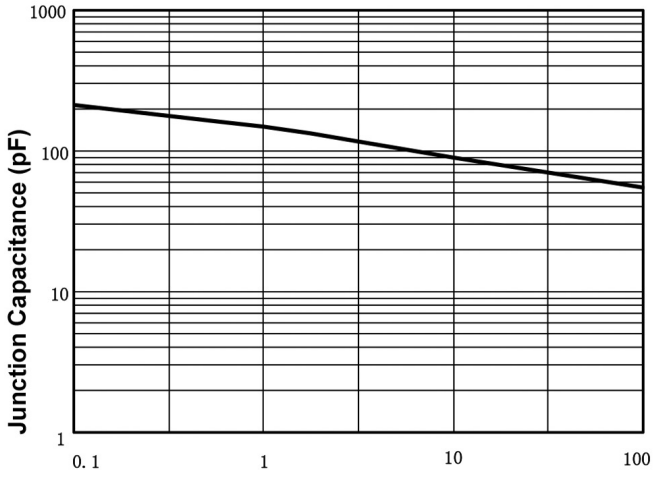


Figure 4. Typical Junction Capacitance Per Diode

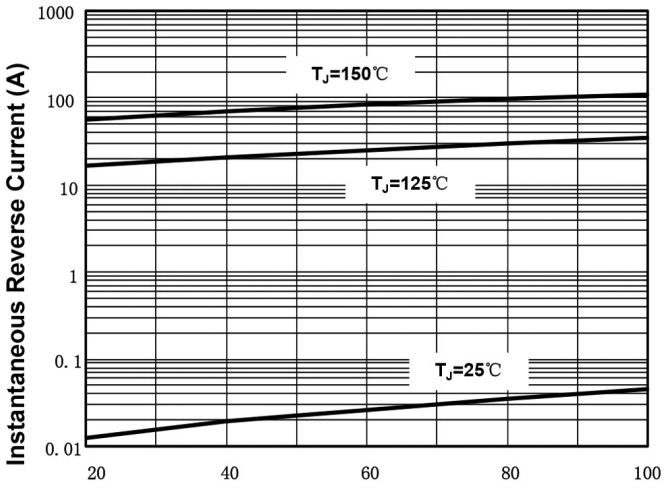


Figure 5. Typical Reverse Characteristics Per Diode