

# GBJ2506~GBJ2510(LS)

## GLASS PASSIVATED BRIDGE RECTIFIERS

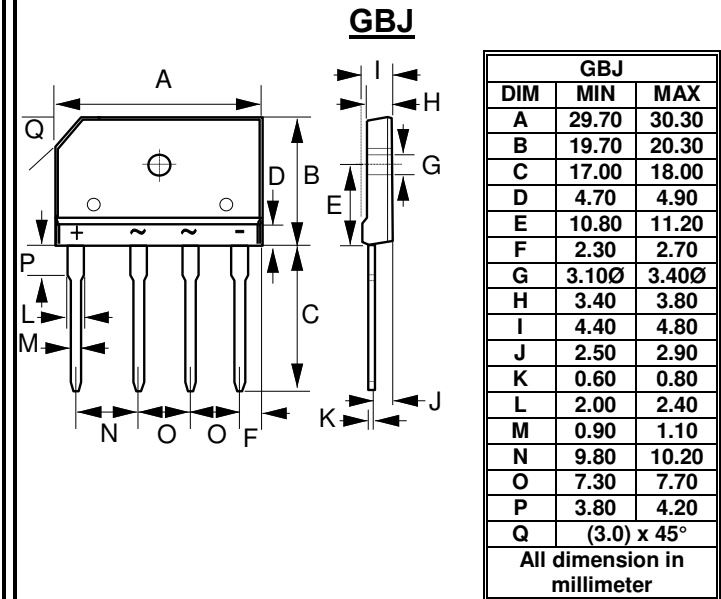
**REVERSE VOLTAGE – 600 to 1000 Volts  
FORWARD CURRENT – 25 Amperes**

### 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: GBJ
- Package Material: Plastic material, UL flammability classification 94V-0
- Component in accordance to RoHs 2002/95/EC
- Polarity indicator: Symbol molded on body
- Weight: 6.82 grams (Approximate)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

### ABSOLUTE RATINGS

PARAMETER	SYMBOL	GBJ2506	GBJ2508	GBJ2510	UNIT
Device marking code	Note	GBJ2506	GBJ2508	GBJ2510	--
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 (Note4) Without heatsink		25 4.2		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	@ $T_A=25^\circ\text{C}$		350		A
Peak forward surge current 1ms single half sine-wave superimposed on rated load	@ $T_A=25^\circ\text{C}$		700		A
Mounting Torque (Recommended torque: 0.5 N.m)	TOR		0.8		N.m
$I^2t$ rating for fusing ( $t = 8.3\text{ms}$ )	$I^2t$		510		A <sup>2</sup> S
Operating and storage temperature range	$T_J, T_{STG}$		-55 to +150		°C

### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Forward voltage	$I_F = 12.5\text{A}$ $T_A = 25^\circ\text{C}$	$V_F$	1.05	V
Leakage current	$V_R$ at rated $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	$I_R$	10 500	$\mu\text{A}$
Typical junction capacitance (Note 4)		$C_J$	85	pF

### THERMAL CHARACTERISTICS

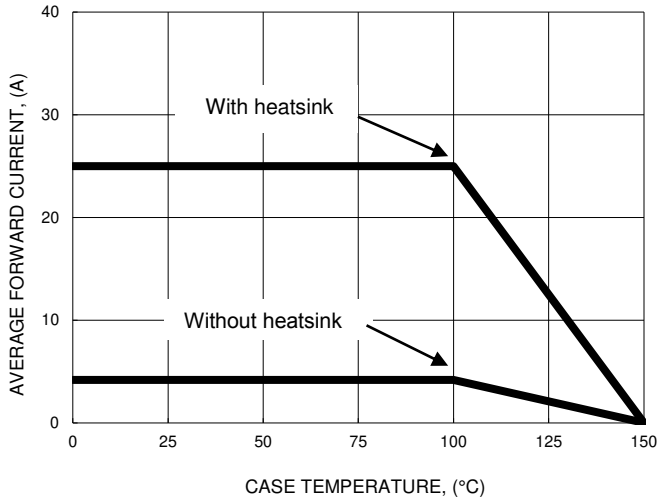
PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 5)	$R_{thJC}$	1	°C/W
	$R_{thJL}$	1	
	$R_{thJA}$	3	

#### Notes:

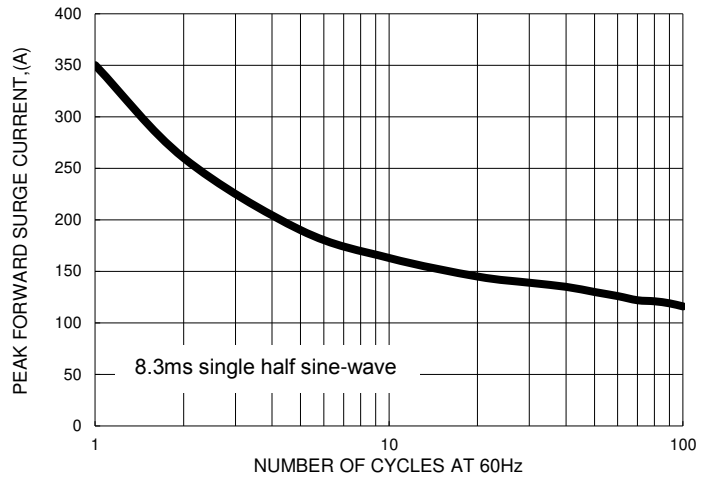
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- 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. Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mounted on 250mm x 250mm x 20mm Aluminum Plate Heatsink.

**RATING AND CHARACTERISTIC CURVES**  
**GBJ2506~GBJ2510**

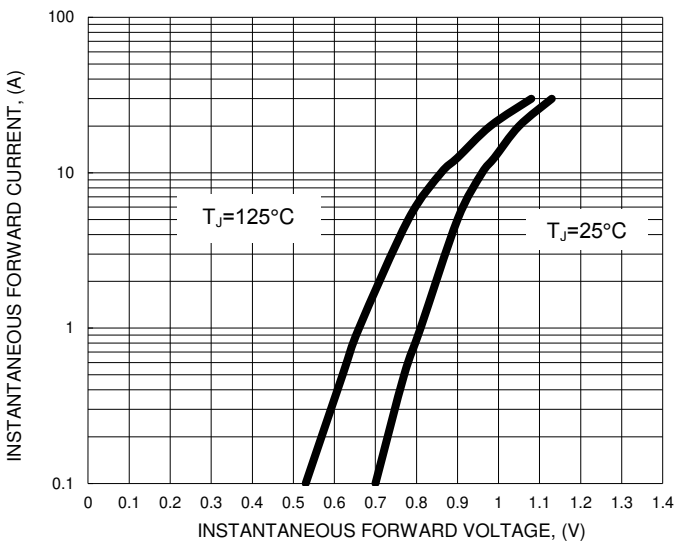
**FIG.1- FORWARD CURRENT DERATING CURVE**



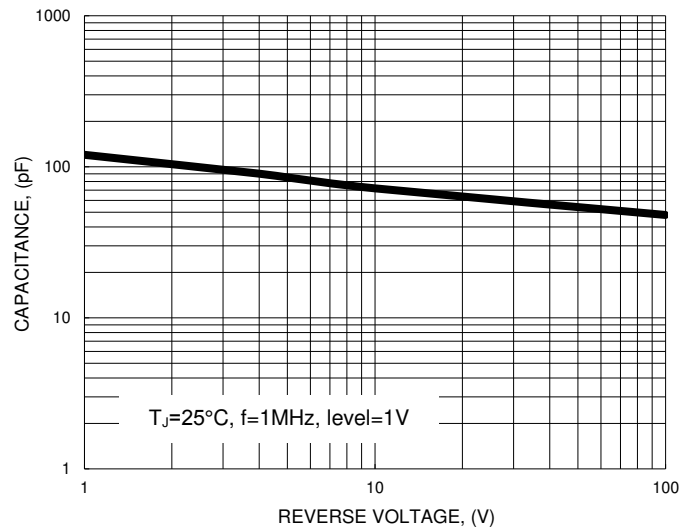
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



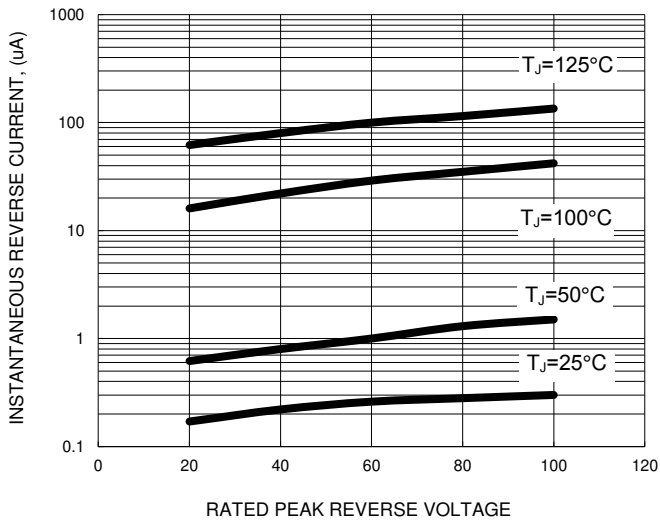
**FIG.3- TYPICAL FOWRD CHARACTERISTICS**



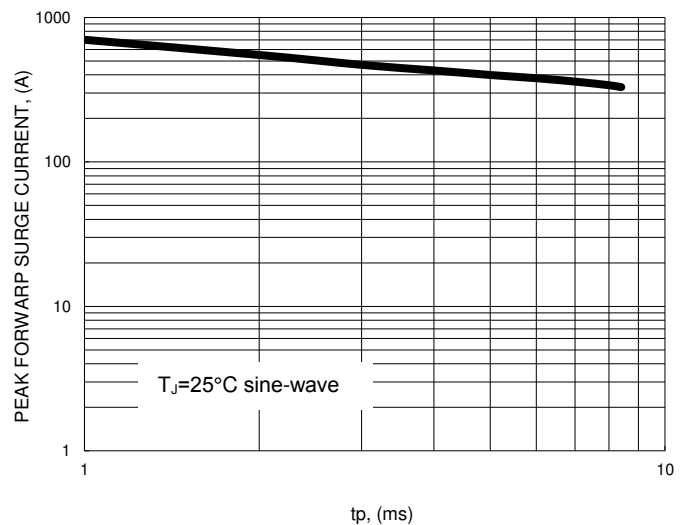
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



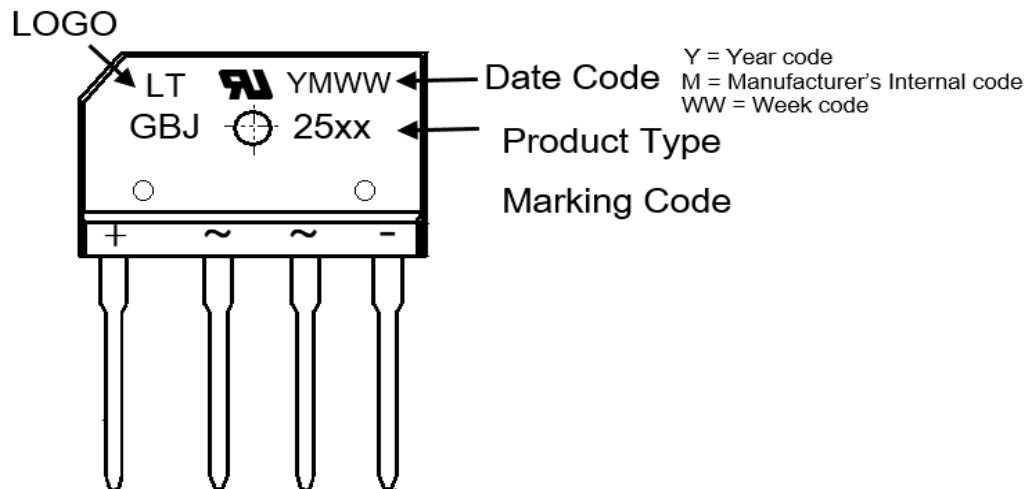
**FIG.6- NON-REPETITIVE SURGE CURRENT**



### Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
GBJ2506_HF	GBJ	15	Tube
GBJ2508_HF	GBJ	15	Tube
GBJ2510_HF	GBJ	15	Tube

### Marking Information:



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