

25A GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 2500V_{RMS}
- Low Reverse Leakage Current
- Surge Overload Rating to 350A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- Lead Free Finish/RoHS Compliant (Note 4)

Mechanical Data

- Case: GBJ
- Case Material: Molded Plastic. UL Flammability Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Plated Leads, Solderable per MIL-STD-202, Method 208 @3:
- Lead Free Plating (Tin Finish).
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Marking: Type Number
- Weight: 6.6 grams (approximate)

Maximum Ratings @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

Characteristic	Symbol	GBJ 25005	GBJ 2501	GBJ 2502	GBJ 2504	GBJ 2506	GBJ 2508	GBJ 2510	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Forward Rectified Output Current (Note 1) @ $T_C = 100^{\circ}C$	lo				25				Α
Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on rated Load	I _{FSM}				350				Α

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 3)	$R_{ heta JC}$	0.6	°C/W
Operating and Storage Temperature Range	$T_{J_1}T_{STG}$	-65 to +150	°C

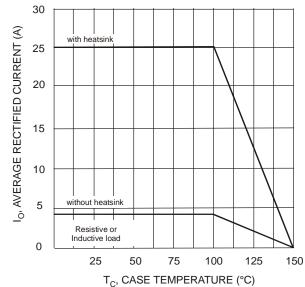
Electrical Characteristics @T_A = 25°C unless otherwise specified

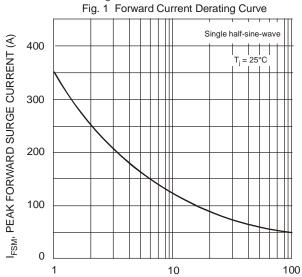
Characteristic		Symbol	Value	Unit
Forward Voltage (per element)	$@ I_F = 12.5A$	V_{FM}	1.05	V
Peak Reverse Current	@ $T_C = 25^{\circ}C$		10	
at Rated DC Blocking Voltage	$@ T_C = 125^{\circ}C$	IR	500	μΑ
I ² t Rating for Fusing (t < 8.3ms)	(Note 1)	l ² t	510	A ² s
Typical Total Capacitance (per element)	(Note 2)	C_T	85	pF

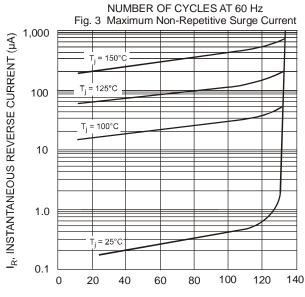
Notes

- 1. Non-repetitive, for t > 1ms and < 8.3 ms.
- 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
- 3. Thermal resistance from junction to case per element. Unit mounted on 220 x 220 x 1.6mm aluminum plate heat sink.
- 4. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/products/lead_free.html.









PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 5 Typical Reverse Characteristics

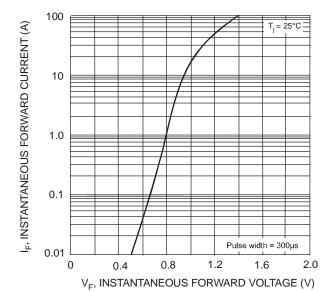


Fig. 2 Typical Forward Characteristics (per element)

1,000

100

100

100

100

 $\label{eq:VR} {\rm V_{R},\ REVERSE\ VOLTAGE\ (V)}$ Fig. 4 Typical Total Capacitance, Per Element

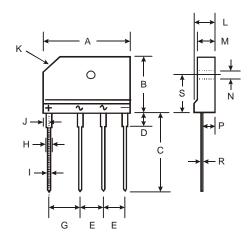


Ordering Information (Note 5)

Part Number	Case	Packaging
GBJ25005-F	GBJ	15/Tube
GBJ2501-F	GBJ	15/Tube
GBJ2502-F	GBJ	15/Tube
GBJ2504-F	GBJ	15/Tube
GBJ2506-F	GBJ	15/Tube
GBJ2508-F	GBJ	15/Tube
GBJ2510-F	GBJ	15/Tube

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Package Outline Dimensions



GBJ				
Dim	Min	Max		
Α	29.70	30.30		
В	19.70	20.30		
С	17.00	18.00		
D	3.80	4.20		
E	7.30	7.70		
G	9.80	10.20		
Н	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		
Р	2.50	2.90		
R	0.60	0.80		
S	10.80	11.20		
All Dimensions in mm				



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