GBL806L

LOW VF BRIDGE RECTIFIERS

VOLTAGE	600 Volts	CURRENT	8.0 Ampers

FEATURES

- Glass passivated die construction
- low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

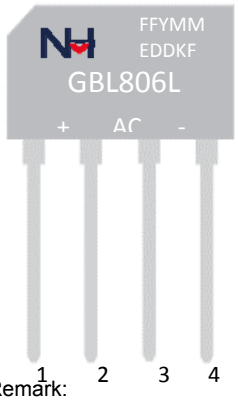
MECHANICAL DATA

- Case: D3K , olded lastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: GBL806L
- Lead Free: For RoHS / Lead Free Version

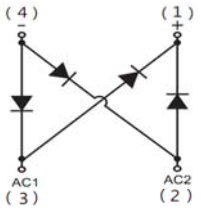
TYPICAL APPLICATIONS

- For use in low voltage ,high frequency inverters ,DC/DC converters,free wheeling ,and polarity protection applications

GBL — Marking & Schematic diagram



PIN	DISCRIPTION
1	Output Cathode(+)
2	Input Pin(AC1)
3	Input Pin(AC2)
4	Output Anode(-)



Remark:

①.NH=niuhang trademark;

②.FF=Product line code,According to actual changes

YWW=Data code,According to actual changes

EDDKF=Inernal control code,According to actual changes

③.GBL806L=Modle

④."+ AC -"= Polarity mark

Single phase,half wave,60Hz,resistive or inductive load.For capacitive load,derate current by 20%

Maximum Ratings (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	*Symbol*	*GBL806L*	*Unit*
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltag	V_{RMS}	420	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current @ TC=100°C (see fig.1) with heatsink / without heatsink	$I_{F(AV)}$	8 / 3.2	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rate Load (JEDEC Method)	I_{FSM}	200	A
Current Squared Time Per Diode(t<8.3ms)	I^2t	166.00	A^2sec

Electrical Characteristcs (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	*Symbol*	*GBL806L*	*Unit*
Maximum Forward Voltage Per Diode (Note 1) @8.0A / @4.0A	V_{FM}	1.05 / 0.95	V
Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 2) T_C=25℃ / T_C=150℃	I_{RRM}	5 / 500	uA
Typical Junction Capacitance(Note 3)	C_J	60	pF

Thermal Characteristcs (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	*Symbol*	*GBL806L*	*Unit*
Operating Junction Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STD}	-55 to +150	
Typical thermal resistance (Note 4)	$R_{\theta JA}$ / $R_{\theta JL}$	34 / 4.0	℃/W

Notes: 1. Pulse test: 300 μs pulse width,1% duty cycle

2. Pulse test: pulse width≤40ms
3. Measured at 1 MHZ and applied reverse voltage of 4.0 VDC.
4. Device mounted on 75mmx75mmx1.6mm Cu Plate Heatsink.

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Pb-Free RoHS COMPLIANT

RATING AND CHARACTERISTIC CURVES

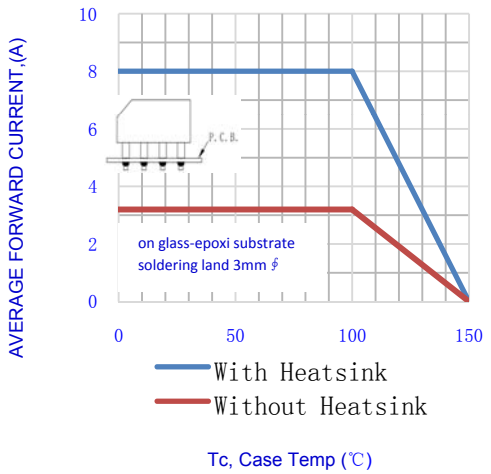

Fig.1-FORWARD CURRENT DERATING CURVE

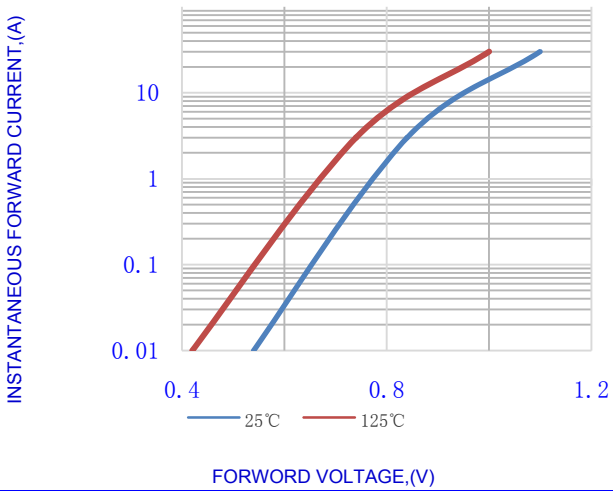

Fig.2- TYPICAL INSTANTANEOUS FORWARD

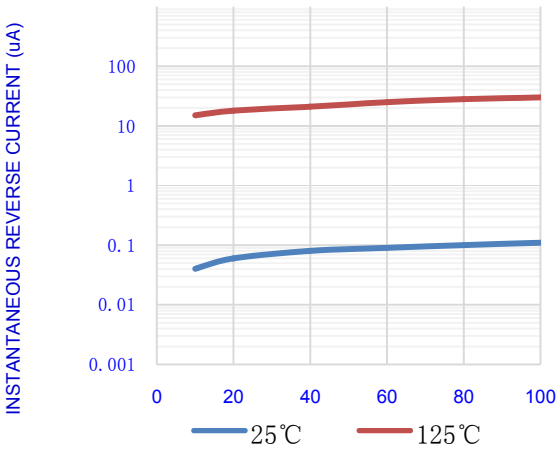

Fig.3- TYPICAL REVERSE CHARACTERISTICS

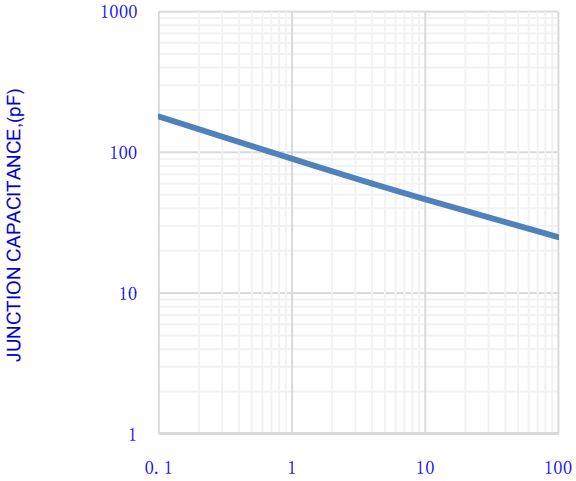

Fig.4- TYPICAL JUNCTION CAPACITANCE

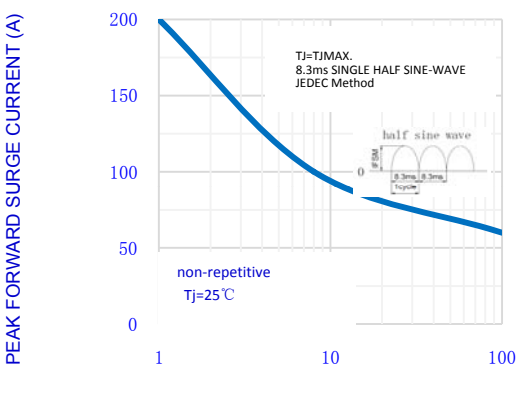

Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

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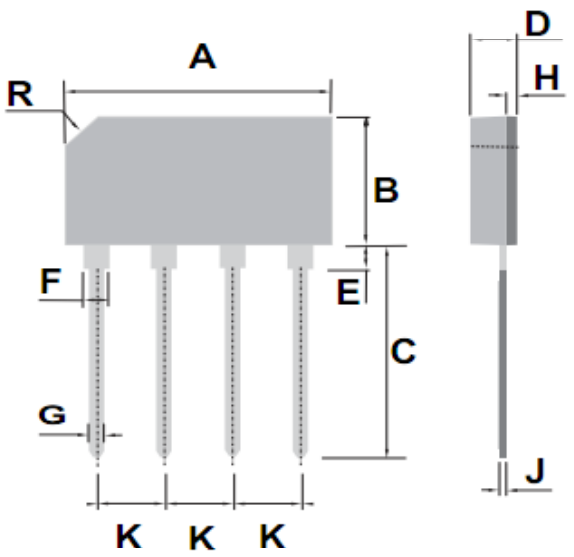
OUTLINE DRAWINGS



OUTLINE DIMENSIONS						
DIM	MILLIME TERS			INCHES		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	19.6	-	20.6	0.772	-	0.811
B	10.7	-	11.2	0.421	-	0.441
C	12.7	-	14.2	0.500	-	0.559
D	3.4	-	3.6	0.134	-	0.142
E	2.4	-	3.0	0.094	-	0.118
F	1.1	-	1.8	0.043	-	0.071
G	0.95	-	1.15	0.037	-	0.045
H	0.6	-	1.1	0.024	-	0.043
J	0.4	-	0.6	0.016	-	0.024
K	4.5	-	5.3	0.177	-	0.209
R	-	3	-	-	0.118	-

GBL

Packing Information

Package	Pack	Quantity (pcs/box)	Box Size L×W×H(mm)	Carton Size L×W×H(mm)	Quantity (box/carton)
GBL	B/P	500	230*50*230	495*245*180	10

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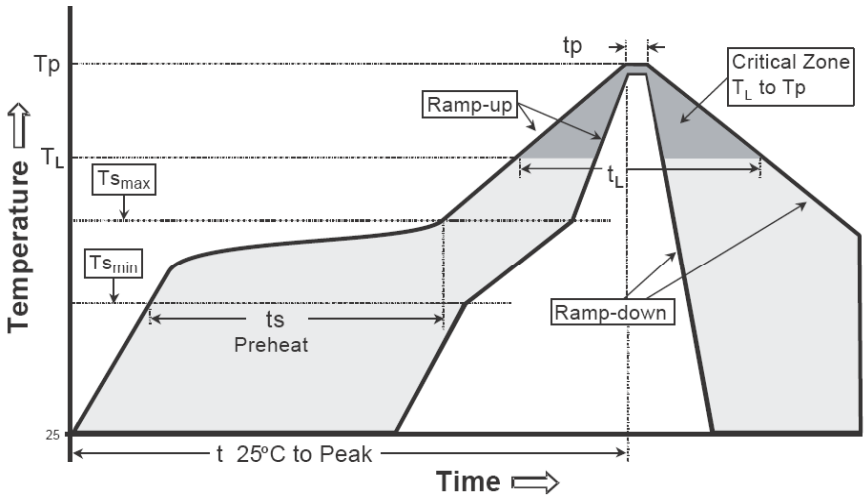
Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(TS min) −Temperature Max(TS max) −Time(ts min to ts max)	 100°C 150°C 60-120 seconds	 150°C 200°C 60-180 seconds
Time maintained above: −Temperature (TL) − Time (tL)	 183°C 60-150 seconds	 217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

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