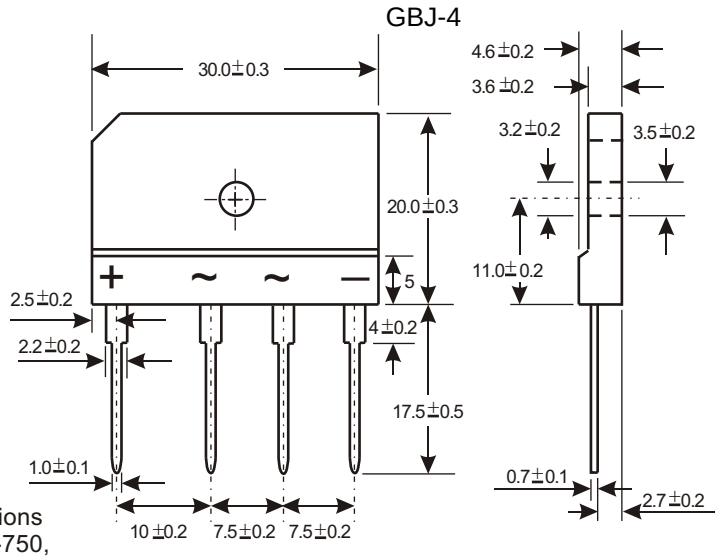
GBJ10005 thru GBJ1010

10 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V



GBJ-4



Dimensions in millimeters(1mm =0.0394")

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500VRMS Ideal for printed circuit boards
- High surge current capability

Mechanical Data

Case : Molded plastic body over passivated junctions
Terminals : Plated leads solderable per MIL-STD-750, Method 2026
Polarity : Polarity symbols molded on body
Mounting Position : Any(3)
Mounting Torque : 5 in-lbs max.
Weight : 0.26 ounce, 7.0 grams (approx)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	GBJ 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward (with heatsink note1) rectified current at Tc=100°C (without heatsink)	IF(AV)	10.0 3.2							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	240							A
Rating for fusing (t<8.3ms)	I^2t	240							A^2sec
Typical thermal resistance per element (note 1)	RthJC	0.8							°C / W
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	GBJ 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	Unit
Maximum instantaneous forward voltage drop per leg at 7.5 A	VF	1.05							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	10.0 500							μA

Notes: (1) Device mounted on 300mm x 300mm x 1.6mm copper plate heatsink.

Rating and Characteristic Curves (T_A=25°C Unless otherwise noted)

GBJ10005 thru GBJ1010

Fig. 1 Derating Curve for Output Rectified Current

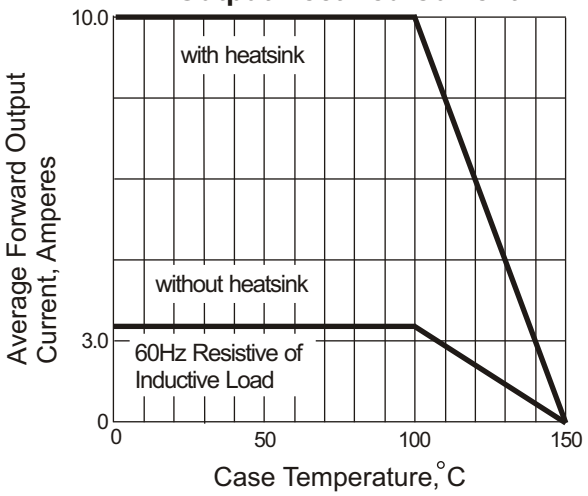


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

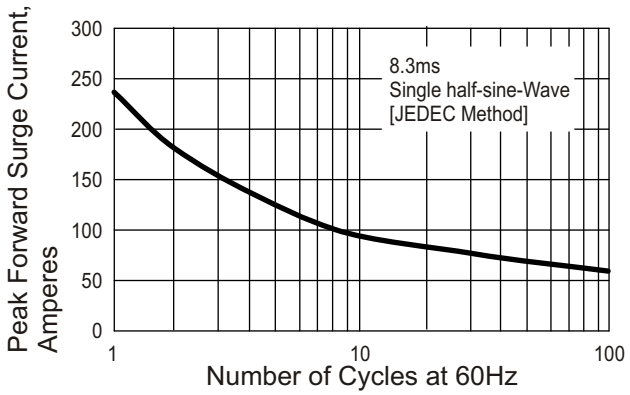


Fig. 3 Typical Instantaneous Forward Characteristics

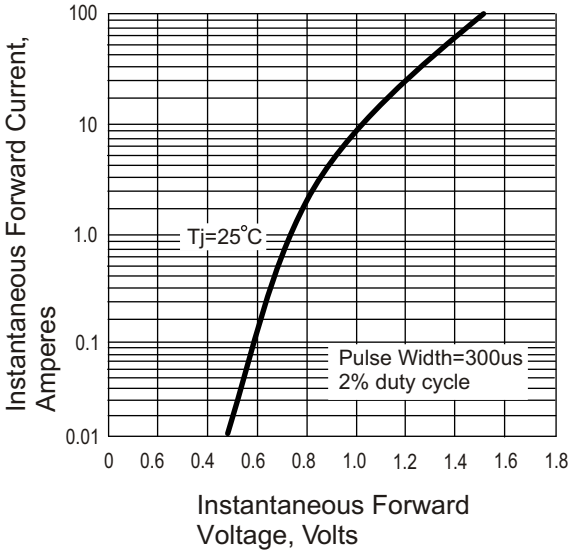


Fig. 4 Typical Reverse Characteristics at Tj=25°C

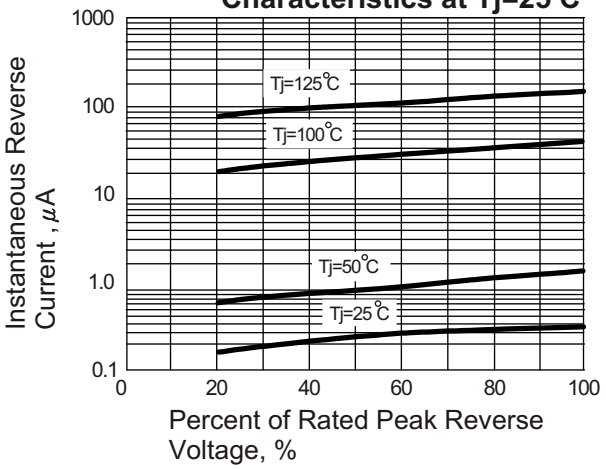


Fig. 5 Typical Junction Capacitance

