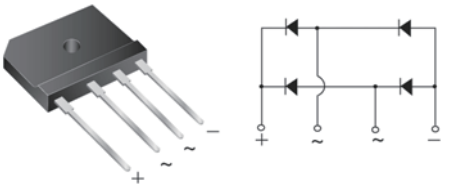
GLASS PASSIVATED CHIP SINGLE-PHASE BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current 6.0 Amperes

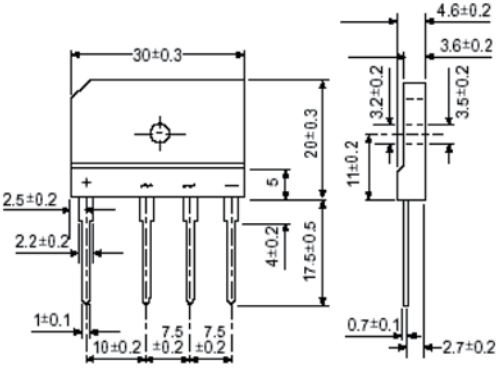
Features

- Thin Single In-Line package
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability
- High case dielectric strength of 2500 V_{RMS}
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



Mechanical Data

- Case: GBJ(5S)
  Epoxy meets UL-94V-0 Flammability rating
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs.(2.3kg) tension
- Polarity: As marked on body
- Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.
- Recommended Torque: 5.7cm-kg (5 inches-lbs)



Package outline dimensions in millimeters

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

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	GBJ6A	GBJ6B	GBJ6D	GBJ6G	GBJ6J	GBJ6K	GBJ6M	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 at T_C=100°C / T_A=25°C	$I_{F(AV)}$	6.0 (1) / 2.8 (2)							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							Amps
Rating for fusing (t<8.3ms)	I^2t	93							A^2sec
Maximum instantaneous forward voltage drop per leg at 3.0A	V_F	1.0							Volt
Maximum DC reverse current at rated DC blocking voltage per leg T_A=25°C / T_A=125°C	I_R	5 / 250							uA
Typical thermal resistance per leg	$R_{\theta JA}$ / $R_{\theta JC}$	22 (2) / 3.4 (1)							°C/W
Dielectric strength (Therm nals to case, AC 1 m nute)	V_{ISO}	2500							Volts
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Notes
1. Unit case mounted on 9.5x9.5x0.15cm thick Al plate heatsink
2. Units mounted on P.C.B. with 0 5 x 0.5" (13 x 13 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 screw

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

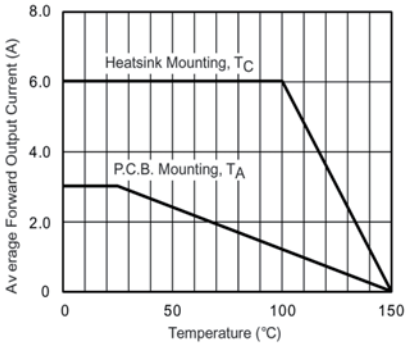


Figure 1. Derating Curve Output Rectified Current

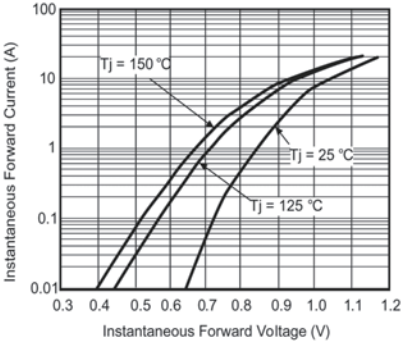


Figure 3. Typical Forward Characteristics Per Leg

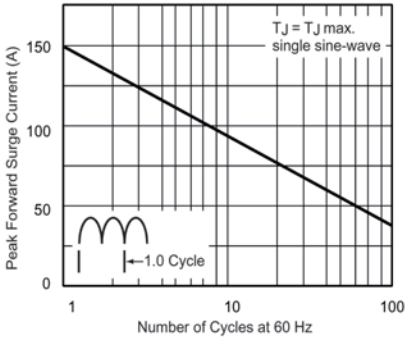


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

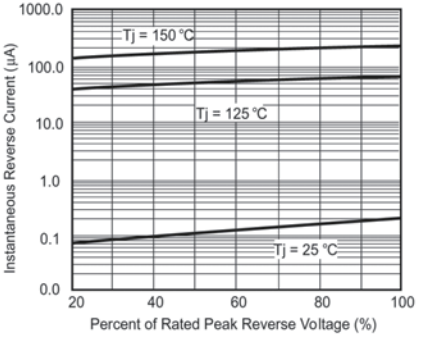


Figure 4. Typical Reverse Characteristics Per Leg

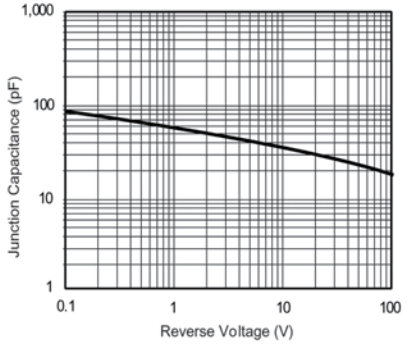


Figure 5. Typical Junction Capacitance Per Leg

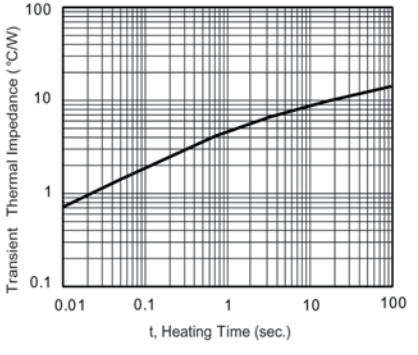


Figure 6. Typical Transient Thermal Impedance