

Glass Passivated Bridge Rectifier

Voltage **1000 V** **Current** **50A**

Features



- Ideal for printed circuit boards
- UL recognition file number E526209
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

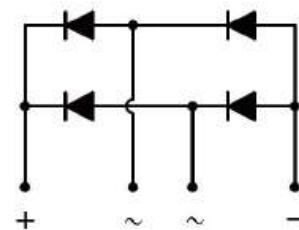
Mechanical Data

- Case : GBJ-2 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 6.6972 grams

Application

- Computing Power,
- Server Power/IND/EV
- Air Conditioner out door power board
- High Power/High Efficiency Power
- Home Appliances Power Board
- TV Power

GBJ-2



Key Parameters	
Parameter	Value
V_{RRM}	1000V
$I_F(AV)$	50A
I_{FSM}	500A
I_R	5uA
Package	GBJ-2

Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	1000	V
Maximum RMS Voltage		V_{RMS}	700	V
Maximum DC Blocking Voltage		V_{DC}	1000	V
Maximum Average Forward Current	With heatsink	$I_{F(AV)}$	50	A
	Without heatsink		4.2	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25^\circ\text{C}$	I_{FSM}	500	A
	@ $T_A = 125^\circ\text{C}$		400	
Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25^\circ\text{C}$	I_{FSM}	1000	A
	@ $T_A = 125^\circ\text{C}$		800	
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)		$I^2 t$	1037.5	A^2S
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$		C_J	200	pF
Typical Thermal Resistance (Note 1)		$R_{\theta JA}$	8	$^\circ\text{C/W}$
		$R_{\theta JL}$	2	
		$R_{\theta JC}$	2	
Operating junction and storage temperature range		T_J, T_{STG}	-55~150	$^\circ\text{C}$
Mounting torque @ Recommend torque:5Kg.cm		Tor	8	Kg.cm

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 25\text{ A}, T_J = 25^\circ\text{C}$	-	-	1.1	V
Reverse Current	I_R	$V_R = 1000\text{ V}, T_J = 25^\circ\text{C}$	-	-	5	μA
		$V_R = 1000\text{ V}, T_J = 125^\circ\text{C}$	-	-	100	

NOTES :

1. Device mounted on 10 cm * 9.4 cm * 2.6 cm Fin type heat sink.

TYPICAL CHARACTERISTIC CURVES

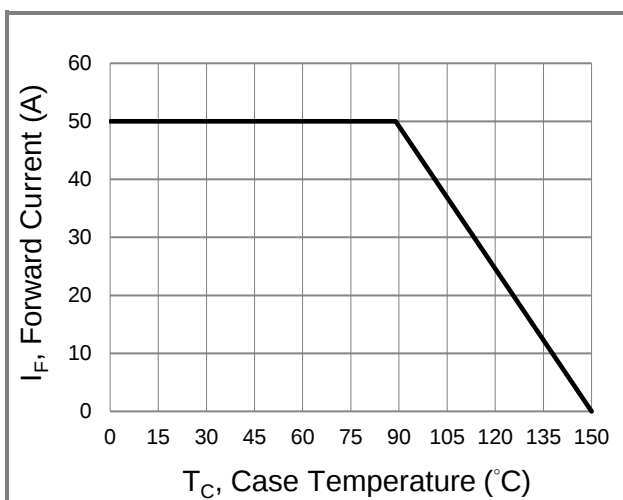


Fig.1 Forward Current Derating Curve

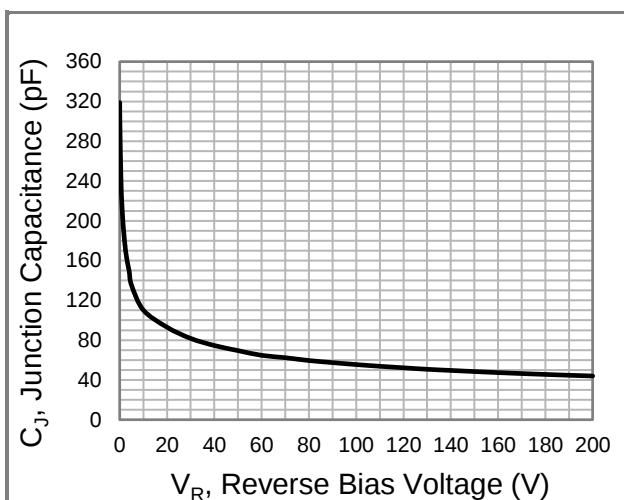


Fig.2 Typical Junction Capacitance

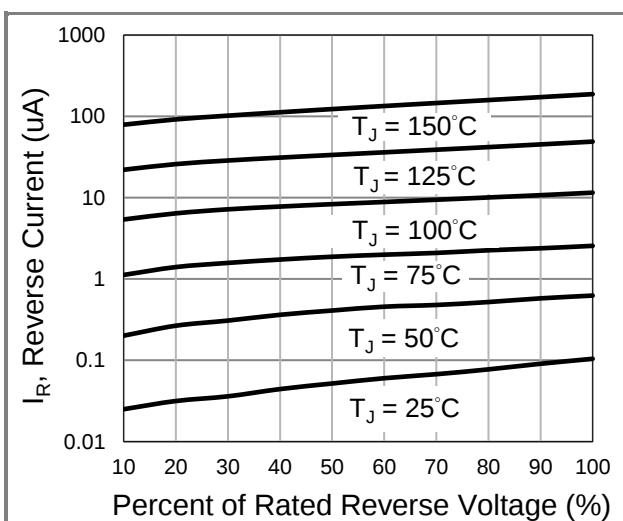


Fig.3 Typical Reverse Characteristics

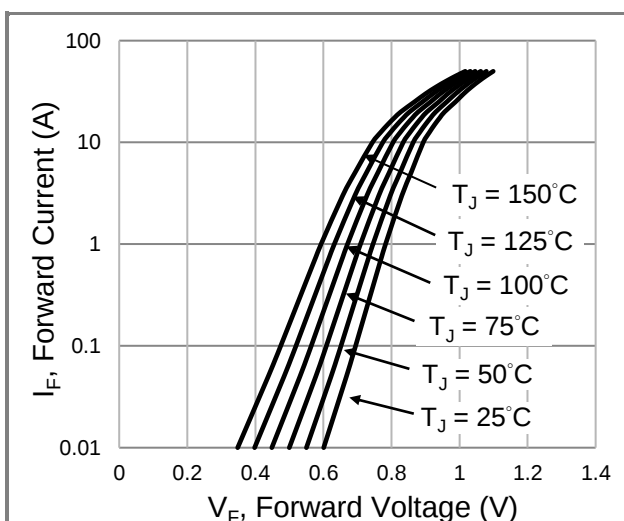
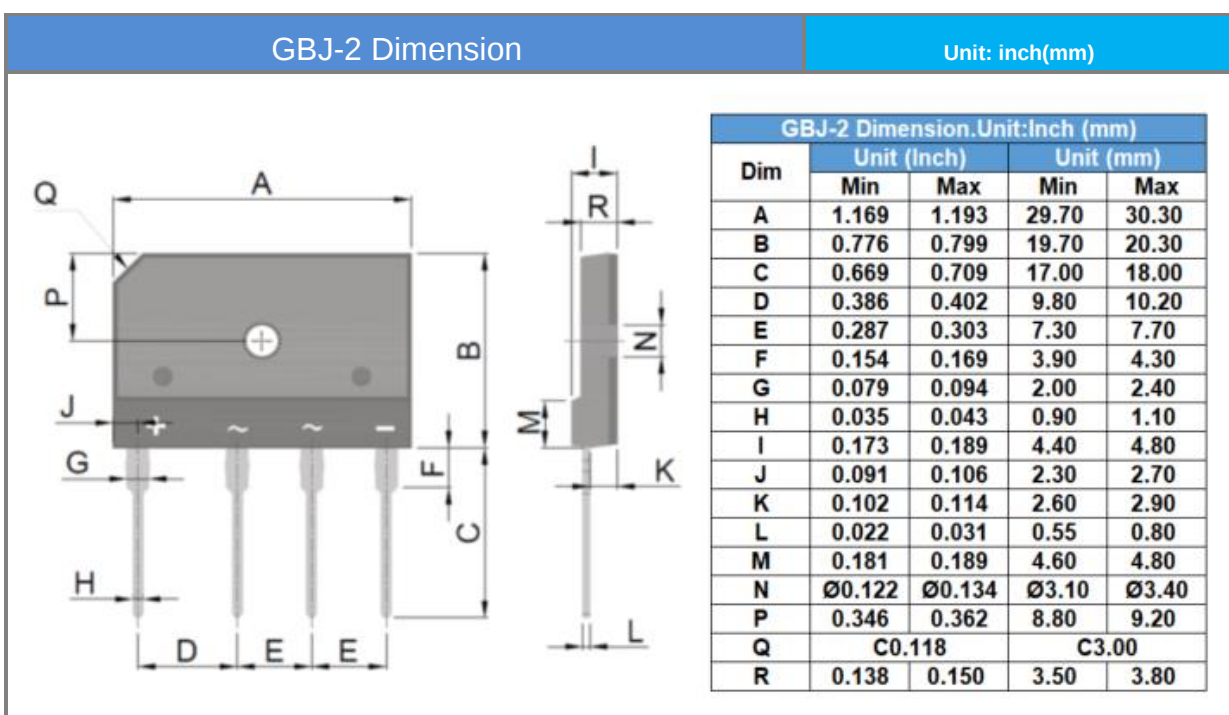


Fig.4 Typical Forward Characteristics

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
GBJ5010	GBJ-2	15 pcs / tube	GBJ5010

Packaging Information



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