TAITRON components incorporated

Single-Phase Glass Passivated Bridge Rectifier

GBJ20005 - GBJ2010

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 240A 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:	6.0 In-1bs Max.
Weight:	6.6 grams

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

Symbol	Description	GBJ20 005	GBJ20 01	GBJ20 02	GBJ20 04	GBJ20 06	GBJ20 08	GBJ20 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 at T_C=100°C	20							A
I_{FSM}	Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	240							A
I^2t	Rating for Fusing (t<8.3ms)	240							A^2s
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +150							° C

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

Symbol	Description		GBJ20 005	GBJ20 01	GBJ20 02	GBJ20 04	GBJ20 06	GBJ20 08	GBJ20 10	Unit
V_F	Max. Instantaneous Forward Voltage Drop per leg at 10A DC		1.1							V
I_R	Max. DC Reverse Current at Rated DC Blocking Voltage per leg	T_A=25°C	10							μA
		T_C=125°C	500							
C_J	Typical Junction Capacitance per leg (Note2)		60							pF
$R_{\theta-JC}$	Typical Thermal Resistance Junction to case (Note3)		2.0							° 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

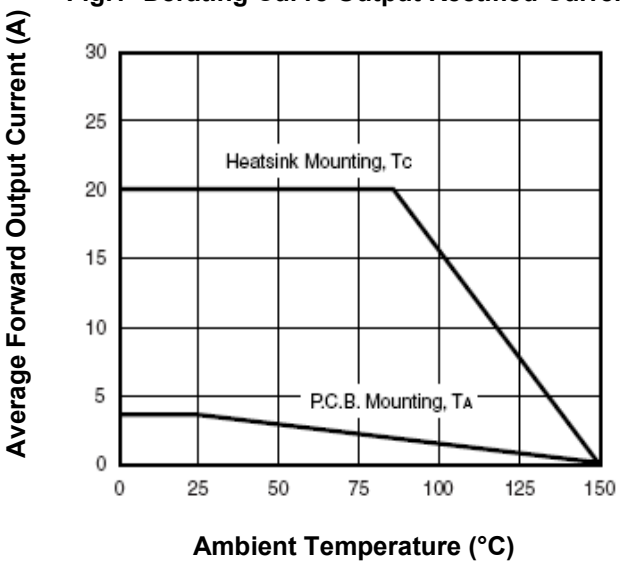


Fig.2- Max. Non-Repetitive Peak Forward Surge Current per leg

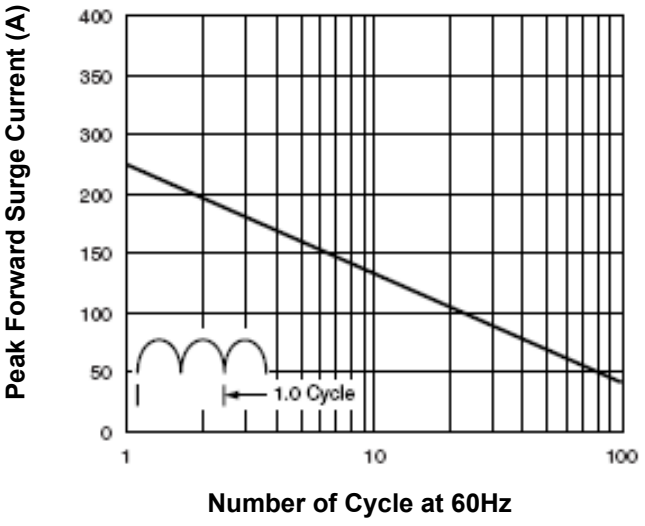


Fig.3- Typical Forward Characteristics per leg

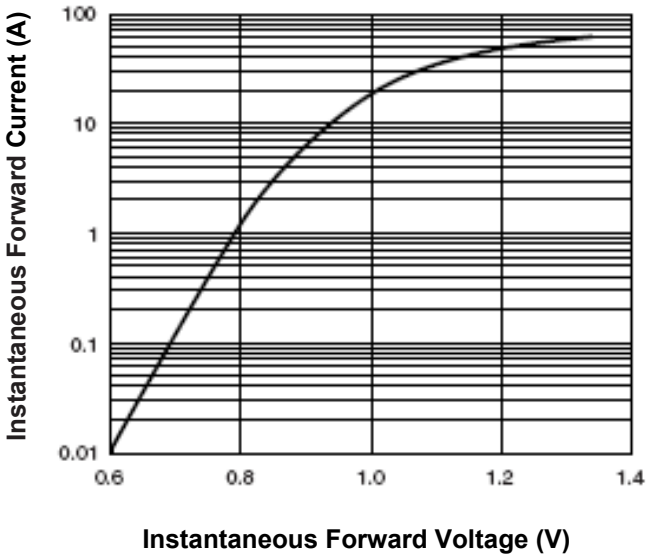


Fig.4- Typical Reverse Characteristics per leg

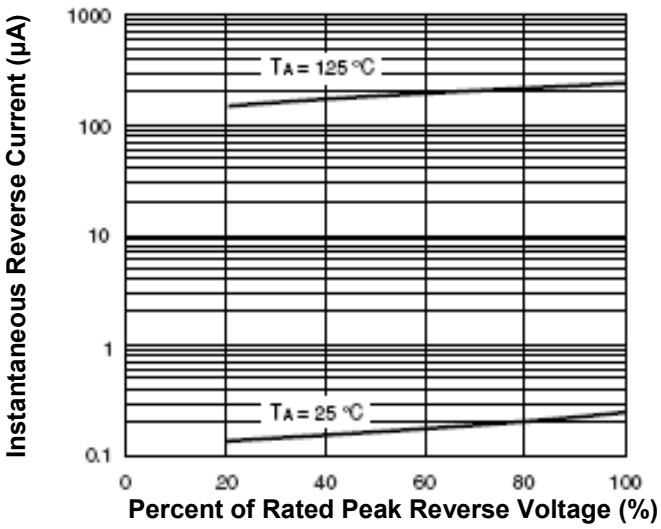


Fig.5- Typical Junction Capacitance per leg

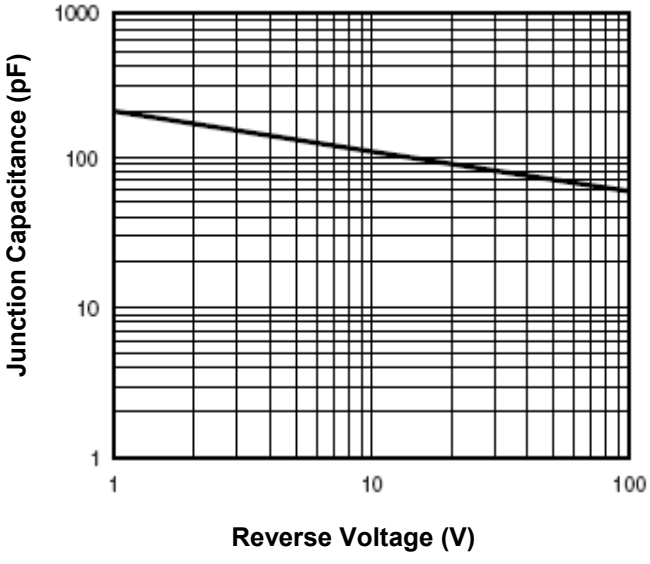
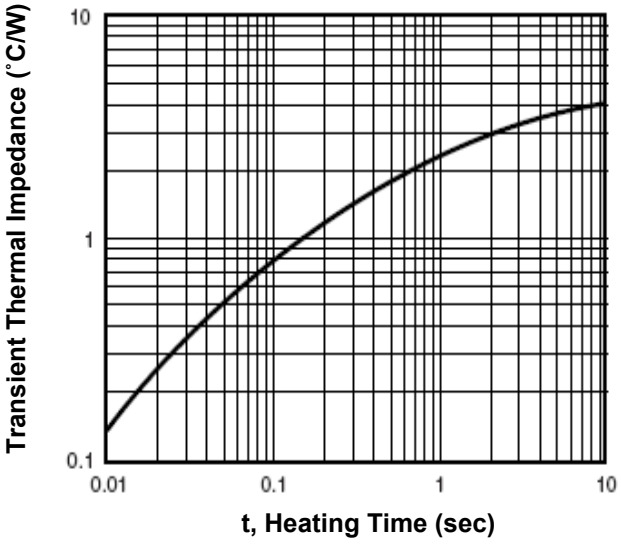
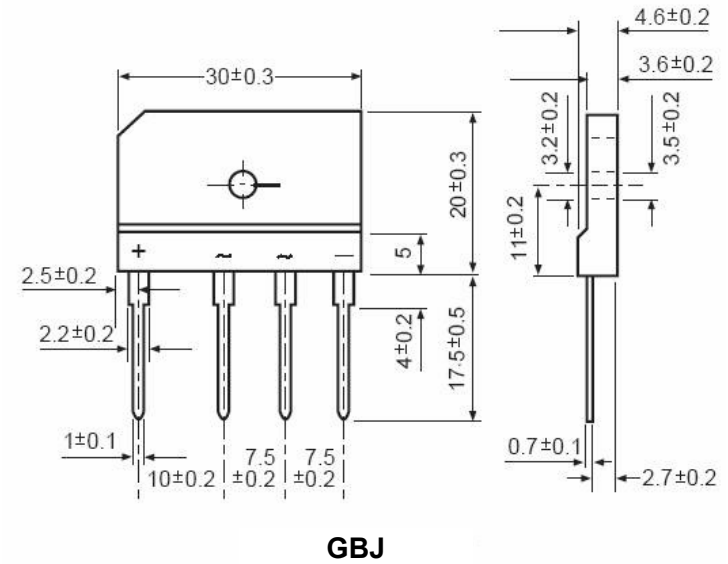


Fig.6- Typical Transient Thermal Impedance



Dimensions in mm



GBJ

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