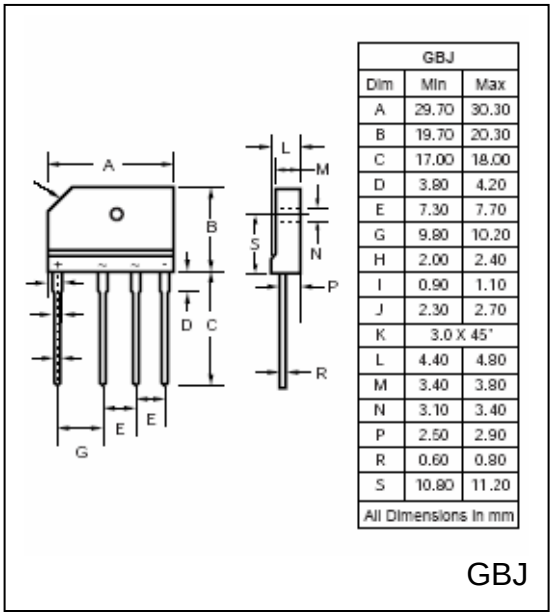
SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

GBJ25005 THRU GBJ2510

VOLTAGE RANGE **50 to 1000 Volts**
CURRENT **25.0 Ampere**

FEATURES

- Plastic package has UL flammability Classification 94V – 0
- Glass passivated chip junction
- High case dielectric strength of 1500 V_{RMS}
- High surge current capability
- High temperature soldering guaranteed: 260 ^{O}C /10 seconds, 0.375" (9.5mm) lead length



GBJ		
Dim	Min	Max
A	29.70	30.30
B	19.70	20.30
C	17.00	18.00
D	3.80	4.20
E	7.30	7.70
G	9.80	10.20
H	2.00	2.40
I	0.90	1.10
J	2.30	2.70
K	3.0 X 45°	
L	4.40	4.80
M	3.40	3.80
N	3.10	3.40
P	2.50	2.90
R	0.60	0.80
S	10.80	11.20
All Dimensions in mm		

GBJ

MECHANICAL DATA

- Case: Molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750 method 2026
- Mounting position: any (Note 2)
- Mounting Torque: 6 in-lbs max.
- Weight: 0.26 ounce, 7.4 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	GBJ 25005	GBJ 2501	GBJ 2502	GBJ 2504	GBJ 2506	GBJ 2508	GBJ 2510	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, At T_C = 100^{O}C	$I_{(AV)}$	25							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	350							Amps
Rating for Fusing (t<8.3mS)	I^2t	570							A^2s
Maximum Instantaneous Forward Voltage drop per Bridge element 12.5A	V_F	1.05							Volts
Maximum DC Reverse Current at Rated T_A = 25 ^{O}C	I_R	10							µA
DC Blocking Voltage per element T_A = 125 ^{O}C		500							
Typical Junction Capacitance, per leg (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	60							pF
Typical Thermal Resistance (Notes 1 and 2)	$R_{\theta JA}$	1.0							^{O}C/W
Operating Junction Temperature Range	T_J	(-65 to +150)							^{O}C
Storage Temperature Range	T_{STG}	(-65 to +150)							^{O}C

Notes:

1. Thermal resistance from junction to case per element. Unit mounted on 220mm x 220mm x 1.6mm) aluminum plate heat sink.
2. Recommended mounting position is to bolt down on heatsink with silicon thermal compound for maximum heat transfer with #6 screw

RATINGS AND CHARACTERISTIC CURVES GBJ25005 THRU GBJ2510

Fig. 1 – Derating Curve Output Rectified Current

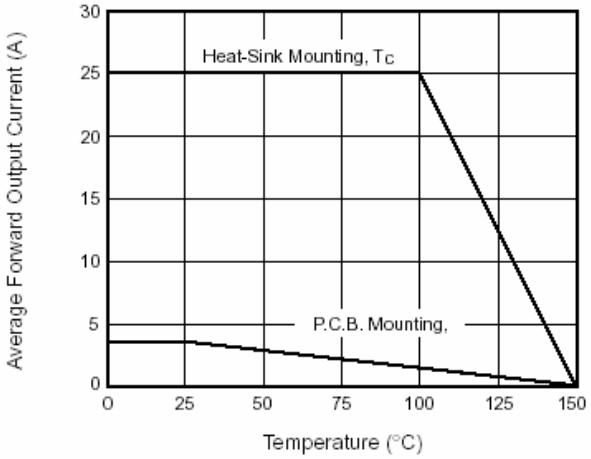


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

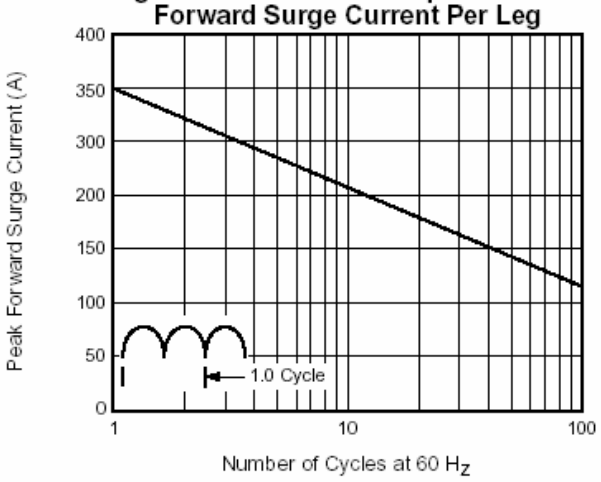


Fig. 3 – Typical Forward Characteristics Per Leg

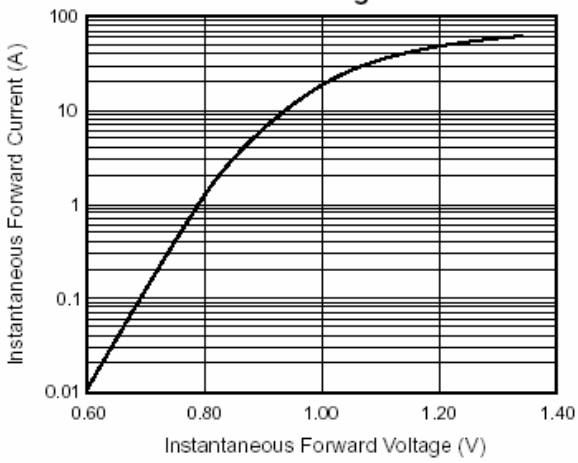


Fig. 4 – Typical Reverse Characteristics Per Leg

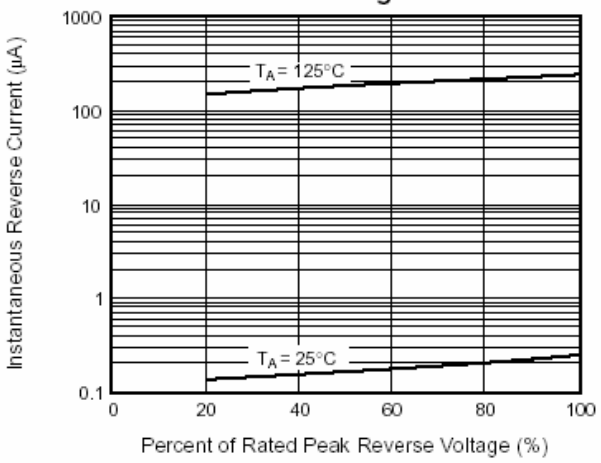


Fig. 5 – Typical Junction Capacitance Per Leg

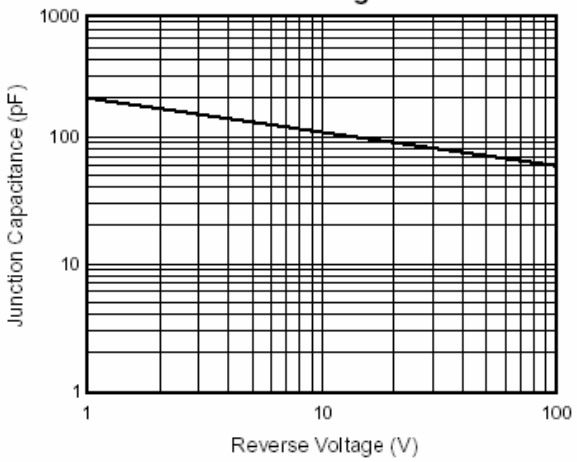


Fig. 6 – Typical Transient Thermal Impedance