

Single-Phase Glass Passivated Bridge Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0
- Glass passivated die construction
- High case dielectric strength of 1500 V_{RMS}
- Low reverse leakage current
- Ideal for printed circuit boards
- Surge overload rating to 240A Peak
- This series is UL recognized under component index, File number E194718
- RoHS Compliant



GBJ



Mechanical Data

Case:	Molded Plastic
Terminals:	Plated leads solderable per MIL-STD-202, method 208
Polarity:	Molded on Body
Mounting:	Through Hole for #6 Screw
Mounting Torque:	6.0 In-lbs Max.
Weight:	6.6 grams

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted)

Symbol	Description	GBJ15005	GBJ1501	GBJ1502	GBJ1504	GBJ1506	GBJ1508	GBJ1510	Unit
V_{RRM}	Max. Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Max. RMS Voltage	35	70	140	280	420	560	700	V
V_{DC}	Max. DC Blocking Voltage	50	100	200	400	600	800	1000	V
I_(AV)	Max. Average Forward Rectified Output Current at $T_c=100^{\circ}\text{C}$	15							A
I_{FSM}	Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	240							A
I_t	Rating for Fusing ($t < 8.3\text{ms}$)	240							A ² s
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +150							°C

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GBJ15005 - GBJ1510

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description		GBJ15 005	GBJ15 01	GBJ15 02	GBJ15 04	GBJ15 06	GBJ15 08	GBJ15 10	Unit
V _F	Max. Instantaneous Forward Voltage Drop per leg at 7.5A DC		1.05							V
I _R	Max. DC Reverse Current at Rated DC Blocking Voltage per leg	T _C =25°C	10							μA
		T _C =125°C	250							
C _J	Typical Junction Capacitance per leg (Note2)		60							pF
R _{θ-JC}	Typical Thermal Resistance Junction to case (Note3)		2.7							° C/W

Notes:

1. Non-repetitive. For $1 > 1ms$ and $< 8.3ms$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to case per leg. Unit mounted 300 x 300 x 1.0mm aluminum plate heat sink.
4. Single phase, 60Hz, resistive or inductive load.
5. For capacitive load, derate current by 20%.

Typical Characteristics Curves

Fig.1- Derating Curve Output Rectified Current

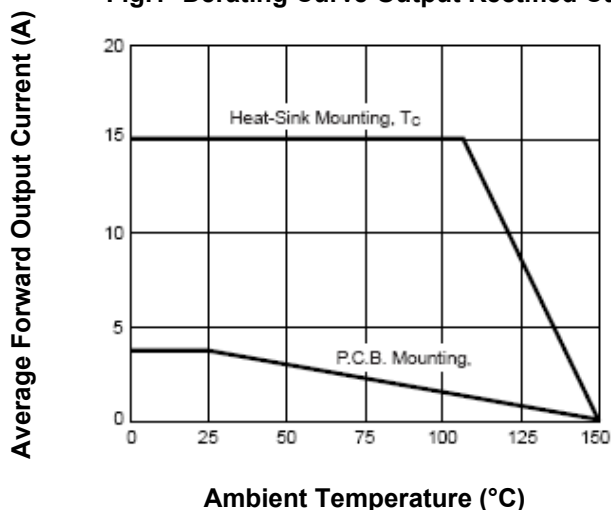
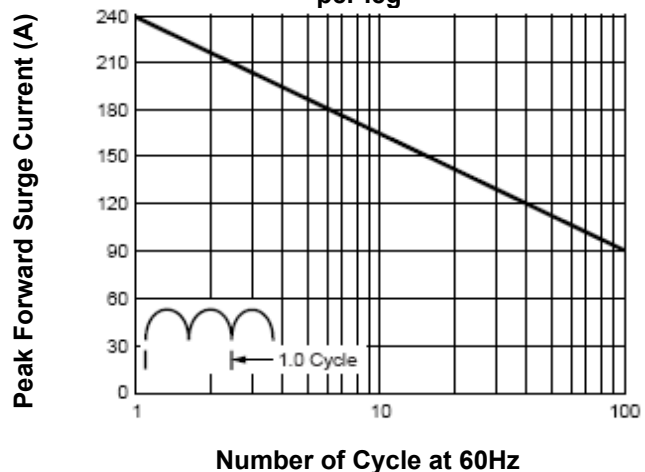


Fig.2- Max. Non-Repetitive Peak Forward Surge Current per leg



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Fig.3- Typical Forward Characteristics per leg

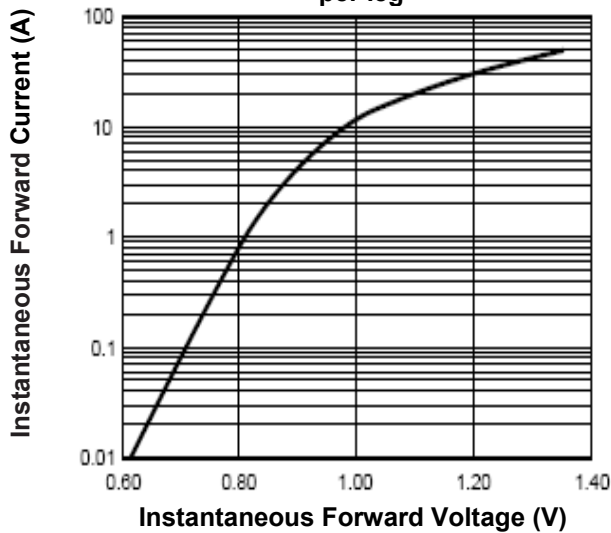


Fig.4- Typical Reverse Characteristics per leg

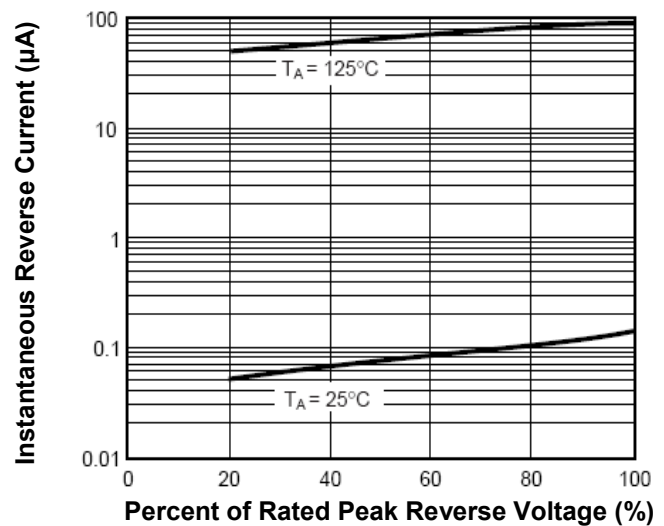


Fig.5- Typical Junction Capacitance per leg

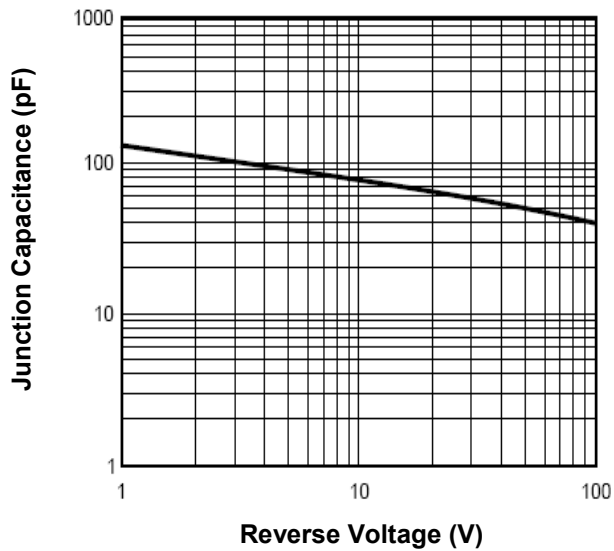
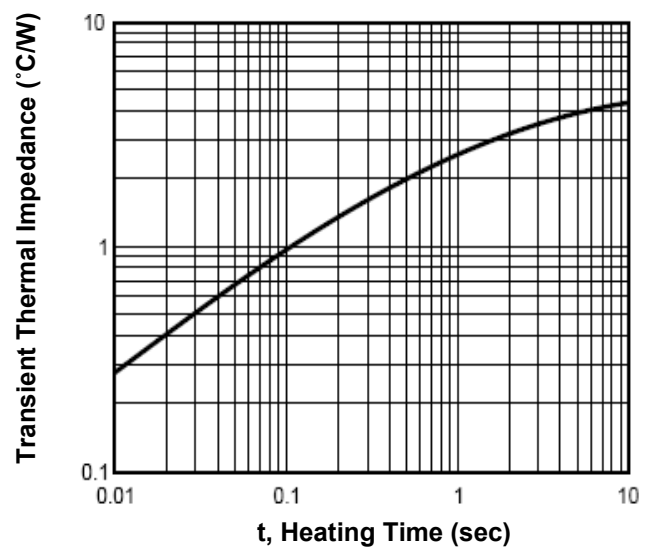


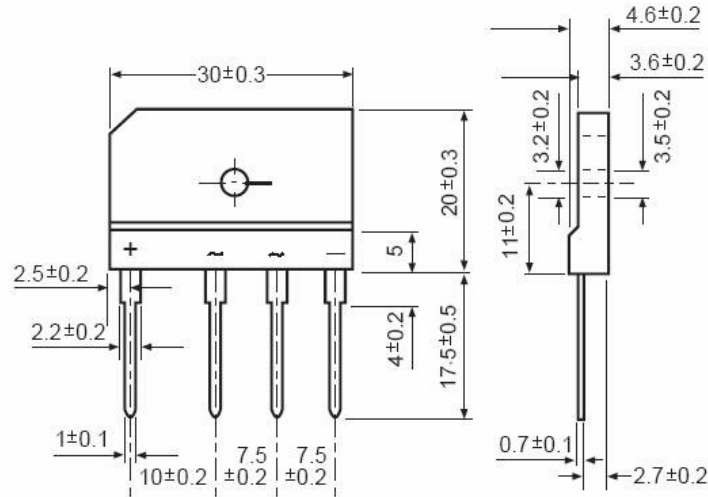
Fig.6- Typical Transient Thermal Impedance



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Dimensions in mm



GBJ

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