

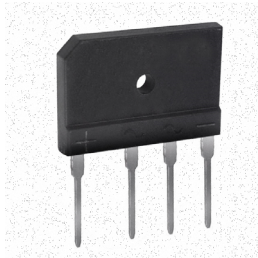
**35A SINGLE-PHASE STANDARD RECOVERY BRIDGE RECTIFIER**

**Features**

- Glass Passivated Die Construction
- High Case Dielectric Strength of 2500V<sub>RMS</sub>
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- Surge Overload Rating to 400A Peak
- Ideal for Printed Circuit Board Applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen- and Antimony-Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

**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(Matte Tin Finish), Solderable per MIL-STD-202, Method 208 ③
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Weight: 6.6 grams (Approximate)

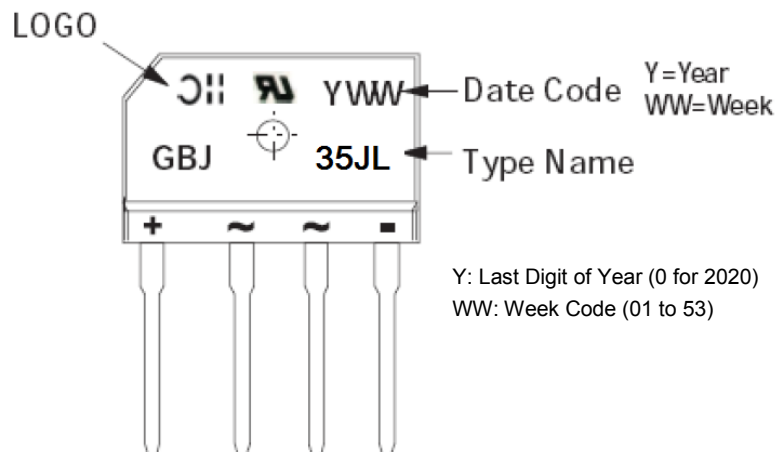


**Ordering Information** (Note 4)

Part Number	Qualification	Case	Packaging
GBJ35JL-F	Commercial	GBJ	15/Tube

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

**Marking Information**



**Maximum Ratings** (@  $T_A = +25^\circ\text{C}$ , 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 Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	V
Average Forward Rectified Output Current (Note 5)	$I_O$	35 4.7	A
		With Heatsink $T_C = +80^\circ\text{C}$ Without Heatsink $T_C = +25^\circ\text{C}$	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on rated Load	$I_{FSM}$	400 320	A
		@ $T_J = +25^\circ\text{C}$ @ $T_J = +125^\circ\text{C}$	
Non-Repetitive Peak Forward Surge Current 1.0ms Single Half Sine-Wave Superimposed on rated Load	$I_{FSM}$	800 640	A
		@ $T_J = +25^\circ\text{C}$ @ $T_J = +125^\circ\text{C}$	
$I^2t$ Rating for Fusing (3ms < t < 8.3ms) (Note 5)	$I^2t$	664	$\text{A}^2\text{S}$
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 6)	$R_{\theta JC}$	4	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance Junction to Lead (Note 6)	$R_{\theta JL}$	10	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	20	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance Junction to Case (Note 7)	$R_{\theta JC}$	1.0	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance Junction to Lead (Note 7)	$R_{\theta JL}$	2	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance Junction to Ambient (Note 7)	$R_{\theta JA}$	2	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

**Electrical Characteristics** (@  $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Breakdown Voltage	$V_R$	600	—	—	V	$I_R = 10\mu\text{A}$
Forward Voltage (Per Element)	$V_F$	—	0.86	0.92	V	$I_F = 17.5\text{A}, T_S = +25^\circ\text{C}$
Reverse Leakage Current (Per Element)	$I_R$	—	—	10	$\mu\text{A}$	$V_R = 600\text{V}, T_J = +25^\circ\text{C}$
Total Capacitance (Per Element)	$C_T$	—	240	—	pF	$f = 1\text{MHz}, V_R = 4\text{Vdc}$

Notes:  
 5. Non-repetitive, for  $t > 1\text{ms}$  and  $< 8.3\text{ms}$ .  
 6. Thermal resistance per element without heatsink.  
 7. Thermal resistance from junction to case per element. Unit mounted on 250mm x 250mm x 25mm aluminum plate heat sink.

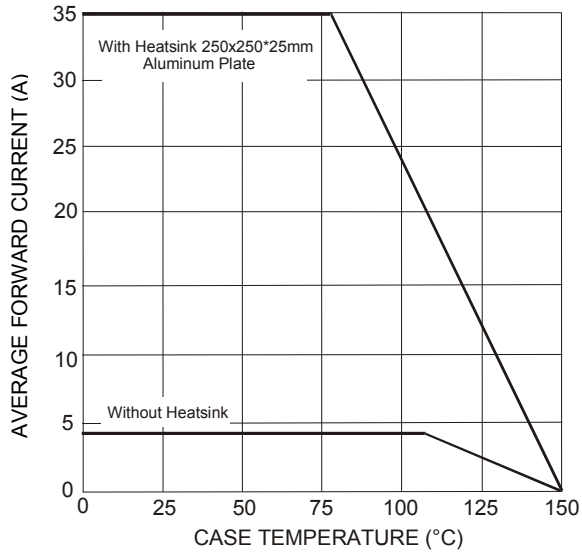


Fig. 1 Forward Current Derating Curve

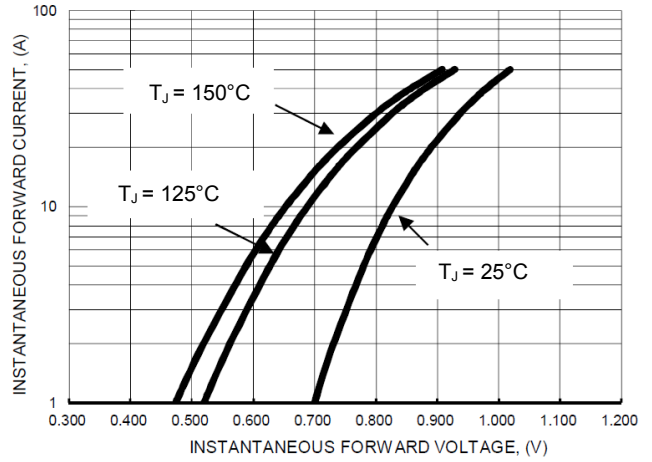


Fig. 2 Typical Forward Characteristics

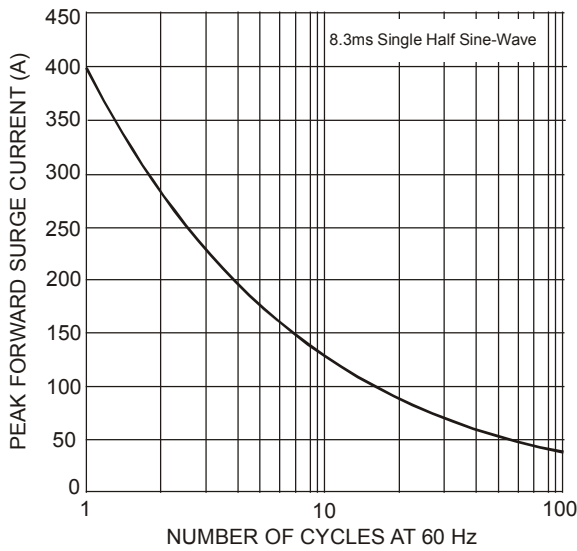


Fig. 3 Maximum Non-Repetitive Surge Current

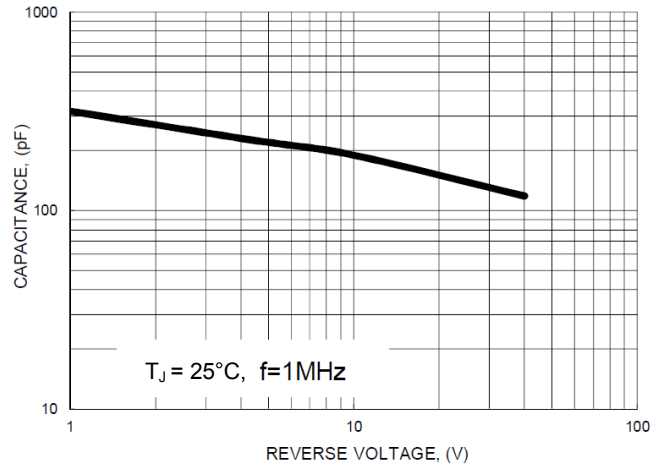


Fig. 4 Typical Junction Capacitance

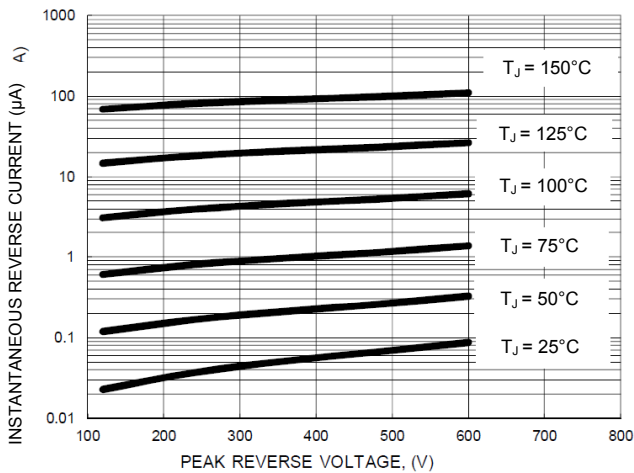
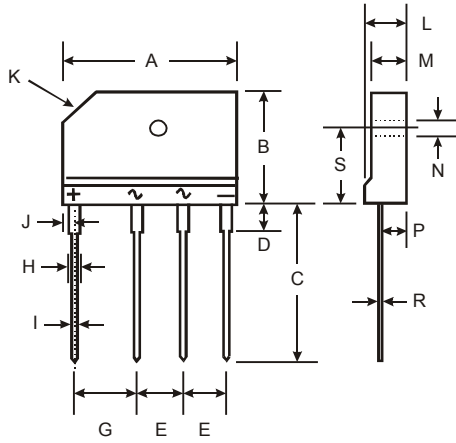


Fig. 5 Typical Reverse Characteristics

## 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		

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