



GBJ15005 thru GBJ1512

15 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1200V



Features

- This series is UL listed under the Recognized Component Index, file number E142814
- 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

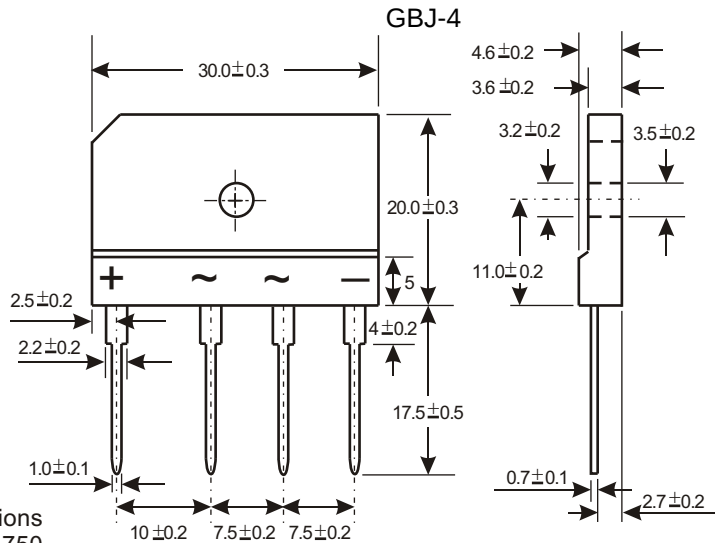
Case : Molded plastic body over passivated junctions
Terminals : Plated leads solderable per MIL-STD-750,
Method 2026

Polarity : Polarity symbols molded on body

Mounting Position : Any(3)

Mounting Torque : 5 in-lbs max.

Weight : 0.26 ounce, 7.0 grams (approx)



Dimensions in millimeters(1mm =0.0394")

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 15005	GBJ 1501	GBJ 1502	GBJ 1504	GBJ 1506	GBJ 1508	GBJ 1510	GBJ 1512	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	1200	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	840	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	1200	V
Maximum average forward (with heatsink note1) rectified current at Tc=100°C (without heatsink)	IF(AV)	15.0 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 ² t	240								A ² sec
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 15005	GBJ 1501	GBJ 1502	GBJ 1504	GBJ 1506	GBJ 1508	GBJ 1510	GBJ 1512	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 ($T_A=25^{\circ}\text{C}$ Unless otherwise noted) GBJ15005 thru GBJ1512

Fig. 1 Derating Curve for Output Rectified Current

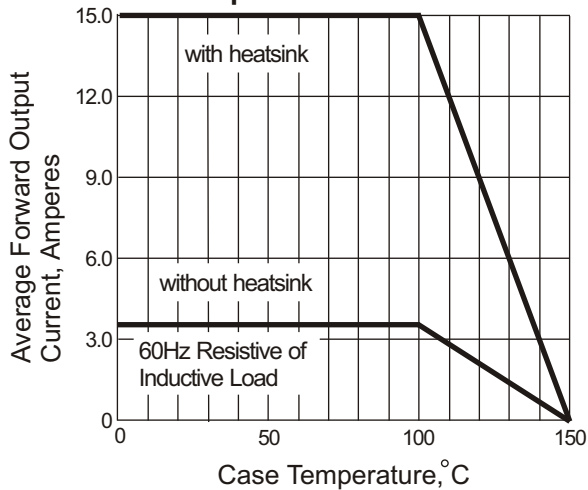


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

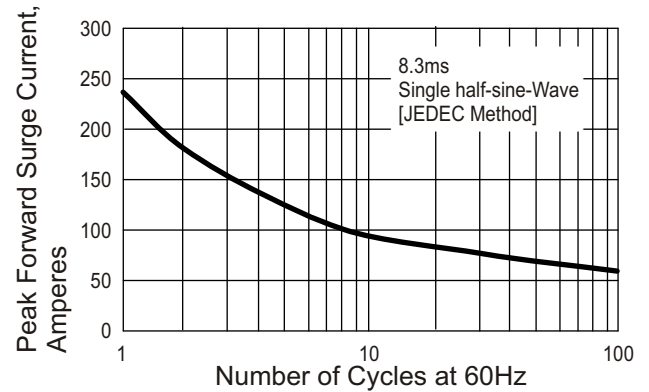


Fig. 3 Typical Instantaneous Forward Characteristics

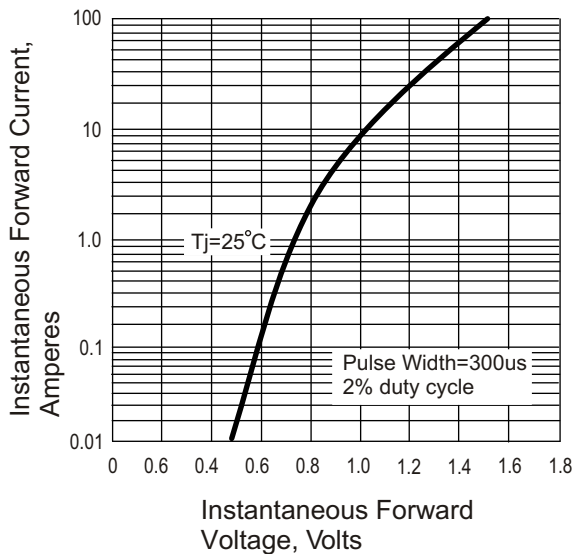


Fig. 4 Typical Reverse Characteristics at $T_j=25^{\circ}\text{C}$

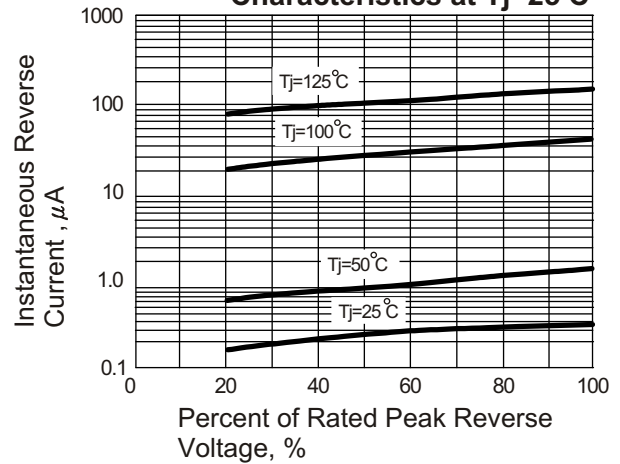


Fig. 5 Typical Junction Capacitance

