

### Features

- Plastic package has UL Flammability Classification 94V-0
- Glass passivated chip junction
- High current capability
- Low forward voltage drop
- Dielectric tested to maximum case, storage and junction temperature to 150 °C to withstand 1500 V
- High temperature soldering guaranteed:275°C/10S
- Component in accordance to RoHS 2015/863/EU

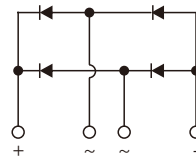
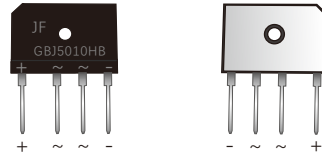
### Mechanical data

- Case:GBJ-HB molded plastic body
- Terminals:Plated leads solderable per MIL-STD-750,method 2026
- Polarity:As marked
- Mounting Position:Any
- Mounting Torque:MAX 10cm-Kg(8.8inches-lbs)
- Recommended Torque: 5.7 cm-kg (5 inches-lbs)
- Weight:7.40grams(approx.)

### Typical Applications

- Used in AC/DC bridge full wave rectification for SPS, home appliances and white-goods applications.

### GBJ-HB



PRIMARY CHARACTERISTICS	
$I_F(AV)$	50A
$V_{RRM}$	1000V
$I_{FSM}$	500A
$V_{F,typ}$ at $I_F=25A, 25^\circ C$	0.99V
$I_{R,MAX,25^\circ C}$	5 $\mu$ A
$T_J(MAX)$	150 $^\circ C$
Package	GBJ-HB

### Maximum Ratings And Electrical Characteristics

(Ratings at 25 $^\circ C$  ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameters	Symbol	GBJ3510HB	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	V
Maximum average forward rectified current, $T_c \leq 100^\circ C$	$I_{F(AV)}$	50	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method,Per diode)	$I_{FSM}$	500	A
Rating for fusing( $t < 8.3ms$ )	$I^2t$	1037.5	A <sup>2</sup> S
Operating junction temperature range	$T_J$	-55 to 150	$^\circ C$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ C$

## Electrical Characteristics (Per diode, $T_A=25^\circ\text{C}$ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	$T_j=25^\circ\text{C}$	$I_f=1\text{A}$	$V_F^{1)}$	0.78	-	V
		$I_f=5\text{A}$		0.86	-	
		$I_f=25\text{A}$		0.99	1.10	
	$T_j=125^\circ\text{C}$	$I_f=1\text{A}$		0.63	-	
$I_f=5\text{A}$		0.72	-			
$I_f=25\text{A}$		0.89	-			
Reverse current	$V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	$I_R^{2)}$	-	5	$\mu\text{A}$
		$T_j=100^\circ\text{C}$		-	30	
		$T_j=125^\circ\text{C}$		-	100	
Typical junction capacitance	4V,1MHz		$C_j$	198		pF

Notes: 1.Pulse test: 300  $\mu\text{s}$  pulse width,1% duty cycle

2.Pulse test: pulse width  $\leq 40\text{ms}$

## Thermal Characteristics

Parameter	Symbol	GBJ	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta JC}$	0.8	$^\circ\text{C/W}$

3.Thermal resistance from per diode junction to case, Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

Fig.1-Forward Current Derating Curve

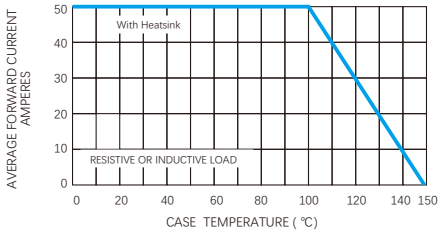


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

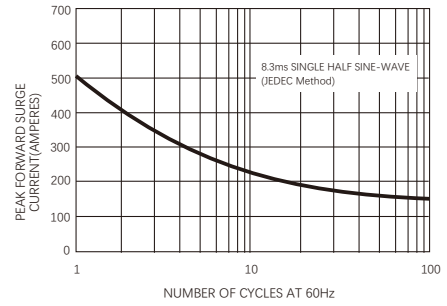


Fig.3-Typical Instantaneous Forward Characteristics(Per diode)

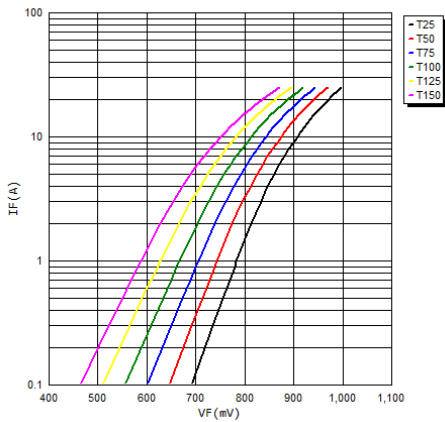


Fig.4-Typical Reverse Characteristics (Per diode)

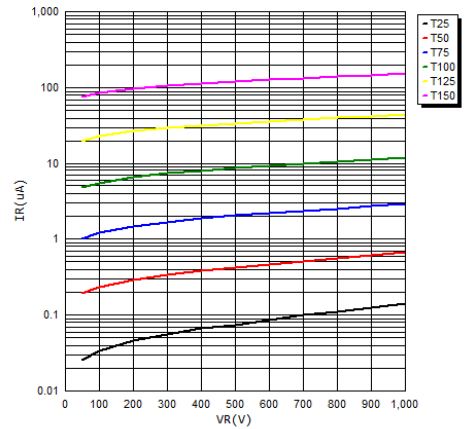
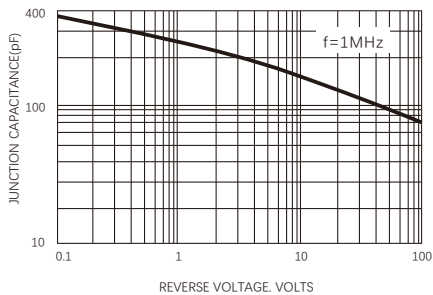
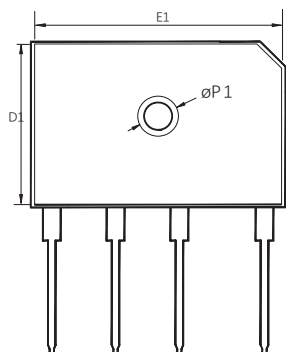
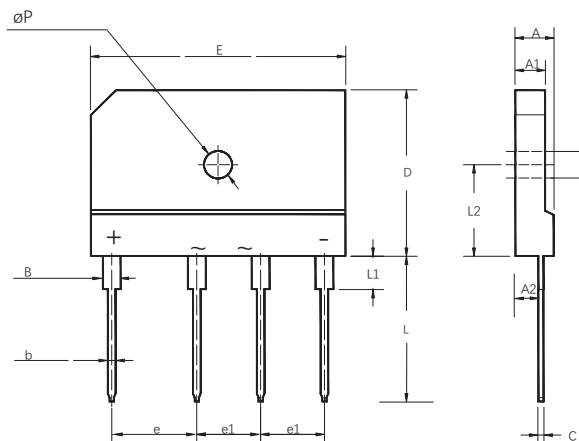


Fig.5-Typical Junction Capacitance(Per diode)



**GBJ-HB**



GBJ		
Dim	Min	Max
A	4.40	5.00
A1	3.30	3.80
A2	2.60	3.00
B	1.90	2.40
b	0.90	1.10
C	0.60	0.80
D	19.60	20.60
D1	18.50	19.50
E	29.00	31.00
E1	28.50	29.50
e	9.50	10.50
e1	7.00	8.00
L	16.60	18.00
L1	3.00	4.20
L2	10.80	11.80
$\phi P$	3.10	3.80
$\phi P1$	5.10	5.90

Dimensions in millimeters

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