

GBU1506G THRU GBU1510G

BRIDGE RECTIFIERS



VOLTAGE 600~1000 Volts

CURRENT 15 Ampers

Marking and circuit diagram

FEATURES

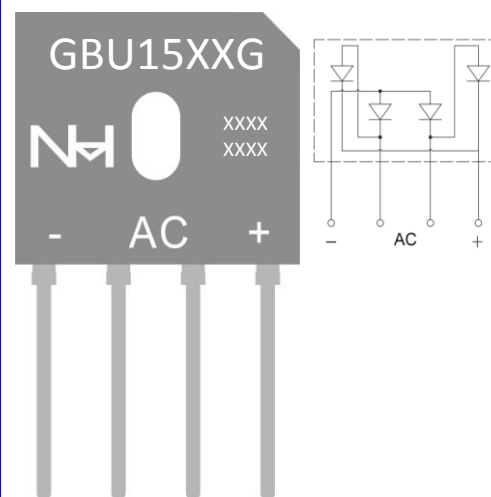
- Glass passivated die construction
- low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

MECHANICAL DATA

- Case: GBU , olded lastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- 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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C(UNLESS OTHERWISE NOTED))

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

Parameter	Symbol	GBU1506G	GBU1508G	GBU1510G	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Maximum RMS voltag	V_{RMS}	420	560	700	V
Maximum DC blocking voltage	V_{RMS}	600	800	1000	V
Average rectified output current @Tc=100°C (See Fig.1)(Note 1)	$I_{F(AV)}$	15 3.2			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	240			A
Current squared time@1ms≤t≤8.3ms, Rating of per diode	$I^2 t$	166			A ² S
Maximum instantaneous forward voltage at 7.5 A(Note 2)	V_F	1.1			V
Maximum instantaneous reverse current at rated DC blocking voltage	I_{RRM}	10 500			uA
Typical junction capacitance per element (Note 3)	C_J	65			pF
Operating junction and storage temperature range	T_J, T_{STD}	-55 to +150			°C

Notes: 1. Device mounted on 300x300x1.6mm cu plate heatsink.

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

3.Measured at 1 MHZ and applied reverse voltage of 4.0 VDC.

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RATING AND CHARACTERISTIC CURVES

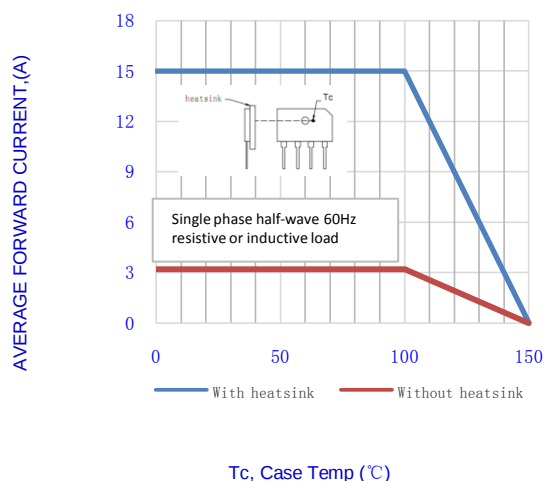


Fig.1- FORWARD CURRENT DERATING CURVE

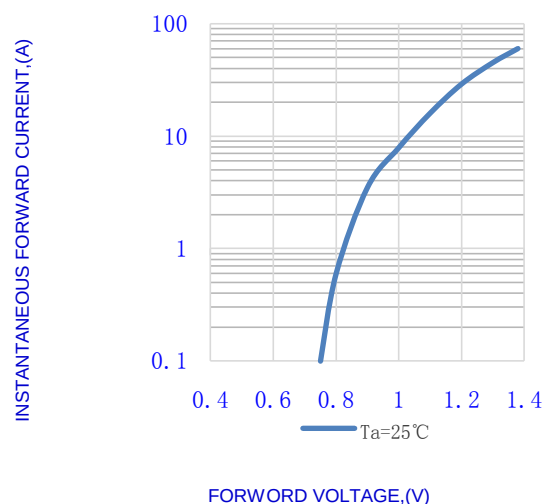


Fig.2-TYPICAL INSTANTANEOUS FORWARD

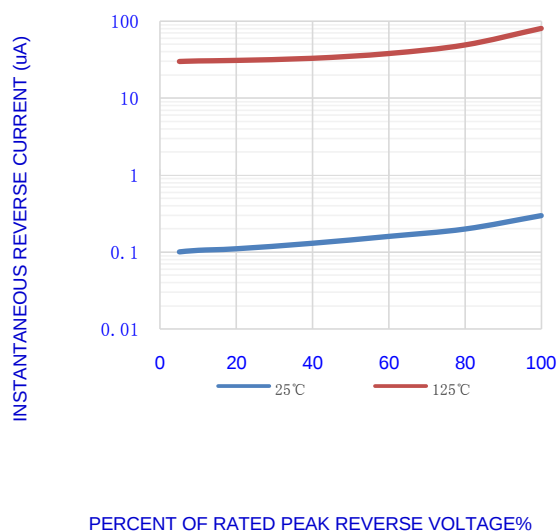


Fig.3- TYPICAL REVERSE CHARACTERISTICS

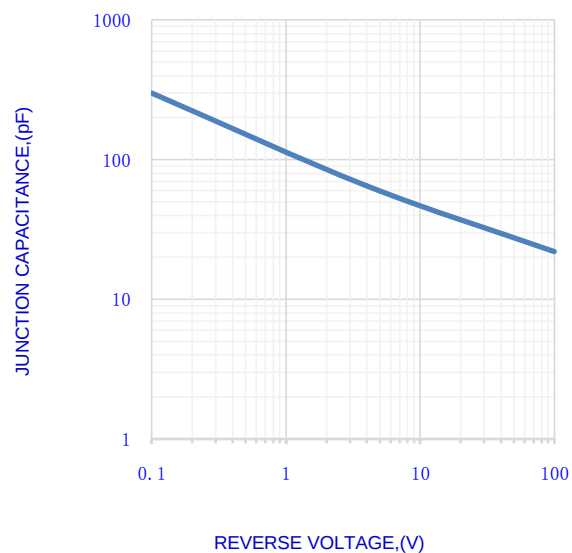


Fig.4-TYPICAL JUNCTION CAPACITANCE

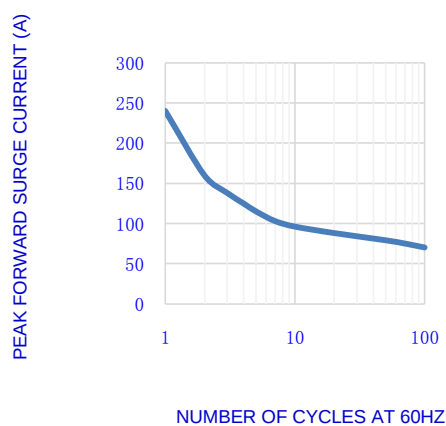


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

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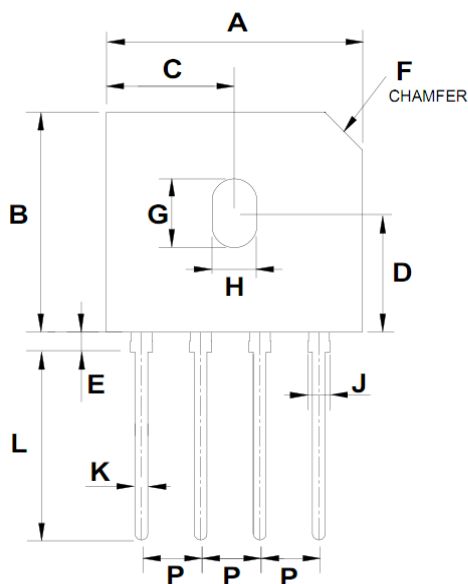


Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	GBU	Unit
Typical thermal resistance (Note 4)	R _{θJA}	23.0	°C/W
	R _{θJL}	1.80	

Note: 4. Device mounted on 300x300x1.6mm cu plate heatsink.

OUTLINE DRAWINGS



DIM	OUTLINE DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	21.8	-	22.2	0.86	-	0.874
B	18.3	-	19.1	0.72	-	0.752
C	10.9	-	11.1	0.43	-	0.437
D	9.8	-	10.2	0.392	-	0.401
E	1.95	-	2.3	0.077	-	0.091
F	-	3.2°45°	-	-	0.126°45°	-
G	5.7	-	5.9	0.224	-	0.232
H	3.7	-	3.9	0.146	-	0.154
J	2.05	-	2.35	0.081	-	0.093
K	0.9	-	1.2	0.035	-	0.047
L	17.27	-	18.29	0.68	-	0.72
M	0.46	-	0.56	0.018	-	0.022
N	2.3	-	2.7	0.091	-	0.106
P	4.8	-	5.3	0.19	-	0.21
T	3.37	-	3.53	0.133	-	0.139

Maximum instantaneous reverse current at rated DC

Product code	Pack	Quantity (pcs/box)	Box Size L×W×H (mm)	Carton Size L×W×H (mm)	Quantity (box/carton)
GBU1506G THRU GBU1510G	B/P	250	230×45×120	360×240×190	12