Single-Phase Glass Passivated Bridge Rectifier

Features

GBJ

- 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 170A Peak
- This series is UL recognized under component index, File number E194718
- RoHS Compliant

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:	5.0 In-1bs Max.
Weight:	6.6 grams

Maximum Ratings (*$T_{Ambient}$=25ºC unless noted*)

Symbol	Description		GBJ10 005	GBJ10 01	GBJ10 02	GBJ10 04	GBJ10 06	GBJ10 08	GBJ10 10	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	T_C=100°C	10							A
		T_A=25°C	5.0							
I_{FSM}	Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)		170							A
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150							° C

Electrical Characteristics *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description		GBJ10 005	GBJ10 01	GBJ10 02	GBJ10 04	GBJ10 06	GBJ10 08	GBJ10 10	Unit
V_F	Max. Instantaneous Forward Voltage Drop per leg at 5A DC		1.05							V
I_R	Max. DC Reverse Current at Rated DC Blocking Voltage per leg	T_A=25°C	10							µA
		T_A=125°C	250							
$R_{\theta-JA}$	Typical Thermal Resistance Junction to case (Note3)		22							° 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 100 x 100 x 1.6mm 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

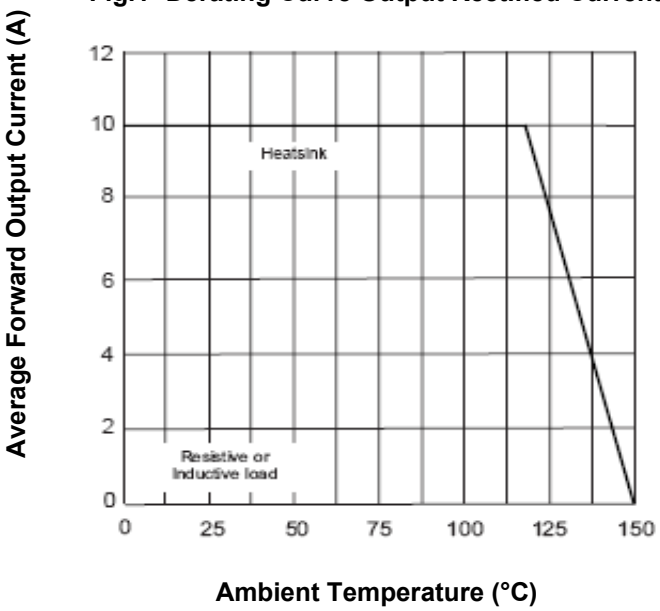


Fig.2- Max. Non-Repetitive Peak Forward Surge Current per leg

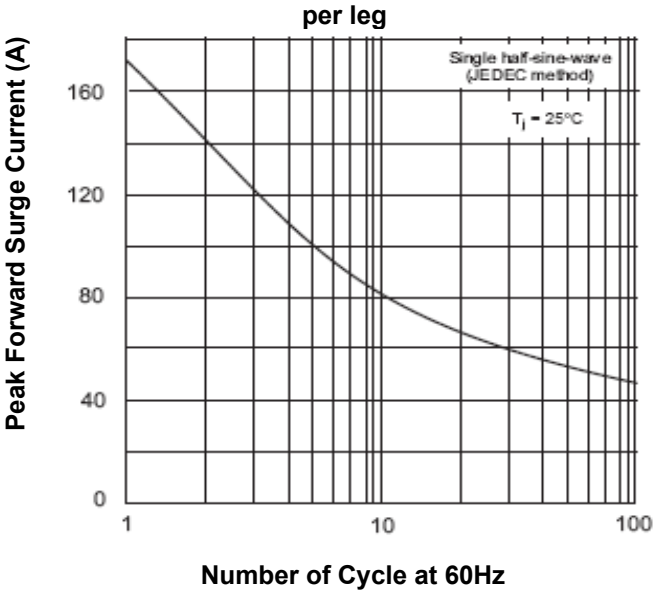


Fig.3- Typical Forward Characteristics per leg

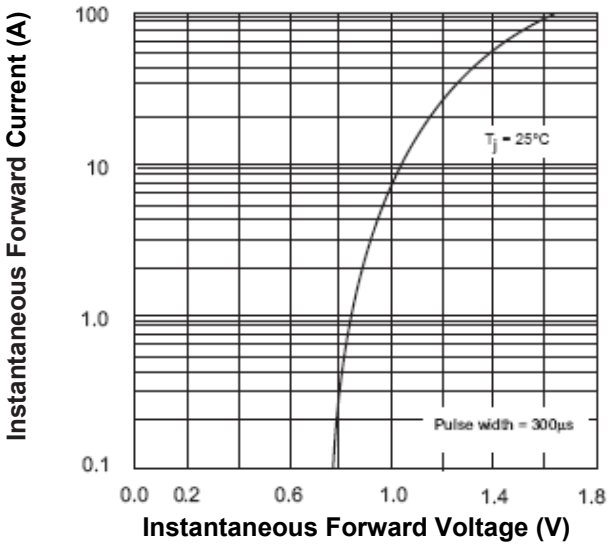
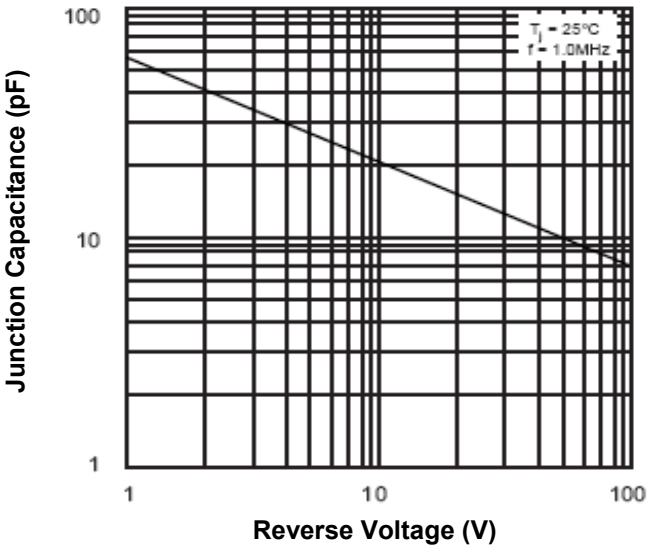
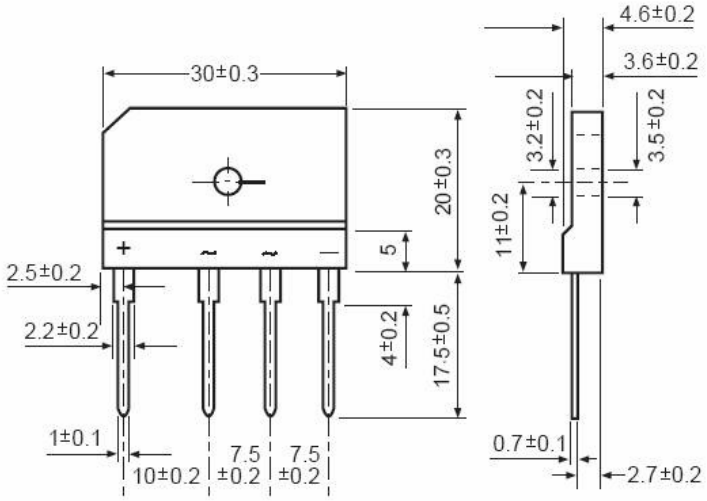


Fig.5- Typical Junction Capacitance per leg



Dimensions in mm



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