

GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE – 600Volts
FORWARD CURRENT – 25 Amperes

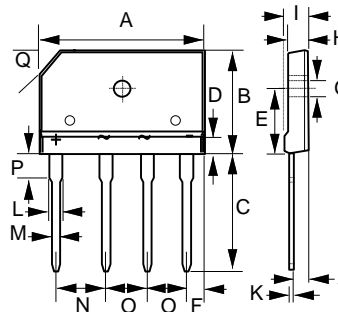
FEATURES

- Low forward Voltage (V_F) Drop performance
- High Thermal Radiation
- High Average Current
- High Surge 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: GBJ
- Package Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Component in accordance to RoHs 2002/95/EC
- Polarity indicator: Symbol molded on body
- Weight: 0.23 ounces, 6.6 grams
- Mounting position: Any

GBJ



GBJ		
DIM.	MIN.	MAX.
A	29.70	30.30
B	19.70	20.30
C	17.0	18.0
D	4.70	4.90
E	10.80	11.20
F	2.30	2.70
G	3.10 \varnothing	3.40 \varnothing
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 Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	GBJ25JL	UNIT
Device Marking Code	Note 4	GBJ25JL	---
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Average Rectified Output Current	$I_{F(AV)}$	25 4.5	A
Peak Forward Surge Current	I_{FSM}	320	A
8.3ms Single Half Sine-Wave		250	
Peak Forward Surge Current	I_{FSM}	640	A
1.0ms Single Half Sine-Wave		500	
I^2t Rating for Fusing (t = 8.3ms)	I^2t	425	A ² S
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating Junction Temperature Range	T_J	-40 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Breakdown Voltage	$I_R=10\mu A$ $T_J=25^\circ C$	V_B	600	---	---	V
Forward Voltage (Note 4)	$I_F=12.5A$ $T_J=25^\circ C$	V_F	---	0.87	0.92	V
Leakage Current	$V_R=600V$ $T_J=25^\circ C$	I_R	---	---	10	μA
Reverse Recovery Time	$I_F=0.1A$, $I_R=0.1A$ per diode	t_{rr}		3		us
Typical Junction Capacitance per Element (Note 4)		C_T		150		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical Thermal Resistance (without Heatsink)	R_{thJC}	6	°C/W
	R_{thJL}	13	
	R_{thJA}	15	
Typical thermal resistance (Note 5)	R_{thJC}	0.8	°C/W
	R_{thJL}	4	
	R_{thJA}	5	

Notes:

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. Device mounted on 314mm x 314mm x 20mm Al Plate Heatsink.

RATING AND CHARACTERISTIC CURVES
GBJ25JL(LS)

FIG.1- FORWARD CURRENT DERATING CURVE

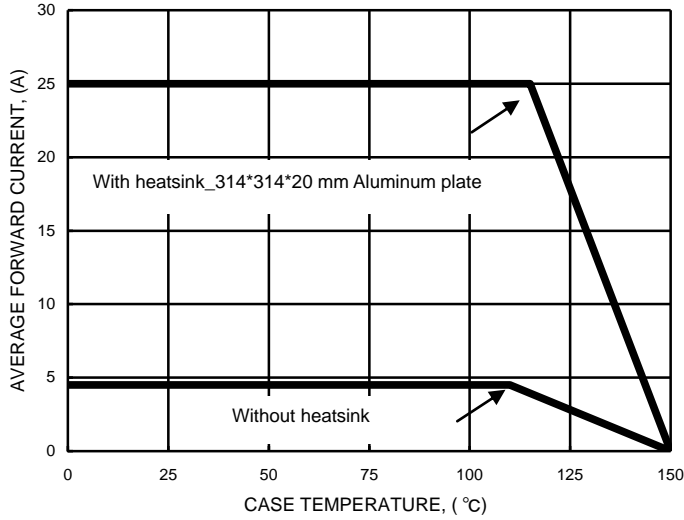


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

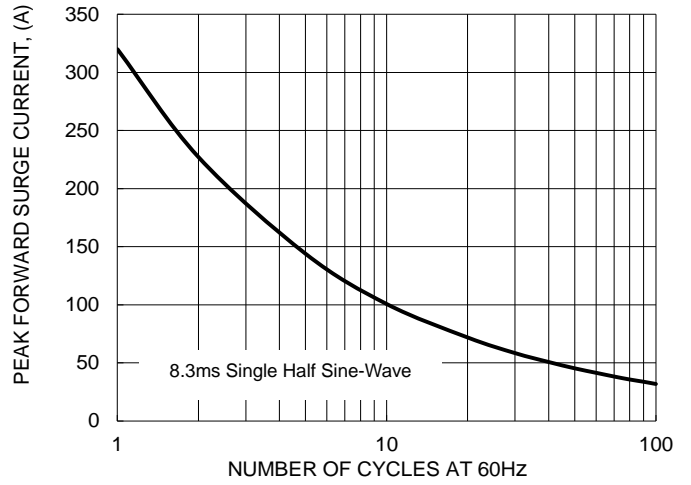


FIG.3- TYPICAL FORWARD CHARACTERISTICS

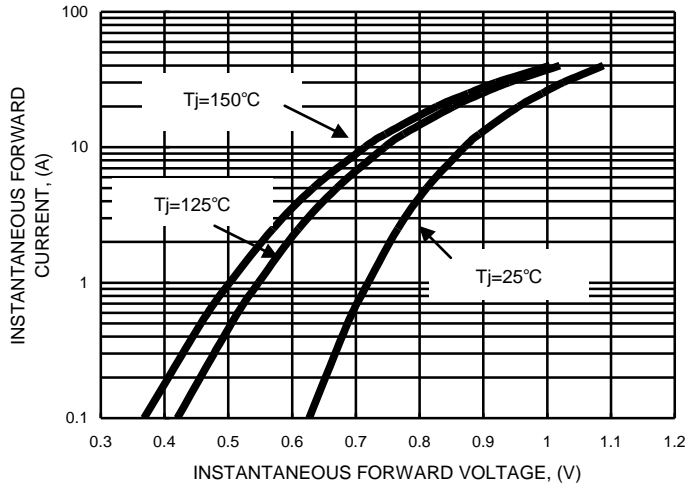


FIG.4- TYPICAL JUNCTION CAPACITANCE

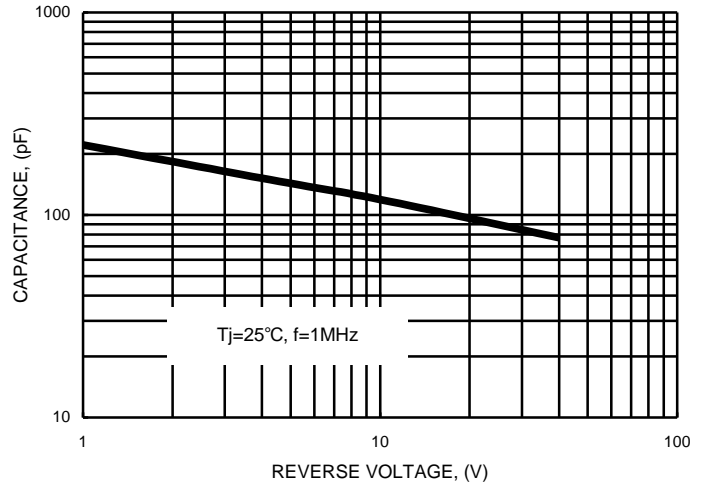


FIG.5- TYPICAL REVERSE CHARACTERISTICS

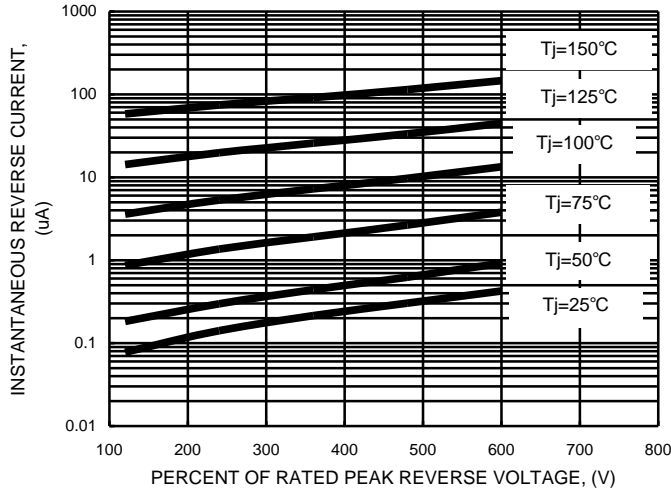
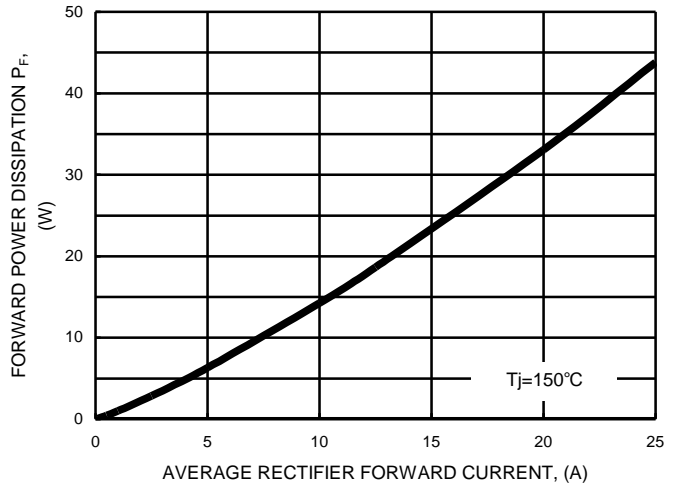


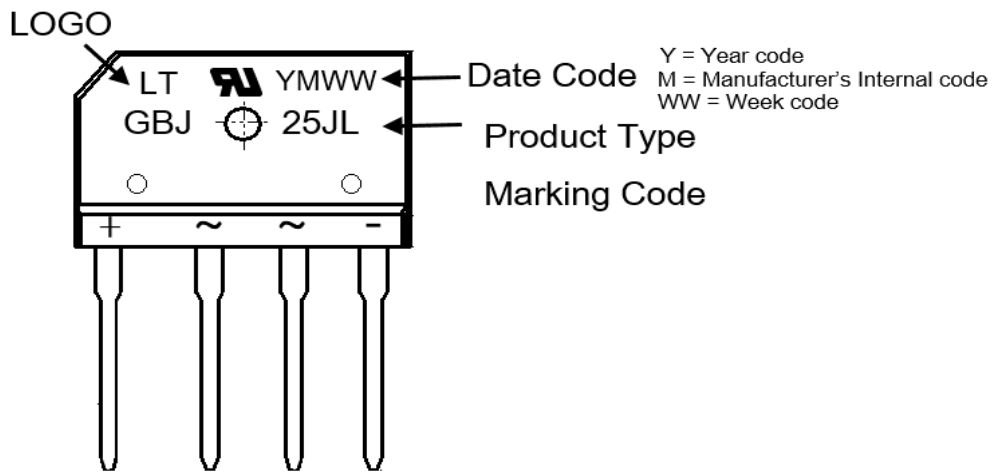
FIG.6- FORWARD POWER DISSIPATION



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
GBJ25JL_HF	GBJ	15	Tube

Marking Information:



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