

## Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 2500V<sub>RMS</sub>
- Low Reverse Leakage Current
- Surge Overload Rating to 400A Peak
- Ideal for Printed Circuit Board Applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

## Mechanical Data

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

## Ordering Information (Note 3)

Part Number	Qualification	Case	Packaging
GBJ3510-F	Commercial	GBJ	15/Tube

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

## Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	1000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	700	V
Average Forward Rectified Output Current (Note 4)	I <sub>O</sub>	35	A
With Heatsink T <sub>C</sub> = +80°C		3.6	
Without Heatsink T <sub>C</sub> = +25°C			
Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on rated Load	I <sub>FSM</sub>	400	A
I <sup>2</sup> t Rating for Fusing (3ms < t < 8.3ms) (Note 4)	I <sup>2</sup> <sub>t</sub>	664	A <sup>2</sup> S
Mounting Torque (Recommended Torque: 0.5N.m)	TOR	0.8	N.m

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 5)	R <sub>θJC</sub>	1.0	°C/W
Typical Thermal Resistance Junction to Lead (Note 5)	R <sub>θJL</sub>	1.5	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

- Notes:
4. Non-repetitive, for t > 1ms and < 8.3ms.
  5. Thermal resistance from junction to case per element. Unit mounted on 250 x 250 x 25mm aluminum plate heat sink.

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

Characteristic	Symbol	Value	Unit
Forward Voltage (Per Element) @ I <sub>F</sub> = 17.5A	V <sub>FM</sub>	1.1	V
Peak Reverse Current @ T <sub>C</sub> = +25°C at Rated DC Blocking Voltage @ T <sub>C</sub> = +125°C	I <sub>R</sub>	10 500	μA
Typical Total Capacitance (Per Element) (Note 6)	C <sub>T</sub>	150	pF

Note: 6. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

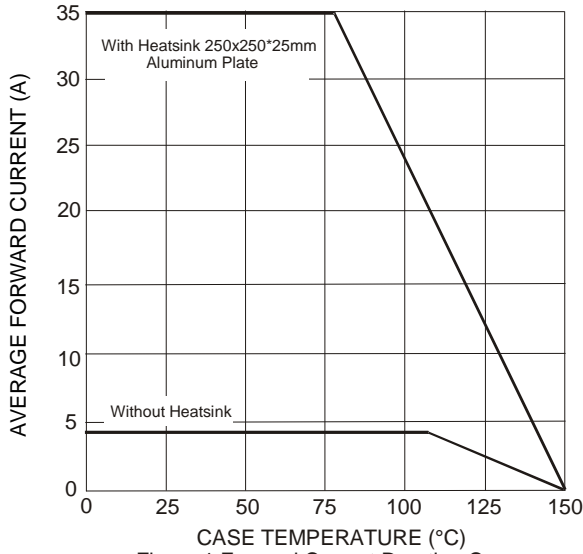


Figure 1 Forward Current Derating Curve

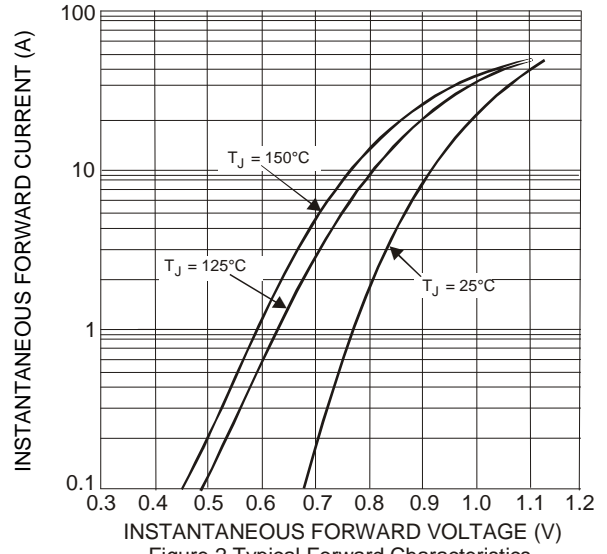


Figure 2 Typical Forward Characteristics

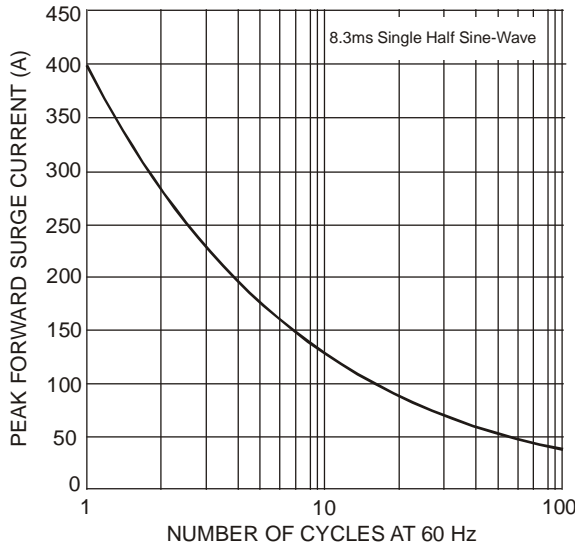


Figure 3 Maximum Non-Repetitive Surge Current

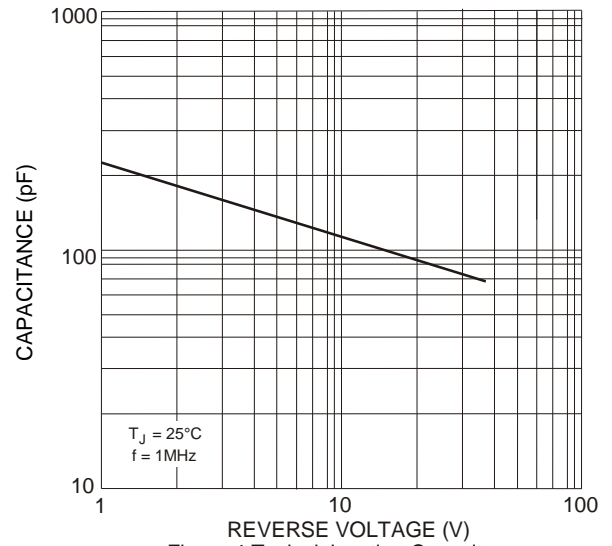
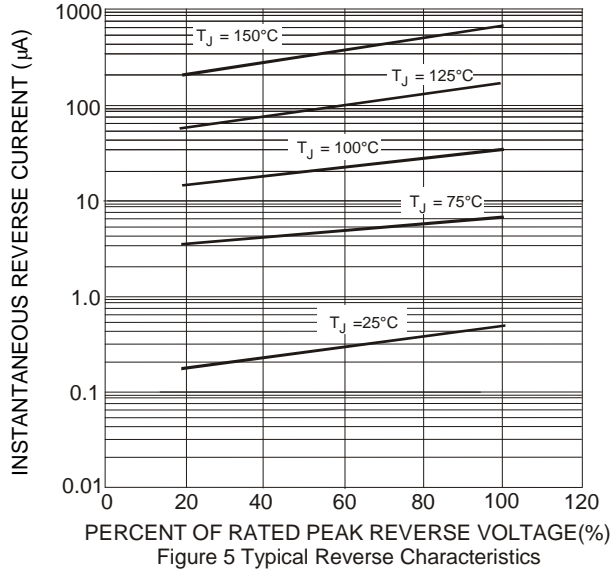


Figure 4 Typical Junction Capacitance

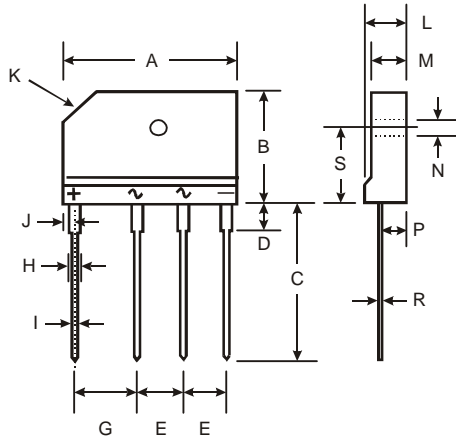
NEW PRODUCT



**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
<b>All Dimensions in mm</b>		

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