



# THE DATASHEET OF GBL4J



## Features

- Glass passivated Bridge Rectifiers
- Ideal for PCB
- High surge current capability
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



## Mechanical Data

- Case:GBL,Molding compound meets UL 94V-0 flammability rating
- Terminals:Matte tin plated leads,solderable per MII-STD-750 Method 2026,J-STD-002 and JESD22-B102, meets JESD 201 class 1A whisker test

## Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for TV,Monitor,SMPS,Adapter, Printer,Audio equipment,and Home Applications application

## Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	GBL4A	GBL4B	GBL4D	GBL4G	GBL4J	GBL4K	GBL4M	Unit
Maximum 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	VDC	100	100	200	400	600	800	1000	V
Maximum average output rectified current $T_C=50^{\circ}C$	$I_{F(AV)}$	4.0 <sup>(1)</sup>							A
$T_C=40^{\circ}C$		3.0 <sup>(2)</sup>							
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150							A
Rating for fusing ( $t \leq 8.3ms$ )	$I^2t$	93							A <sup>2</sup> s
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to 150							°C

## Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	GBL4A	GBL4B	GBL4D	GBL4G	GBL4J	GBL4K	GBL4M	Unit
Maximum instantaneous forward voltage	$I_F=2.0A$	$V_F$	1.0							Volts
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^{\circ}C$	$I_R$	10.0							$\mu A$
	$T_A=150^{\circ}C$		500							
Typical junction capacitance	4.0 V, 1 MHz	$C_J$	95				40			pF
Typical thermal resistance <sup>1)</sup>	junction to ambient	$R_{\theta JA}$	22 <sup>(2)</sup>							°C/W
	junction to case	$R_{\theta JL}$	3.5 <sup>(1)</sup>							

Note:1. Unit mounted on 3.0×3.0×0.11" thick (7.5×7.5×0.3 cm) Al.plate

2. Unit mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5×0.5" (13×13mm) copper pads

## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

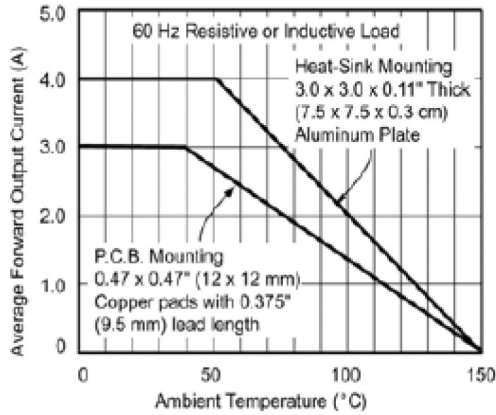


Figure 1. Derating Curves Output Rectified Current

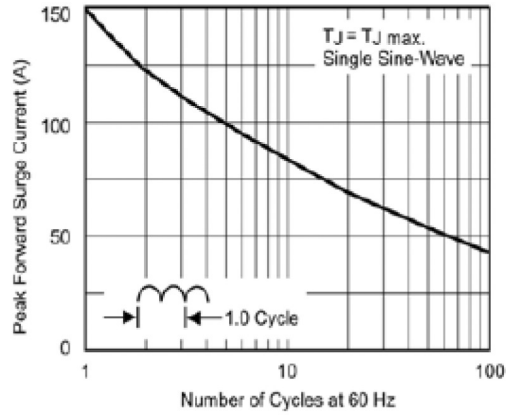


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

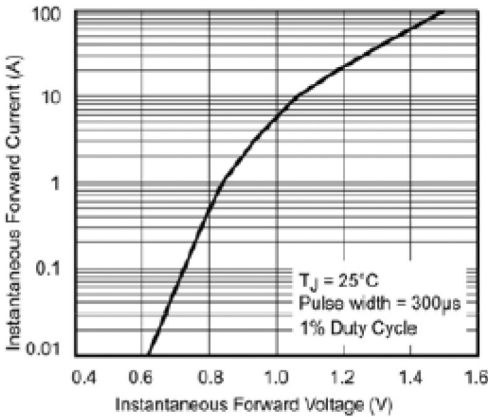


Figure 3. Typical Forward Voltage Characteristics Per Leg

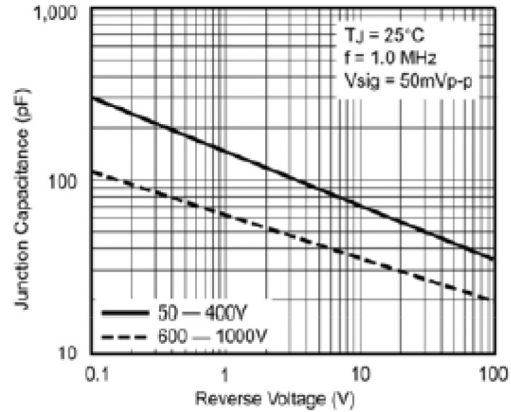


Figure 5. Typical Junction Capacitance Per Leg

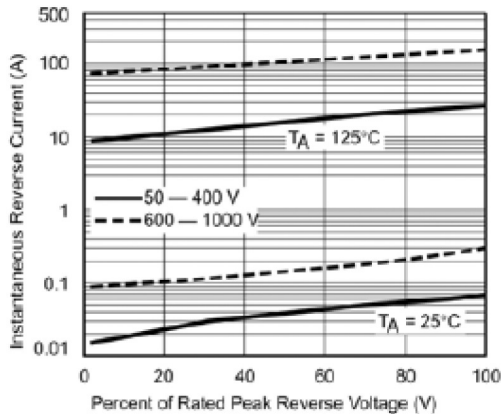


Figure 4. Typical Reverse Characteristics Per Leg

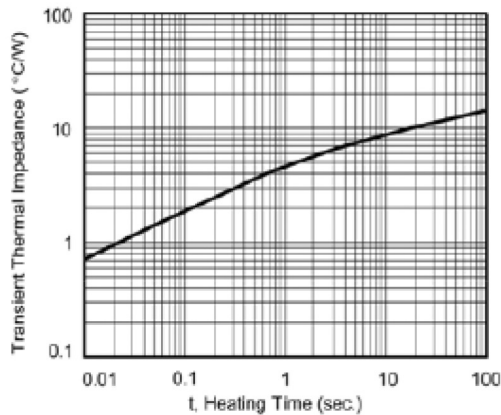
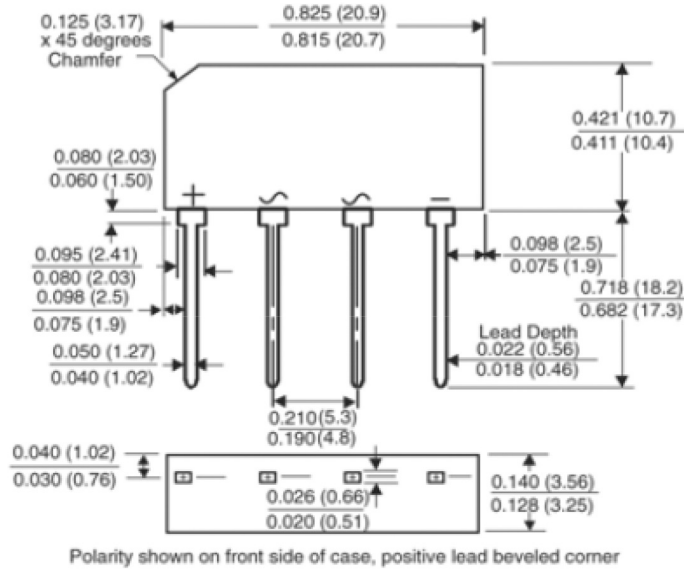


Figure 6. Typical Transient Thermal Impedance Per Leg



## Package Outline Dimensions

Unit: inches(mm)



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