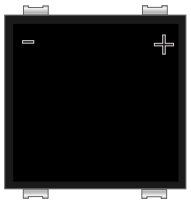
GSJBF310

Glass Passivated Bridge Rectifier
Reverse Voltage 1000V Forward Current 3.0A

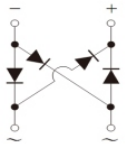
Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- High surge forward current capability
- Ideal for automated placement
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



Package: BF

RoHS COMPLIANT



Schematic Diagram

Mechanical Data

- Case: BF molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any

Applications

Used in high frequency AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment and telecommunication applications.

Maximum Ratings

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.)

Parameters	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	120	A
Rating for Fusing (t=8.3ms)	I^2t	59.7	A^2S
Typical Thermal Resistance[1]	$R_{\theta JC}$	5.0	℃/W
Operating Junction Temperature Range	T_J	-55 to +150	℃
Storge Temperature Range	T_{stg}	-55 to +150	℃

GSJBF310

Glass Passivated Bridge Rectifier
Reverse Voltage 1000V Forward Current 3.0A

Electrical Characteristics (Per diode, T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions		Min.	Typ.	Max.	Unit
Breakdown Voltage	V_{BR}	I_R=10μA		1050	-	-	V
Blocking Voltage	V_R						
Instaneous Forward Voltage[2]	V_F	T_J=25℃	I_F=1.0A	-	0.85	-	V
			I_F=3.0A	-	0.93	1.00	
		T_J=125℃	I_F=1.0A	-	0.72	-	
			I_F=3.0A	-	0.81	0.87	
Reverse Current[3]	I_R	T_J=25℃	V_R=1000V	-	-	5	μA
		T_J=125℃		-	-	250	
Junction Capacitance	C_J	4V, 1MHz		-	36	-	pF

Notes:

1. Thermal resistance from per diode junction to case
2. Pulse test: 300μs pulse width, 1% duty cycle
3. Pulse test: Pulse width ≤ 40ms

Ratings and Characteristics Curves

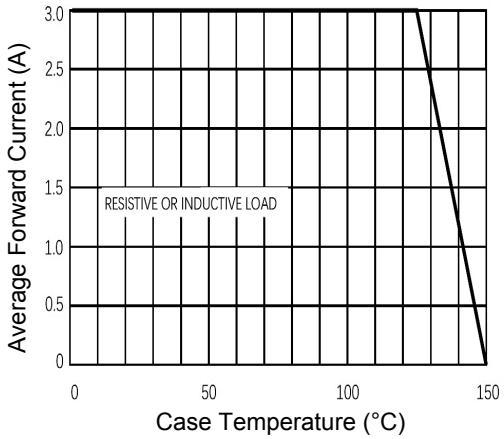


Figure 1. Forward Current Derating Curve

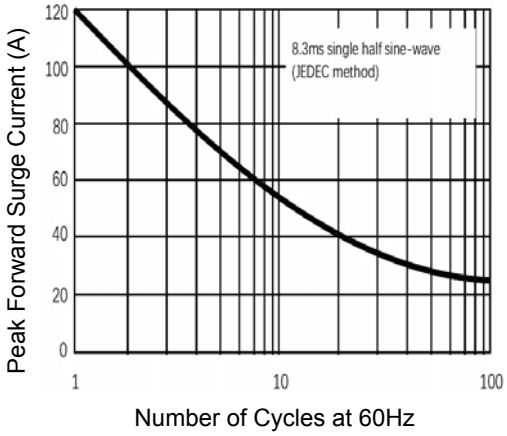


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

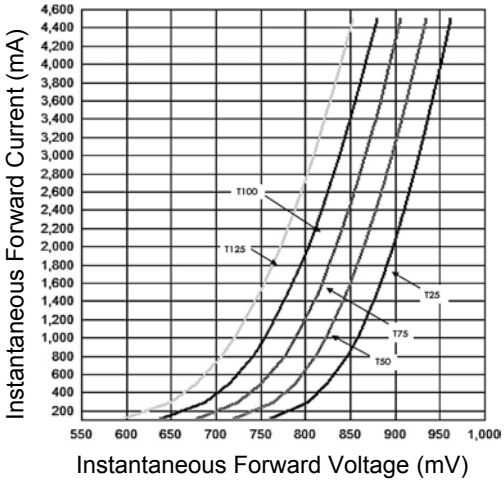


Figure 3. Typical Instantaneous Forward Characteristics

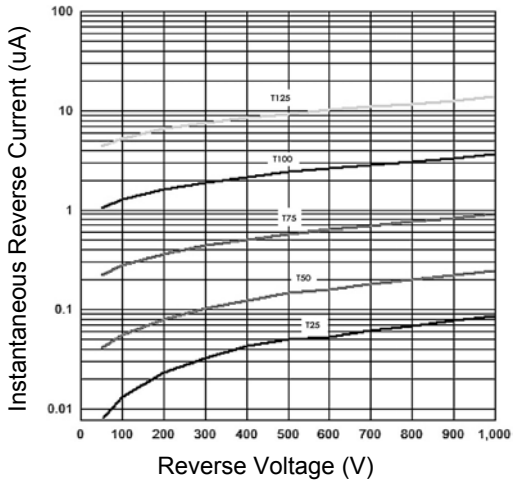
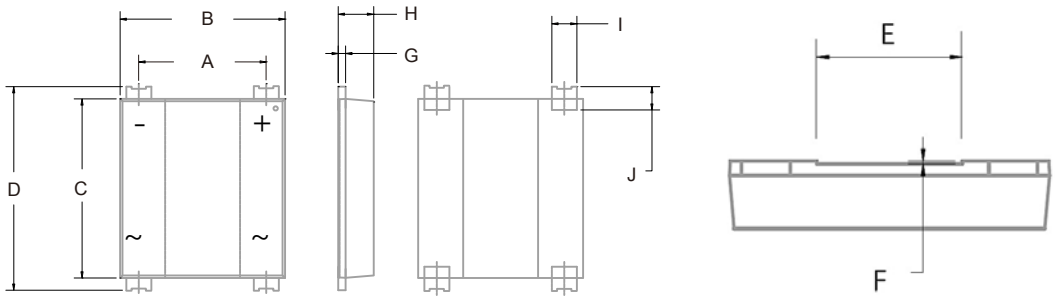


Figure 4. Typical Reverse Characteristics

GSJBF310

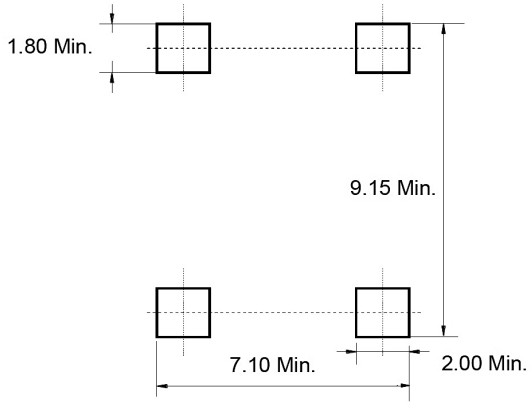
Glass Passivated Bridge Rectifier
Reverse Voltage 1000V Forward Current 3.0A

Package Outline Dimensions (BF)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.80	5.30	0.189	0.209
B	6.20	7.00	0.244	0.276
C	7.10	8.20	0.280	0.323
D	7.90	8.90	0.311	0.350
E	2.90	3.10	0.114	0.122
F	0.04	0.08	0.002	0.003
G	0.15	0.40	0.006	0.016
H	1.30	1.50	0.051	0.059
I	0.80	1.20	0.031	0.047
J	0.70	1.60	0.028	0.063

Recommended Pad Layout



Note:
1. Dimensions in millimeters
2. The pad layout is for reference

Order Information

Device	Package	Marking	Carrier	Quantity
GSJBF310	BF	JBF310	Tape & Reel	3,000 Pcs / Reel