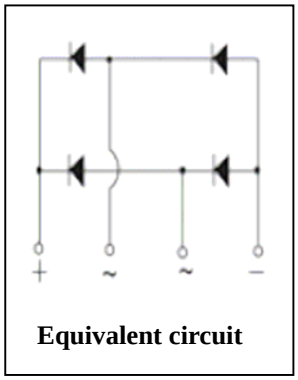
Glass passivated Single Phase Bridge Rectifiers

GBL4A thru GBL4M

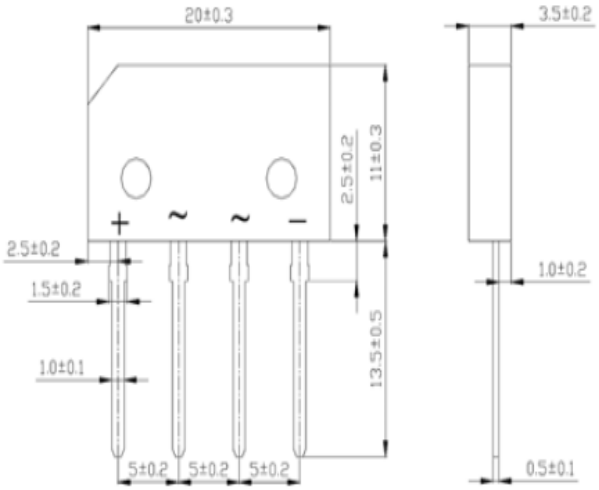
Reverse Voltage 50 to 1000V Forward Current 4 Amps

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability



Equivalent circuit



Package outline dimensions in millimeters

Mechanical Data

- Case: GBL(2S) Molded plastic body
- Terminals: Matte tin 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
- Mounting position: Any.
- Polarity : shown on front side of case, positive lead by beveled corner.
- Weight: 2.1gram, 0.074 oz.

Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Type							Units
			GBL4A	GBL4B	GBL4D	GBL4G	GBL4J	GBL4K	GBL4M	
Repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage drop per leg, I_F=1A		V_F	1							V
Maximum average forward rectified output current at	T_C=50°C	$I_{F(AV)}$	4.0 (Note 1)							A
	T_A=40°C		3.0 (Note 2)							
Peak forward surge current @ 8.3ms single half sine wave superimposed on rated load (JEDEC method)		I_{FSM}	150							A
Rating for fusing (t<8.3ms)		I^2t	93							A^2s
Maximum DC reverse current at rated DC blocking voltage per leg	T_A=25°C	I_R	10							μA
	T_A=125°C		500							
Typical thermal resistance per leg		$R_{\theta JA}$	32 (Note 2)							°C /W
		$R_{\theta JL}$	3.5 (Note 1)							
Storage temperature range		Tstg	-55 ~ +150							°C
Operating junction temperature range		T_J	-55 ~ +150							°C

Notes : 1.Unit mounted on 3.0”x3.0”x0.11” thick (7.5 cmx7.5cmx0.3cm) Al plate
2.Unit mounted on PCB at 0.375”(9.5mm) lead length and 0.5”x0.5”(13mmx13mm) copper pads.

Typical Characteristics

Ratings and Characteristics Curves (TA = 25°C unless otherwise noted)

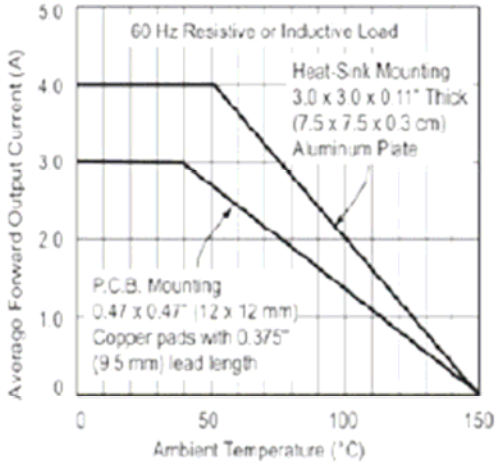


Figure 1. Derating Curves Output Rectified Current

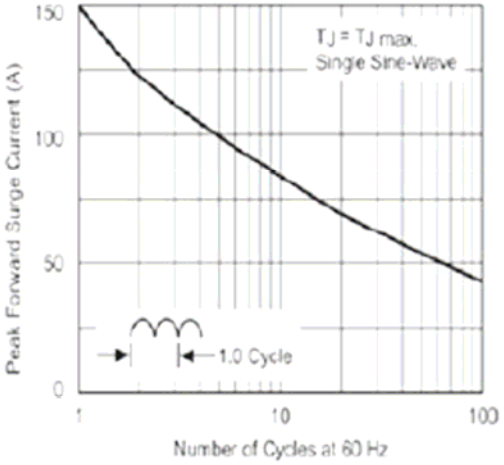


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

Fig. 3 – Typical Forward Voltage Characteristics Per Leg

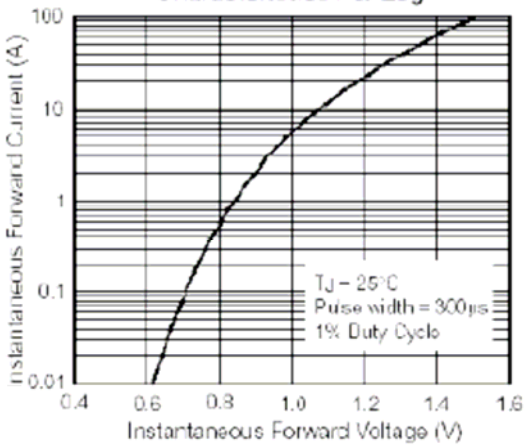


Fig. 4 – Typical Reverse Leakage Characteristics Per Leg

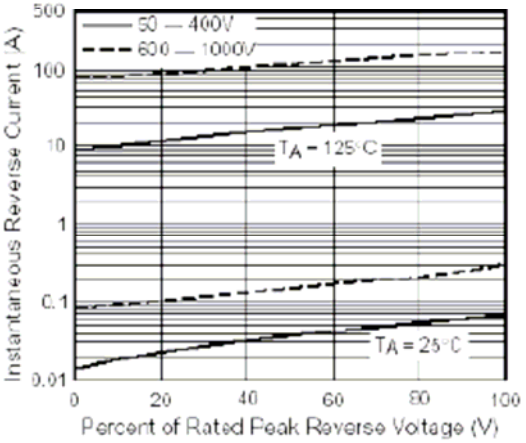


Fig. 5 – Typical Junction Capacitance Per Leg

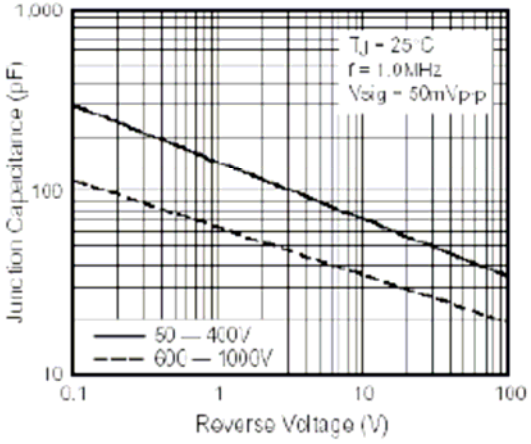


Fig. 6 – Typical Transient Thermal Impedance Per Leg