

**GLASS PASSIVATED BRIDGE RECTIFIERS**

**REVERSE VOLTAGE – 600 to 1000 Volts  
FORWARD CURRENT – 35 Amperes**

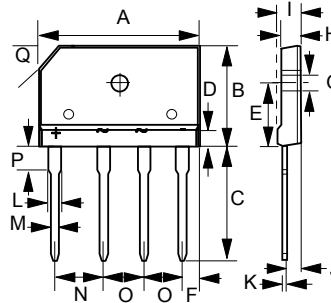
**FEATURES**

- Ideal for printed circuit board
- High surge current capability.
- ESD capability:  
Machine mode, C (> 400 V)  
Human body model, 3B (> 8 kV)
- UL recognized file # E95060

**MECHANICAL DATA**

- Case: GBJ
- Case Material: Plastic material, UL flammability classification 94V-0
- 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 $\phi$	3.40 $\phi$
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	GBJ3506	GBJ3508	GBJ3510	UNIT
Device marking code	Note	GBJ3506	GBJ3508	GBJ3510	--
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600	800	1000	V
Average rectified output current with heatsink T <sub>C</sub> = 80°C without heatsink T <sub>a</sub> = 25°C	I <sub>F(AV)</sub>	35 3.6			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load. T <sub>J</sub> =25°C	I <sub>FSM</sub>	400			A
I <sup>2</sup> t rating for fusing ( 3ms ≤ t ≤ 8.3ms )	I <sup>2</sup> t	664			A <sup>2</sup> S
Mounting torque ( recommended torque: 0.5 N.m)	TOR	0.8			N.m
Operating junction temperature range	T <sub>J</sub>	-40 to +150			°C
Storage temperature range	T <sub>STG</sub>	-55 to +150			°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS		SYMBOL	MAX	UNIT
Forward voltage	I <sub>F</sub> =17.5A	T <sub>J</sub> =25°C	V <sub>F</sub>	1.1	V
Leakage current	VR rated	T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	10 500	uA
Typical junction capacitance (Note1)			C <sub>J</sub>	150	pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note2)	R <sub>thJC</sub> R <sub>thJL</sub>	1.0 1.5	°C/W

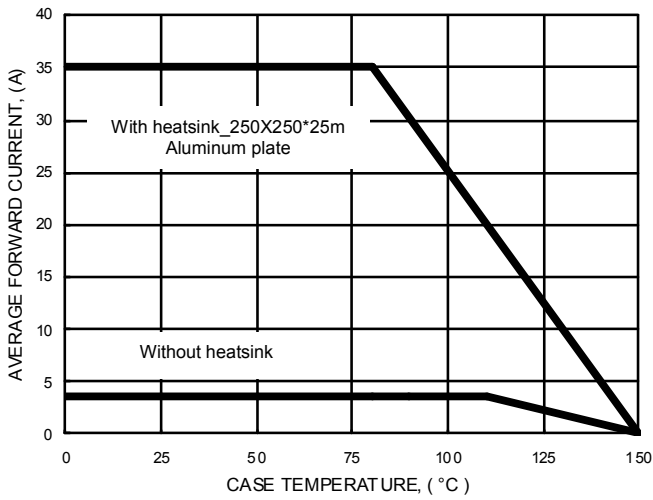
**Note :**

- (1) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (2) Thermal resistance test performed in accordance with JESD-51.  
Device mounted on 250mm x 250mm x 25mm Al plate heatsink.

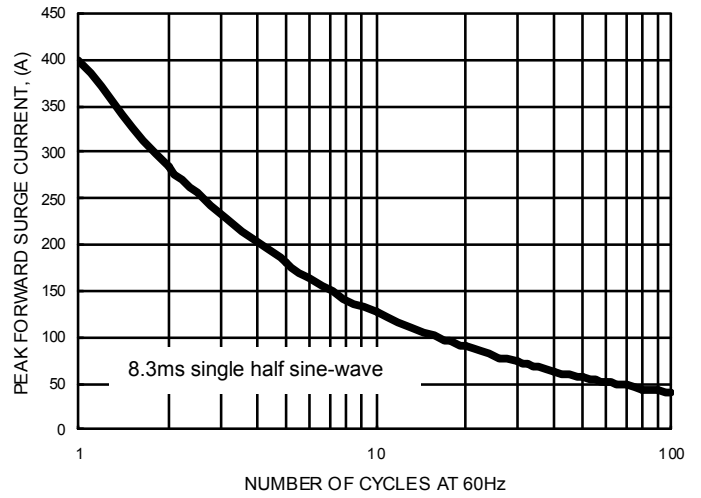
# RATING AND CHARACTERISTIC CURVES GBJ3506 thru GBJ3510



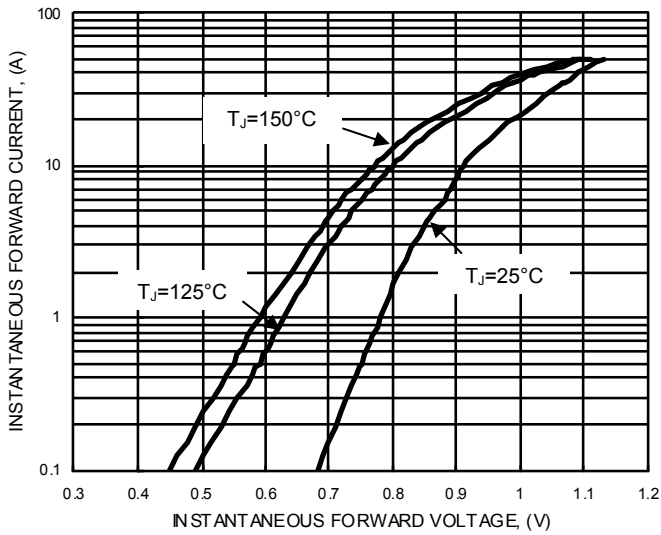
**FIG.1- FORWARD CURRENT DERATING CURVE**



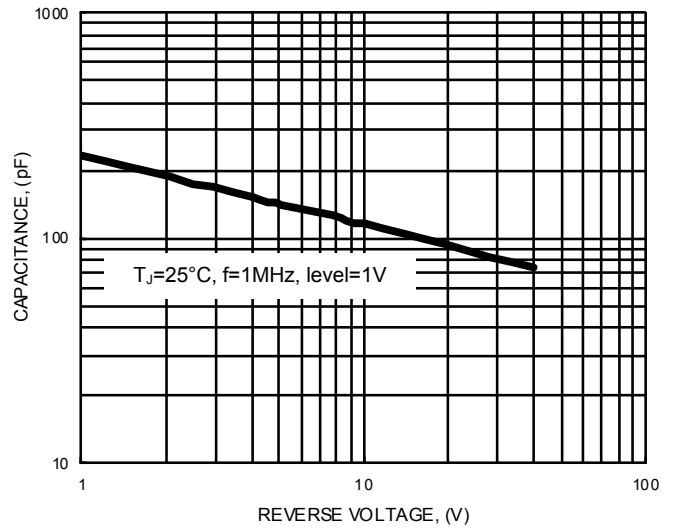
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



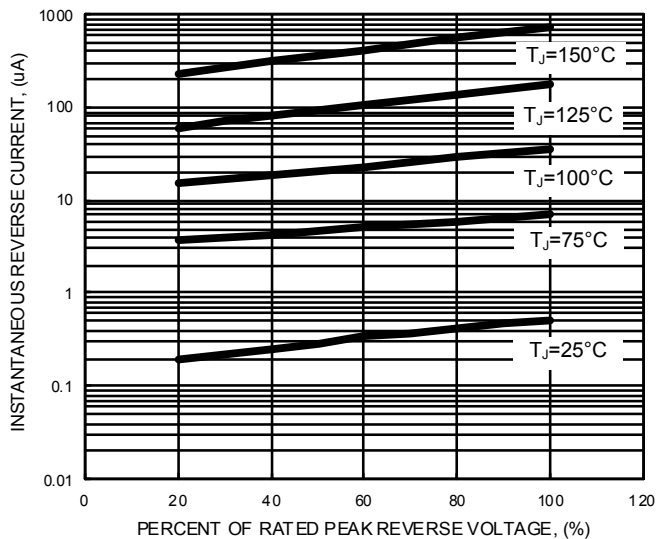
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



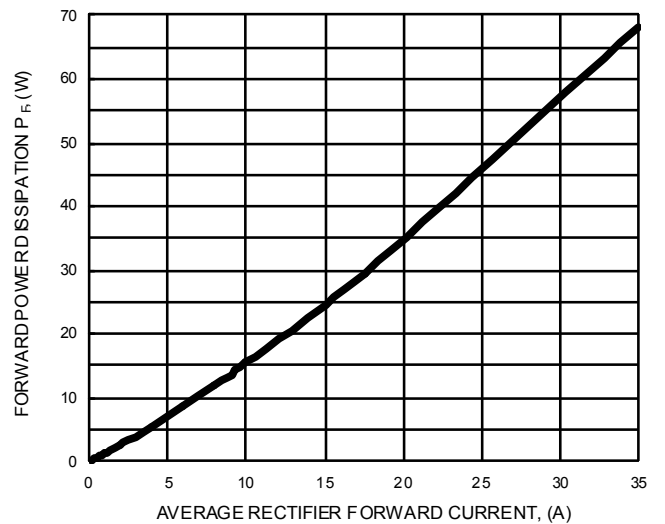
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



**FIG.6- FORWARD POWER DISSIPATION**



## Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.

**LITEON**