GBJ5010(LS)

GLASS PASSIVATED BRIDGE RECTIFIER

REVERSE VOLTAGE –1000 Volts
FORWARD CURRENT – 50 Amperes

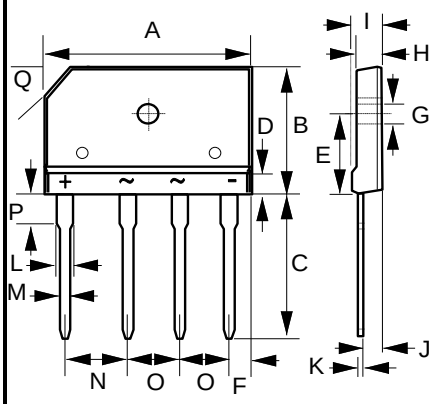
FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability.
- UL recognition file # E95060
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package Material: Green molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
- Polarity indicator: Symbol molded on body
- Weight: 7.2 grams (Approximate)
- Marking code : GBJ5010

GBJ



GBJ		
DIM	MIN	MAX
A	29.70	30.30
B	19.70	20.30
C	17.00	18.00
D	4.70	4.90
E	10.80	11.20
F	2.30	2.70
G	3.10Ø	3.40Ø
H	3.40	3.80
I	4.40	4.80
J	2.50	2.90
K	0.60	0.80
L	2.00	2.40
M	0.90	1.10
N	9.80	10.20
O	7.30	7.70
P	3.80	4.20
Q	(3.0) x 45°	
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	1000	V
Maximum DC blocking voltage	V_{DC}	1000	V
Average rectified output current per device with heatsink (Note 5) without heatsink @ T_C = 85°C	$I_{(AV)}$	50 4.9	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load @ T_J=25°C @ T_J=125°C	I_{FSM}	500 400	A
Peak forward surge current 1ms single half sine-wave superimposed on rated load @ T_J=25°C @ T_J=125°C	I_{FSM}	1000 800	A
I^2t rating for fusing (t = 8.3ms)	I^2t	1037	A^2S
Mounting Torque (recommended torque: 0.5 N.m)	TOR	0.8	N.m
Operating and storage temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	VALUE	UNIT
Forward voltage	I_F = 25A	T_J = 25°C	V_F	1.1	V
Leakage current	V_R = 1000V	T_J = 25°C T_J = 125°C	I_R	10 500	uA
Typical junction capacitance (Note 4)			C_J	205	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance (Note 5)	$RthJ_A$ $RthJ_C$ $RthJ_L$	1.6 0.4 1.2	°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 Lead, device mounted on heatsink.

RATING AND CHARACTERISTIC CURVES
GBJ5010

FIG.1- FORWARD CURRENT DERATING CURVE

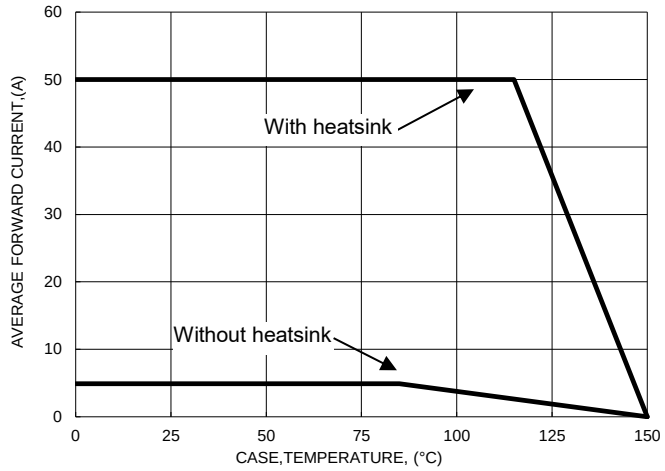


FIG.2- FORWARD CURRENT DERATING CURVE

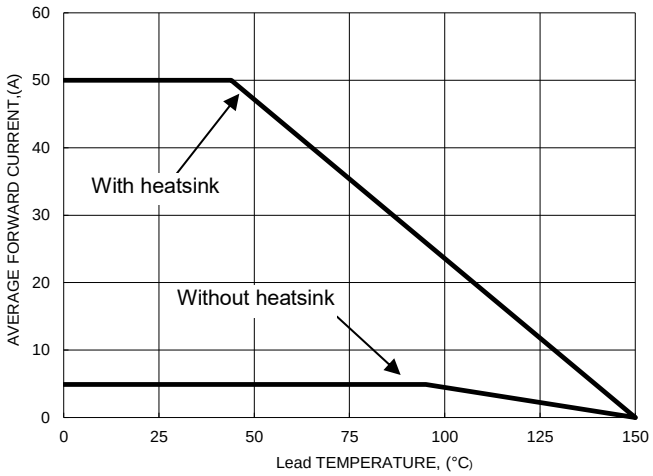


FIG.3- MAXIMUM NON-REPETITIVE SURGE CURRENT

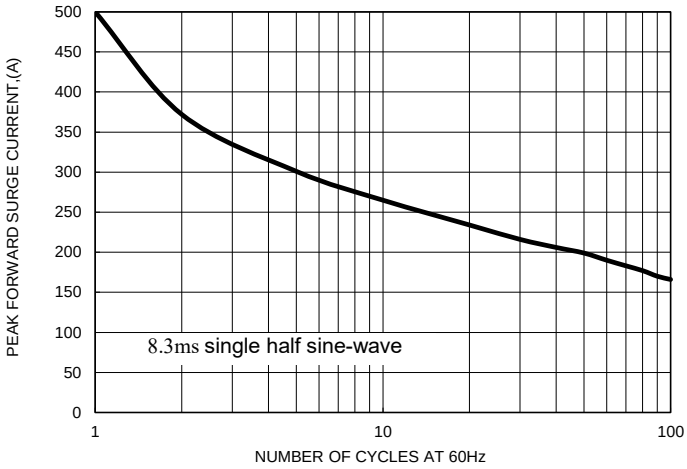


FIG.4- TYPICAL JUNCTION CAPACITANCE

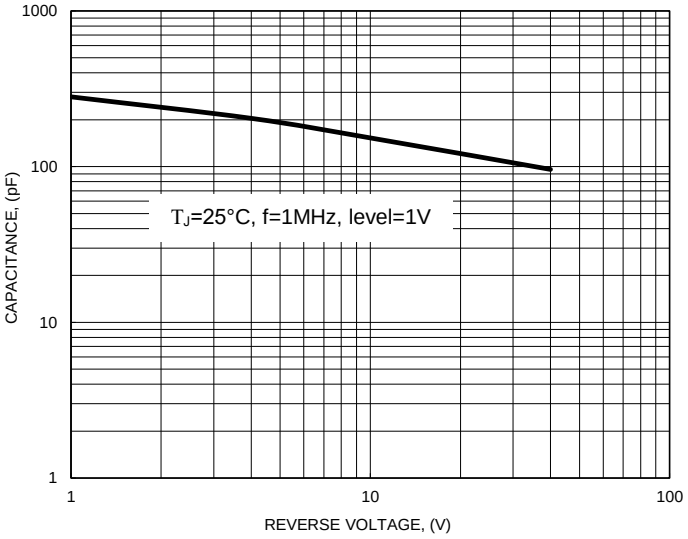


FIG.5- TYPICAL FORWORD CHARACTERISTICS

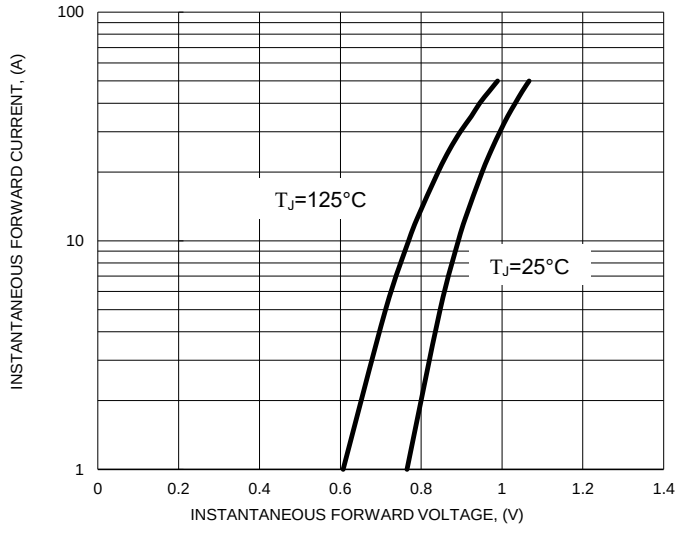
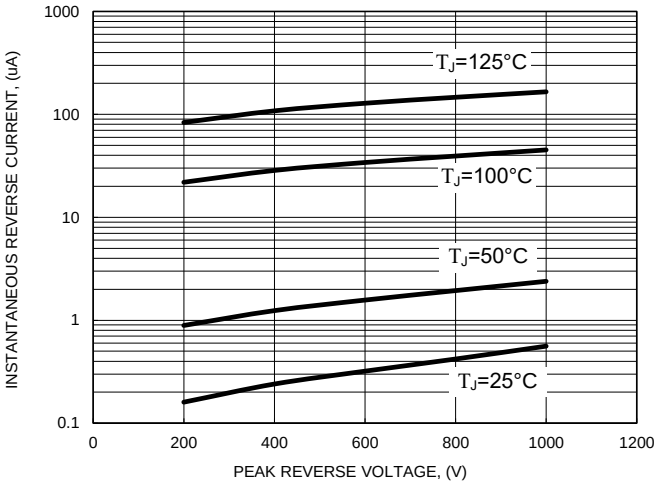


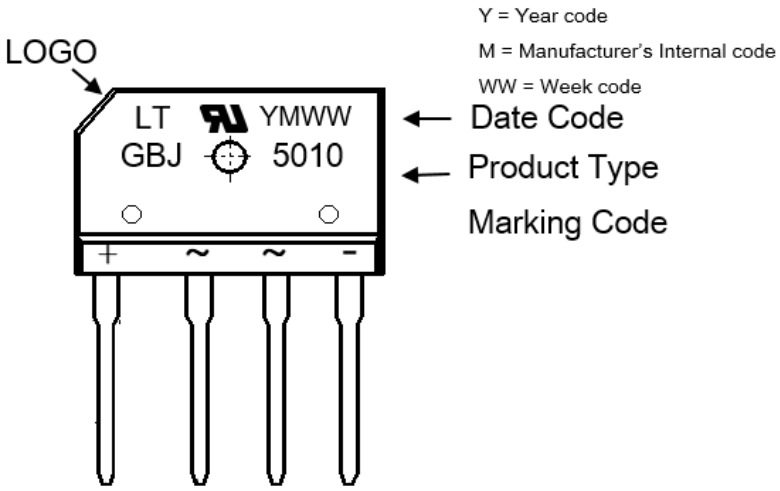
FIG.6- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
GBJ5010_HF	GBJ	15pcs	Tube

Marking Information :



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