

## Maximum Ratings (@T<sub>A</sub> = 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	V <sub>RRM</sub>								
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Forward Rectified Output Current (Note 3) @ T <sub>C</sub> = 100°C	I <sub>O</sub>	25							A
Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on rated Load	I <sub>FSM</sub>	350							A

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 5)	R <sub>θJC</sub>	1.0	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

## Electrical Characteristics (@T<sub>A</sub> = 25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Forward Voltage (per element) @ I <sub>F</sub> = 12.5A	V <sub>FM</sub>	1.05	V
Peak Reverse Current @ T <sub>C</sub> = 25°C	I <sub>R</sub>	10	μA
at Rated DC Blocking Voltage @ T <sub>C</sub> = 125°C		500	
I <sup>2</sup> t Rating for Fusing (t > 1ms and < 8.3 ms) (Note 3)	I <sup>2</sup> t	510	A <sup>2</sup> s
Typical Total Capacitance (per element) (Note 4)	C <sub>T</sub>	85	pF

Notes:

- Non-repetitive, for t > 1ms and < 8.3 ms.
- Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
- Thermal resistance from junction to case per element. Unit mounted on 250 x 250 x 20mm aluminum plate heat sink.

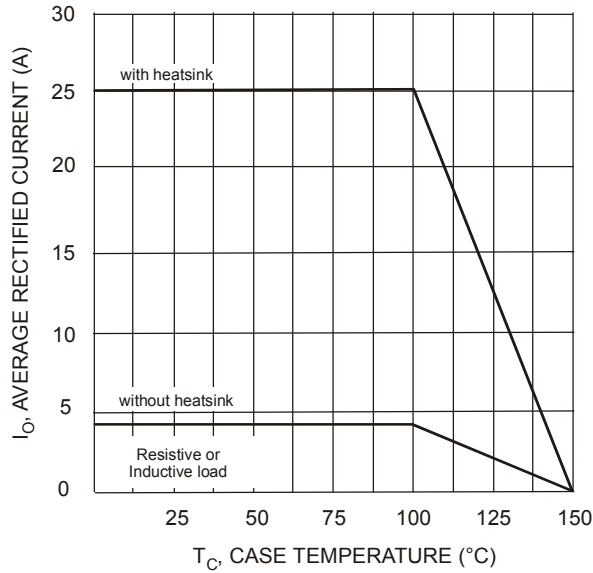


Fig. 1 Forward Current Derating Curve

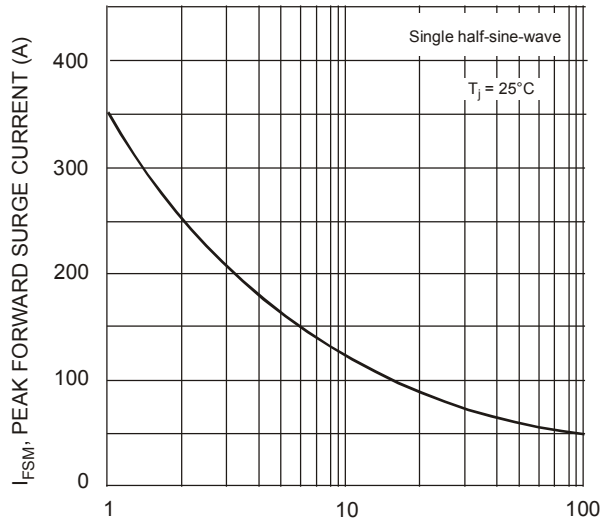


Fig. 3 Maximum Non-Repetitive Surge Current

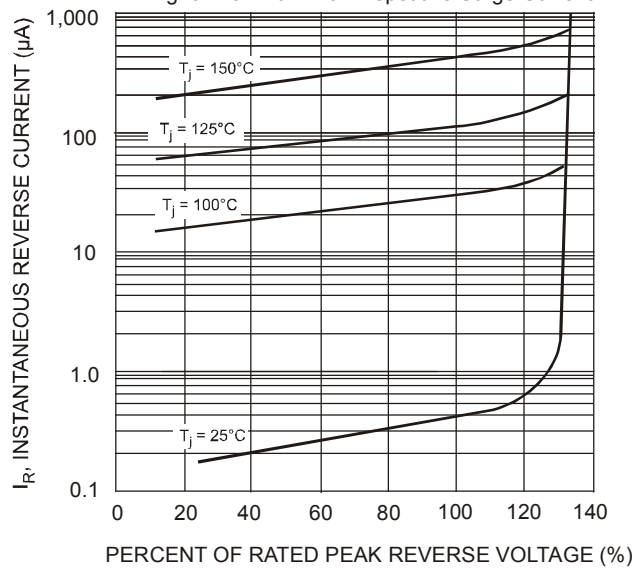


Fig. 5 Typical Reverse Characteristics

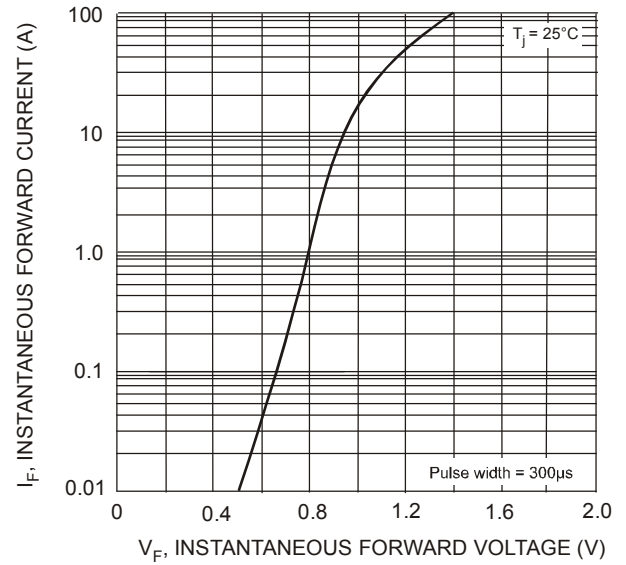


Fig. 2 Typical Forward Characteristics (per element)

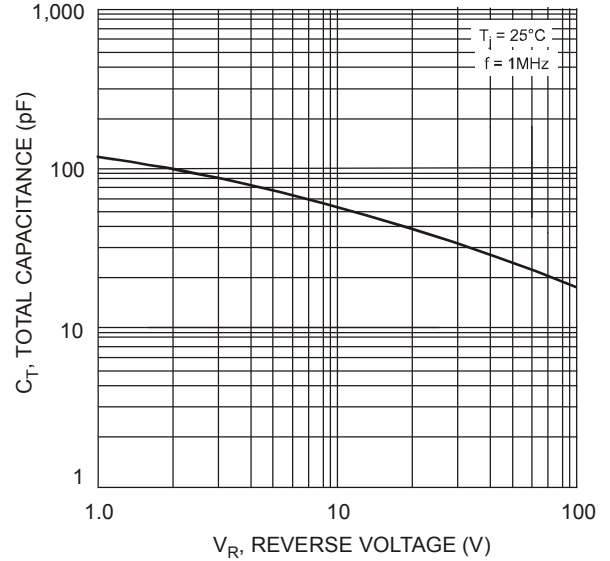


Fig. 4 Typical Total Capacitance, Per Element

## Ordering Information (Note 6)

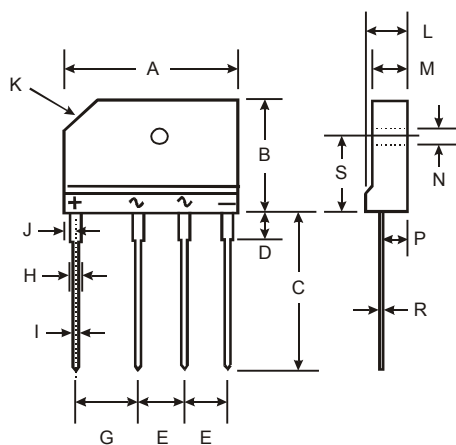
Part Number	Case	Packaging
GBJ25005-F	GBJ	15/Tube
GBJ2501-F	GBJ	15/Tube
GBJ2502-F	GBJ	15/Tube
GBJ2504-F	GBJ	15/Tube
GBJ2506-F	GBJ	15/Tube
GBJ2508-F	GBJ	15/Tube
GBJ2510-F	GBJ	15/Tube

Note: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

### GBJ



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		

Note: For high voltage applications, the appropriate industry sector guidelines should be considered with regards to creepage and clearance.

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