GBU1006~GBU1010(LS)

GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE – 600 to 1000 Volts
FORWARD CURRENT – 10 Amperes

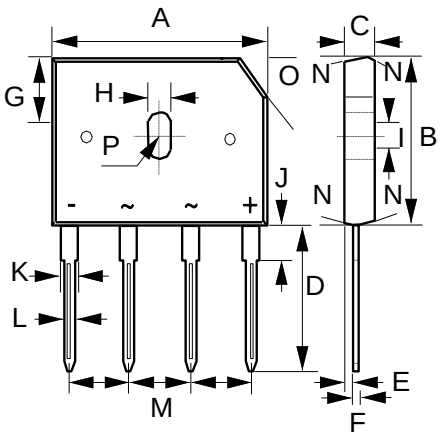
FEATURES

- Rating to 1000V PRV.
- Ideal for printed circuit board
- Reliable construction utilizing molded plastic technique.
- UL recognition file # E95060
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: GBU
- Package Material: Plastic material, UL flammability classification 94V-0
- Terminals: Tin e3
- Polarity Indicator: Symbol molded on body
- Weight: 3.72 grams (Approximate)

GBU



GBU		
DIM	MIN	MAX
A	21.80	22.30
B	18.30	18.80
C	3.30	3.56
D	17.50	18.00
E	0.76	1.00
F	0.46	0.56
G	7.40	7.90
H	3.50	4.10
I	1.65	2.16
J	2.25	2.75
K	1.95	2.35
L	1.02	1.27
M	4.83	5.33
N	7.0° TYPICAL	
O	(3.2) x 45°	
P	1.90 PADIUS	
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	GBU1006	GBU1008	GBU1010	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Maximum DC blocking voltage	V_{DC}	600	800	1000	V
Average rectified output current per device with heatsink (Note 2) without heatsink @ T_C=100°C	$I_{(AV)}$	10 3.2			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load @ T_A=25°C @ T_A=125°C	I_{FSM}	240 220			A
Peak forward surge current 1ms single half sine-wave superimposed on rated load @ T_A=25°C @ T_A=125°C	I_{FSM}	480 440			A
I^2t rating for fusing (t = 8.3 ms) @ T_A=25°C	I^2t	239			A^2S
Mounting Torque (recommended torque: 0.5 N.m)	TOR	0.8			N.m
Operating and storage temperature range	T_J ,T_{STG}	-55 to +150			°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX	UNIT
Forward voltage	I_F = 5.0A	T_J = 25°C	V_F	1.0	V
	I_F = 10A	T_J = 25°C		1.2	
Leakage current	V_R at rated	T_J = 25°C T_J = 125°C	I_R	5 500	uA
Typical junction capacitance (Note 4)			C_J	60	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance	$RthJ_C$ (Note 5) $RthJ_C$ (without heatsink) $RthJ_A$ (without heatsink)	2.0 5.6 22	°C/W

Note:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Thermal resistance junction to case and ambient in accordance with JESD-51. Device mounted on 150mm * 150mm * 1.6mm Cu plate heatsink.

RATING AND CHARACTERISTIC CURVES
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FIG.1- FORWARD CURRENT DERATING CURVE

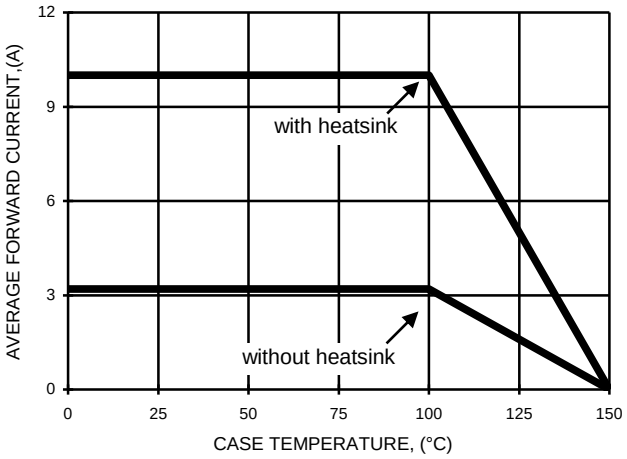


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

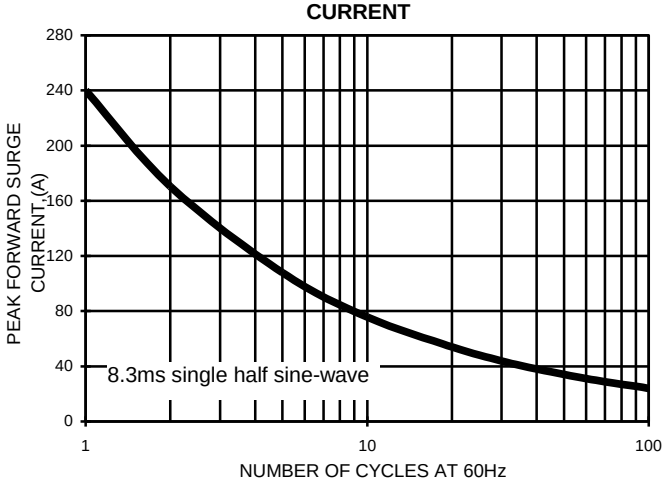


FIG.3- TYPICAL FORWORD CHARACTERISTICS

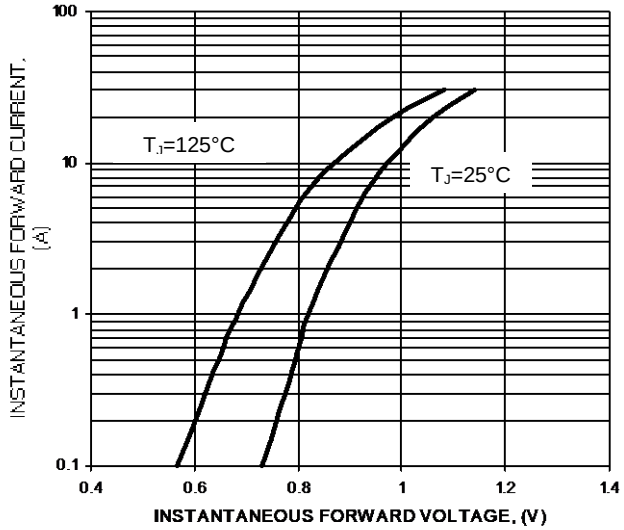


FIG.4- TYPICAL JUNCTION CAPACITANCE

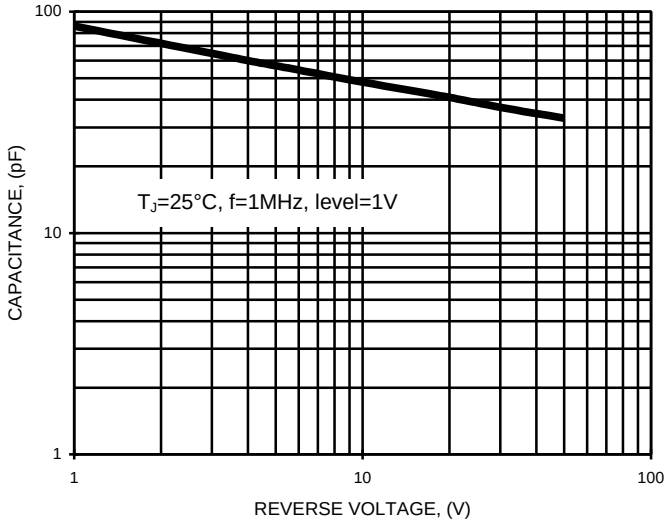


FIG.5- TYPICAL REVERSE CHARACTERISTICS

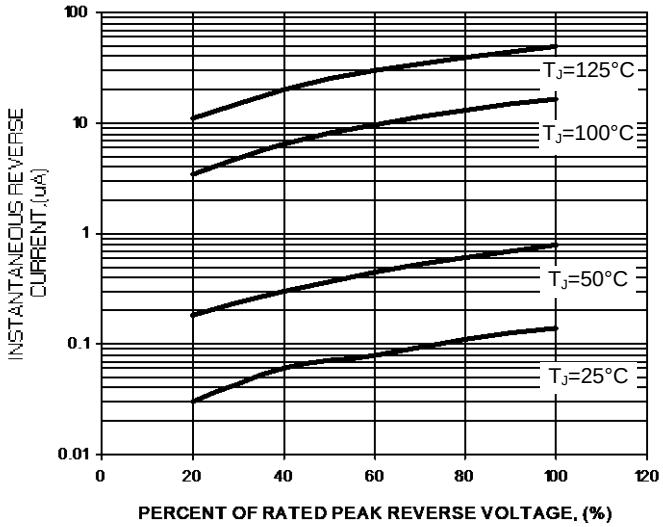
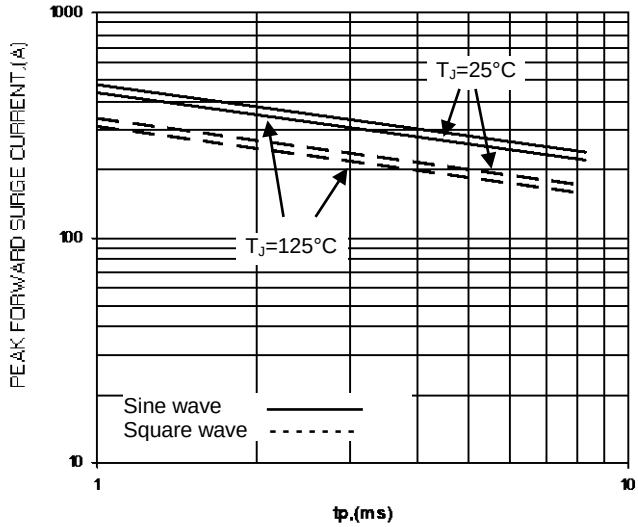


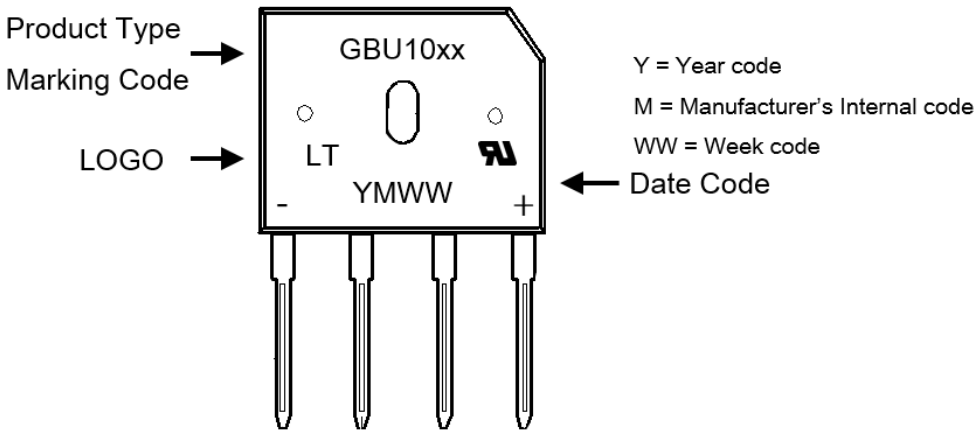
FIG.6- NON-REPETITIVE SURGE CURRENT



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
GBU1006_HF	GBU	20	Tube
GBU1008_HF	GBU	20	Tube
GBU1010_HF	GBU	20	Tube

Marking Information :



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