

**GLASS PASSIVATED BRIDGE RECTIFIERS**

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

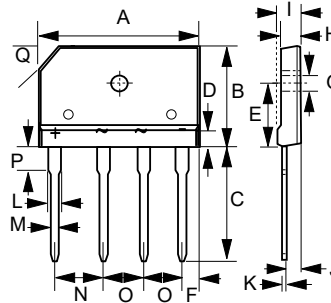
**FEATURES**

- 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	3.100	3.400
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 ( 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>	1.0	°C/W
	R <sub>thJL</sub>	1.5	

**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.

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# RATING AND CHARACTERISTIC CURVES

## GBJ3506 thru GBJ3510



FIG.1- FORWARD CURRENT DERATING CURVE

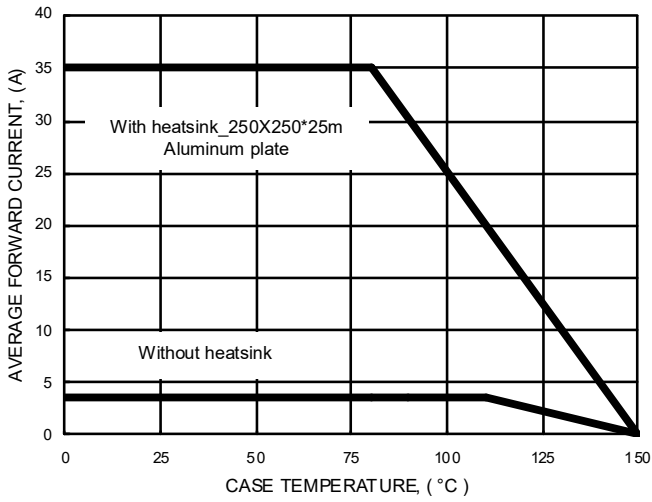


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

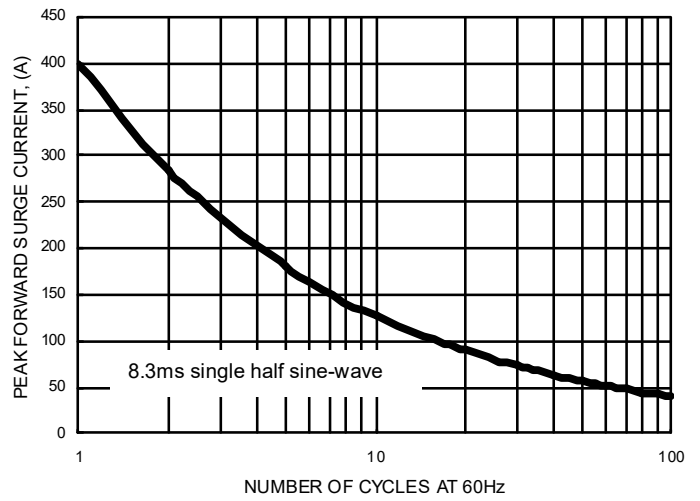


FIG.3- TYPICAL FORWARD CHARACTERISTICS

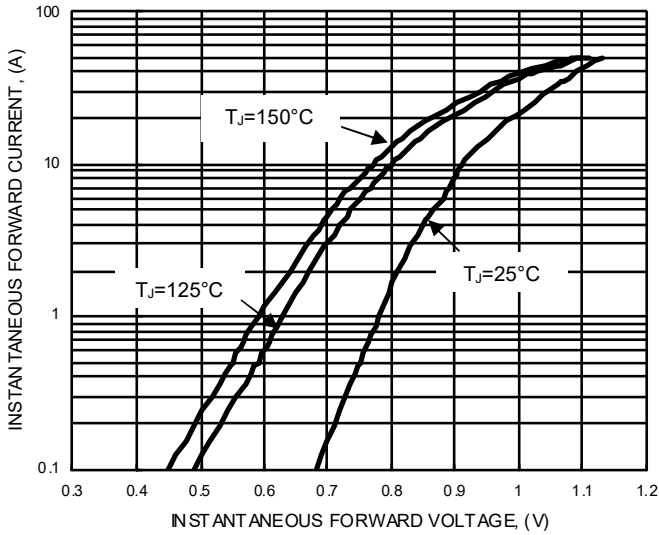


FIG.4- TYPICAL JUNCTION CAPACITANCE

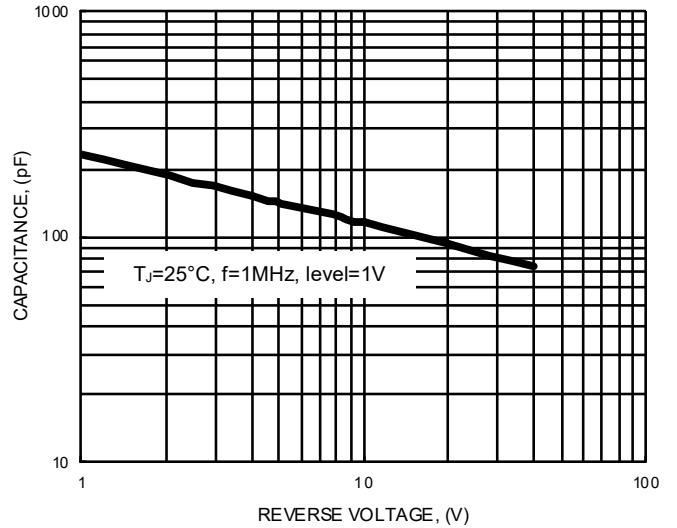


FIG.5- TYPICAL REVERSE CHARACTERISTICS

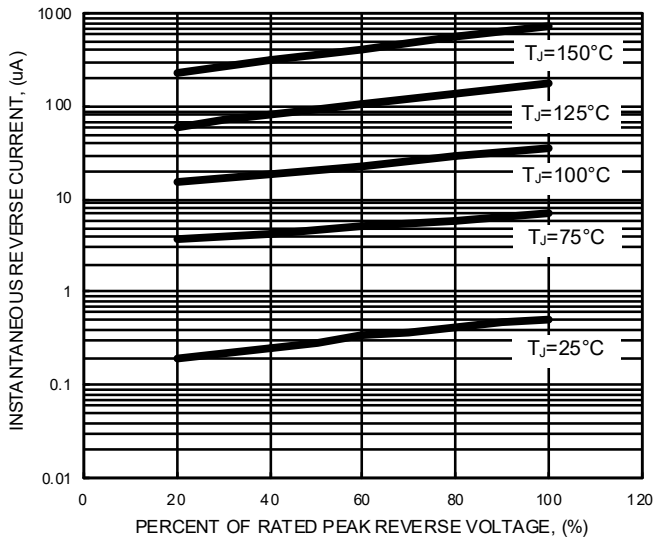
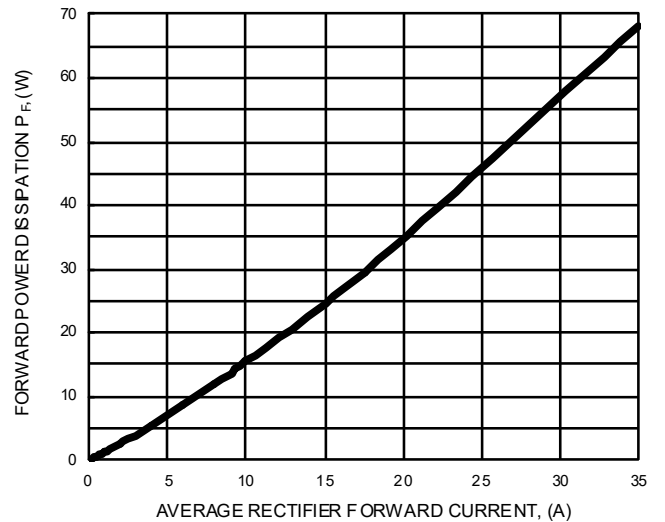


FIG.6- FORWARD POWER DISSIPATION



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