

**30 A Single-Phase Bridge Rectifier**  
Rectifier Reverse Voltage 50 to 1000V

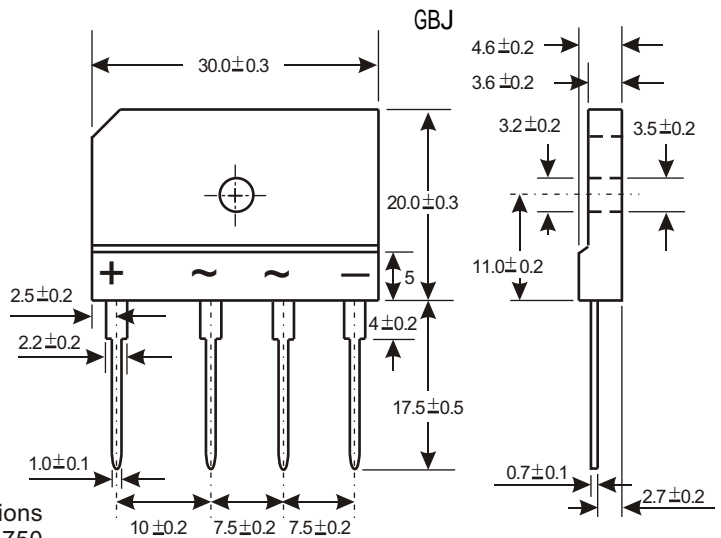


**Features**

- 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 35001	GBJ 3502	GBJ 3503	GBJ 3504	GBJ 3506	GBJ 3508	GBJ 3510	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)	30.0 4.2							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	350							A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	510							A <sup>2</sup> sec
Typical thermal resistance per element (note 1)	RthJC	1.0							°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 %.

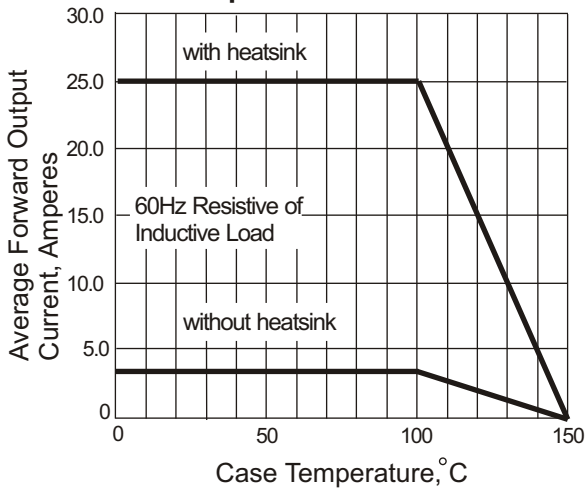
Parameter	Symbol	GBJ 35001	GBJ 3502	GBJ 3503	GBJ 3504	GBJ 3506	GBJ 3508	GBJ 3510	Unit
Maximum instantaneous forward voltage drop per leg at 12.5 A	VF	1.05							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	10.0 500							μA

**Notes:** (1) Device mounted on 250mm x 250mm x 20mm aluminum plate heatsink.

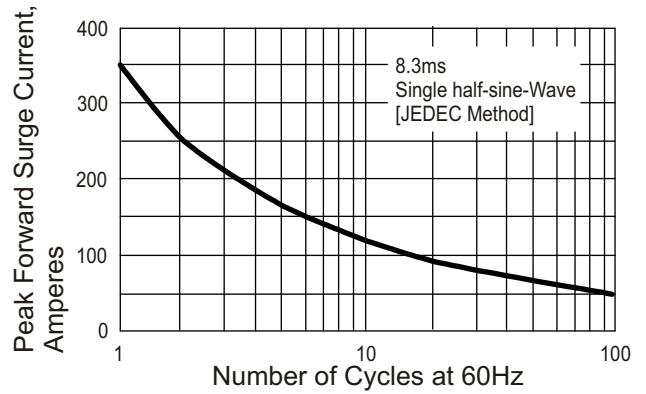
# Rating and Characteristic Curves ( $T_A=25^\circ\text{C}$ Unless otherwise noted )

## GBJ35001 THRU GBJ3510

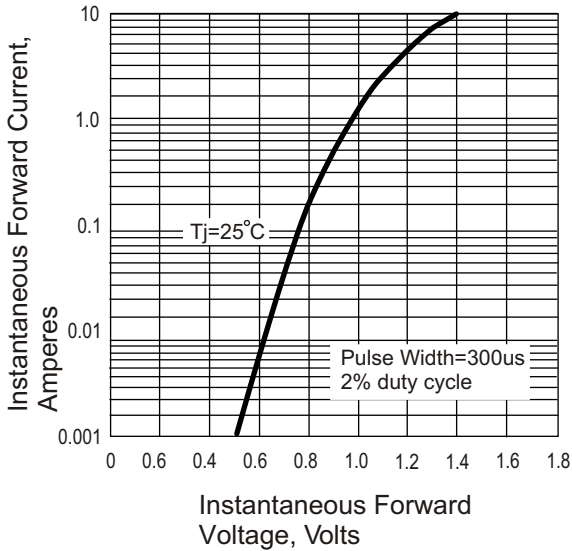
**Fig. 1 Derating Curve for Output Rectified Current**



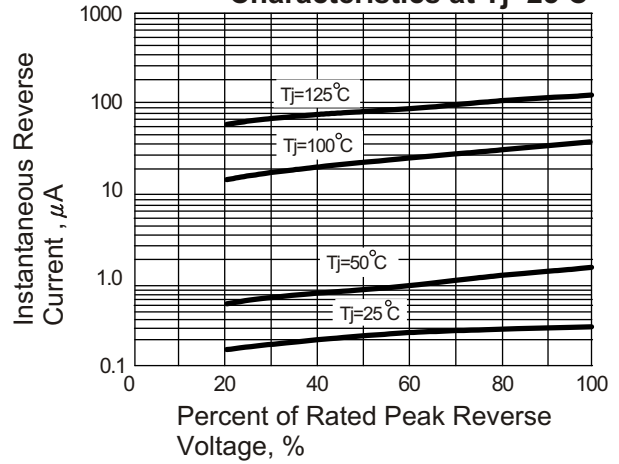
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



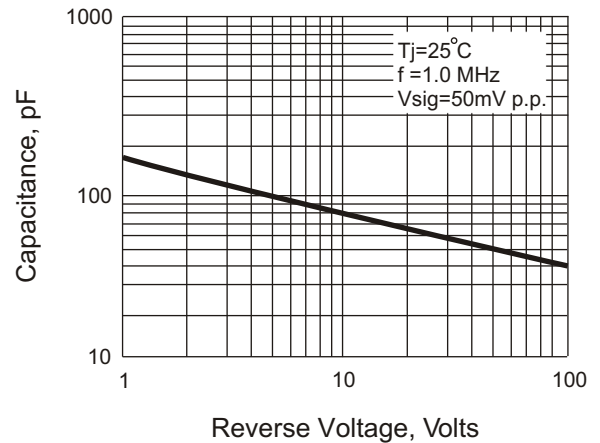
**Fig. 3 Typical Instantaneous Forward Characteristics**



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



**Fig. 5 Typical Junction Capacitance**



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