

GLASS PASSIVATED BRIDGE RECTIFIER

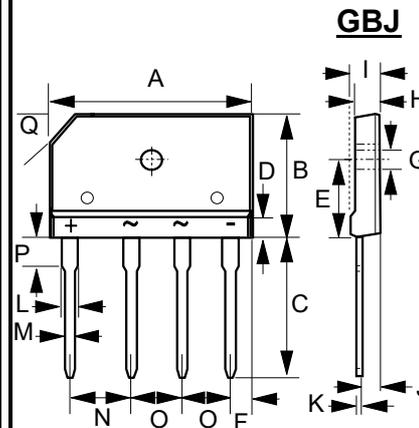
**REVERSE VOLTAGE –1000 Volts
FORWARD CURRENT – 50 Amperes**

FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability.
- UL recognition file # E95060

MECHANICAL DATA

- Case 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		
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 2) without heatsink @ $T_C = 85^\circ\text{C}$	$I_{(AV)}$	50 4.9	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load @ $T_J = 25^\circ\text{C}$ @ $T_J = 125^\circ\text{C}$	I_{FSM}	500 400	A
Peak forward surge current 1ms single half sine-wave superimposed on rated load @ $T_J = 25^\circ\text{C}$ @ $T_J = 125^\circ\text{C}$	I_{FSM}	1000 800	A
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)	$I^2 t$	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	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note 1)	$I_F = 25\text{A}$ $T_J = 25^\circ\text{C}$	V_F	1.1	V
Leakage current	$V_R = 1000\text{V}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_R	10 500	μA
Typical junction capacitance (Note 1)		C_J	205	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Typical	UNIT
Typical thermal resistance (Note 2)	R_{thJA}	1.6	$^\circ\text{C}/\text{W}$
	R_{thJC}	0.4	
	R_{thJL}	1.2	

Note :

- (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
- (2) Thermal Resistance Junction to Lead, device mounted on heatsink.

RATING AND CHARACTERISTIC CURVES

GBJ5010



FIG.1- FORWARD CURRENT DERATING CURVE

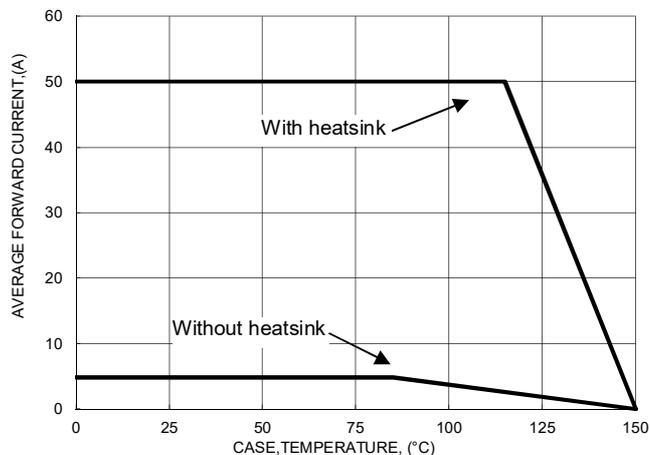


FIG.2- FORWARD CURRENT DERATING CURVE

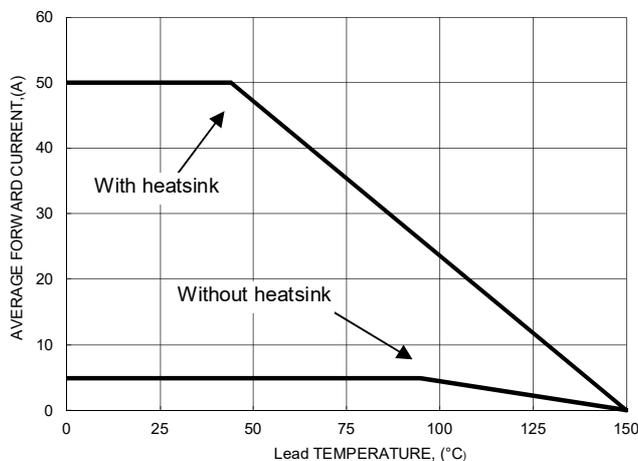


FIG.3- MAXIMUM NON-REPETITIVE SURGE CURRENT

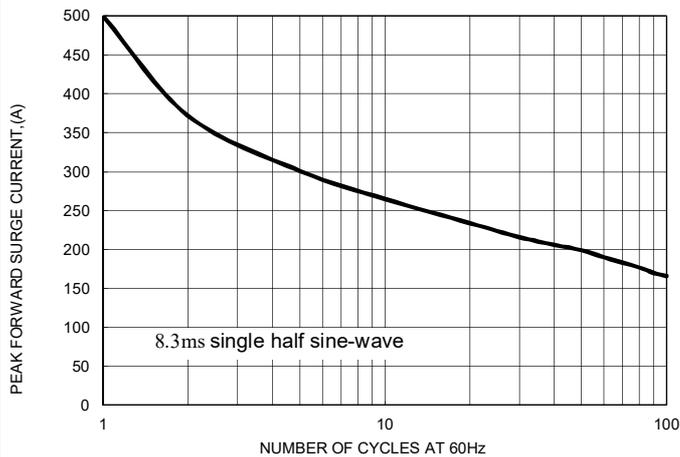


FIG.4- TYPICAL JUNCTION CAPACITANCE

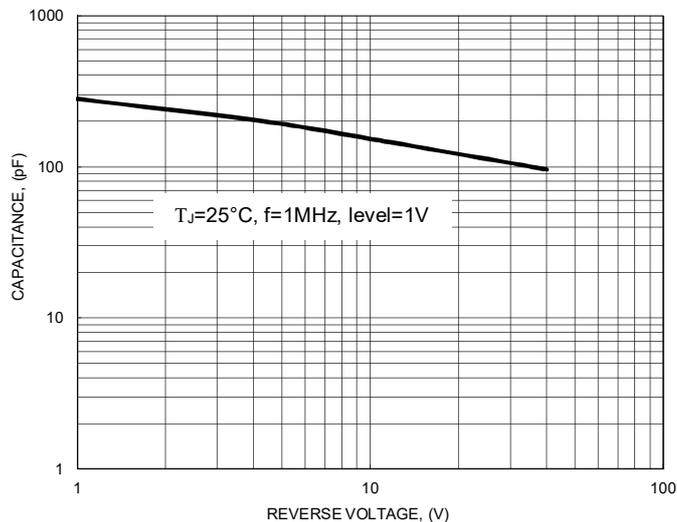


FIG.5- TYPICAL FORWARD CHARACTERISTICS

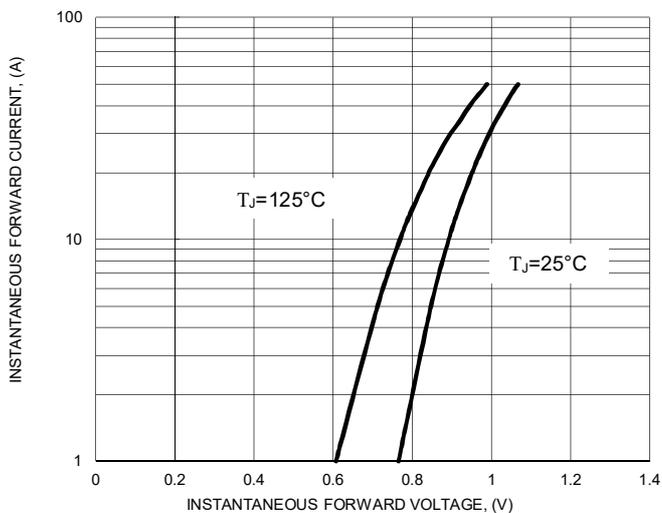
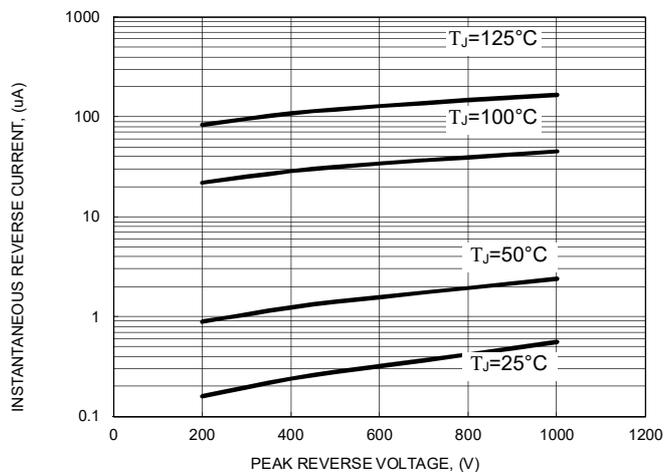


FIG.6- TYPICAL REVERSE CHARACTERISTICS



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