

Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 12.5A	I _R Max (μA)
600	25	0.92	10

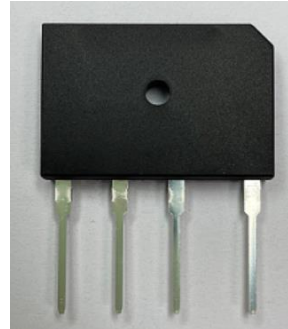
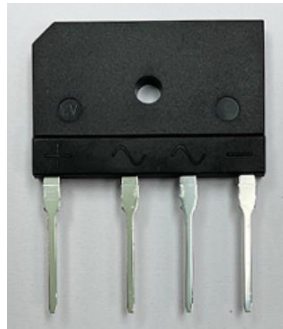
Mechanical Data

- Package: GBJ
- Package Material: Plastic Material, UL Flammability Classification 94V-0 (No Br, Sb, Cl)
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 Ⓢ
- Polarity Indicator: Symbol Molded on Body
- Weight: 6.60 grams (Approximate)

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Thermal Radiation
- High Average Current
- High Surge Current Capability
- UL Recognized File # E94661
- **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-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/contact-us) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

GBJ

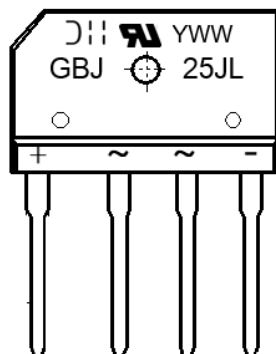


Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
GBJ25JL-TU	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



GBJ25JL= Product Type Marking Code
 Jii = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 2 = 2022)
 WW = Week Code (01 to 53)

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

Characteristic	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Average Rectified Output Current	$I_{F(AV)}$	With Heatsink $T_C = +115^\circ\text{C}$	25
		Without Heatsink $T_A = +25^\circ\text{C}$	4.5
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	$T_J = +25^\circ\text{C}$	320
		$T_J = +125^\circ\text{C}$	250
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	$T_J = +25^\circ\text{C}$	640
		$T_J = +125^\circ\text{C}$	500
I^2t Rating for Fusing ($t = 8.3\text{ms}$)	I^2t	425	A^2s
Operating Temperature Range	T_J	-40 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics

Characteristic	Test Conditions		Symbol	Min	Typ	Max	Unit
Breakdown Voltage	$I_R = 10\mu\text{A}$	$T_J = +25^\circ\text{C}$	V_B	600	—	—	V
Forward Voltage	$I_F = 12.5\text{A}$	$T_J = +25^\circ\text{C}$	V_F	—	0.87	0.92	V
Leakage Current	$V_R = 600\text{V}$	$T_J = +25^\circ\text{C}$	I_R	—	—	10	μA
Reverse Recovery Time	$I_F = 0.1\text{A}$, $I_R = 0.1$ Per Diode		t_{RR}	3			μs
Typical Junction Capacitance (Note 5)			C_J	150			pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Without Heatsink)	$R_{\theta JC}$	6	$^\circ\text{C/W}$
	$R_{\theta JL}$	13	
	$R_{\theta JA}$	15	
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$	0.8	$^\circ\text{C/W}$
	$R_{\theta JL}$	4	
	$R_{\theta JA}$	5	

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Device mounted on 314mm x 314mm x 20mm Al plate heatsink.

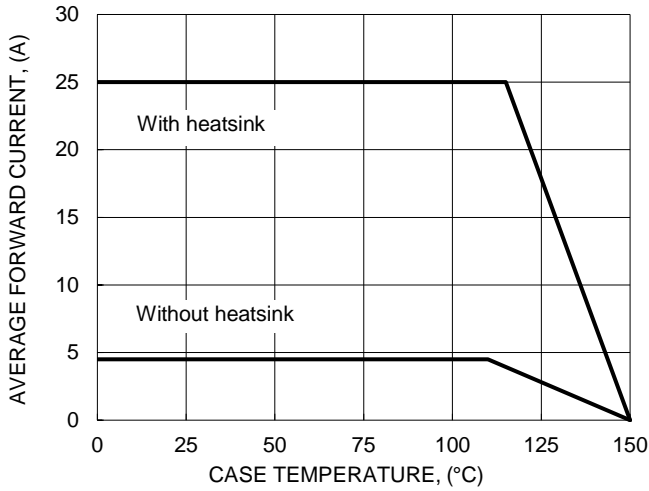


Figure 1. Forward Current Derating Curve

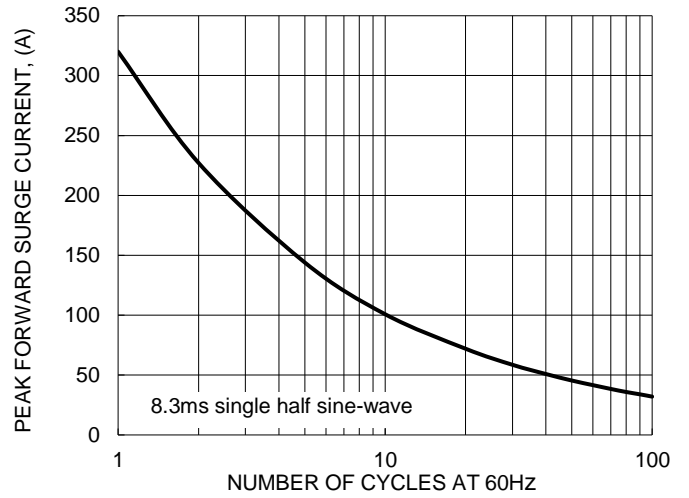


Figure 2. Maximum Non-Repetitive Surge Current

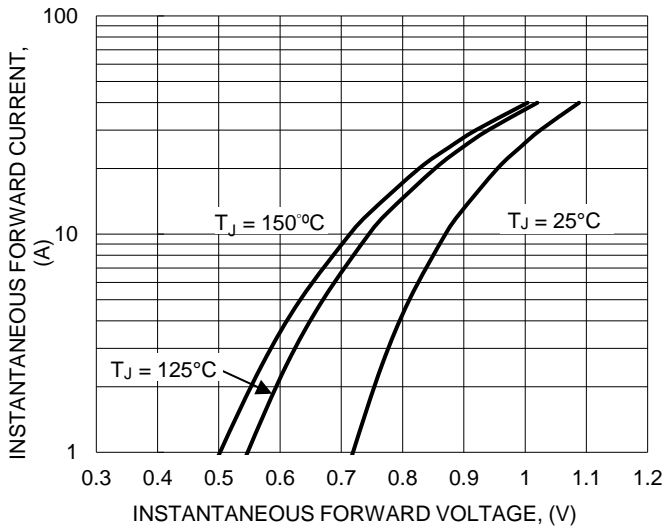


Figure 3. Typical Forward Characteristics

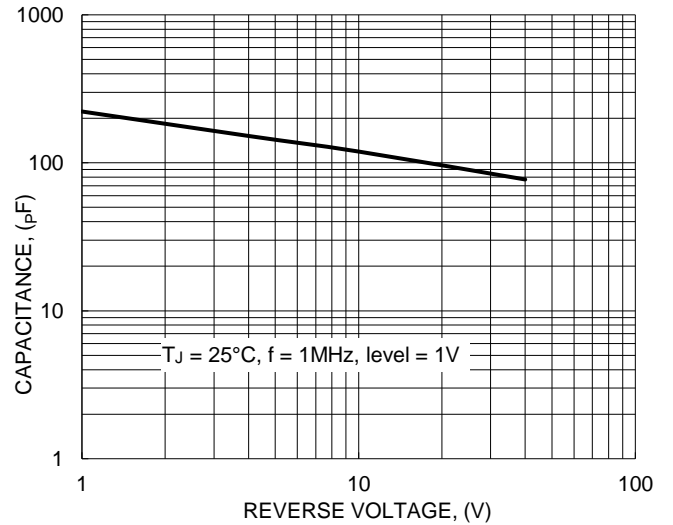


Figure 4. Typical Junction Capacitance

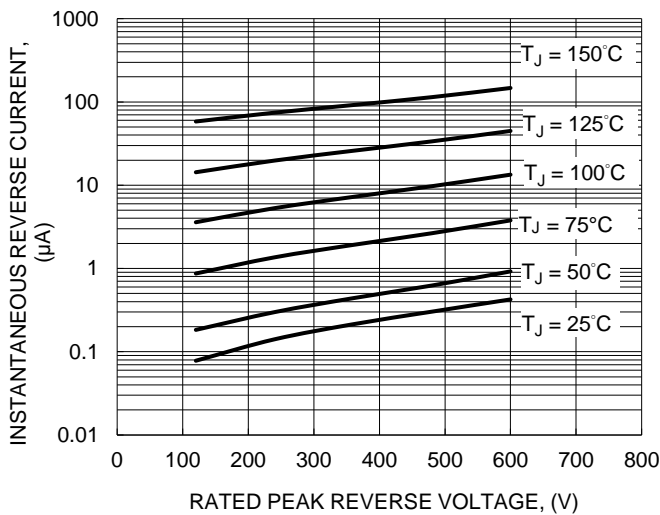


Figure 5. Typical Reverse Characteristics

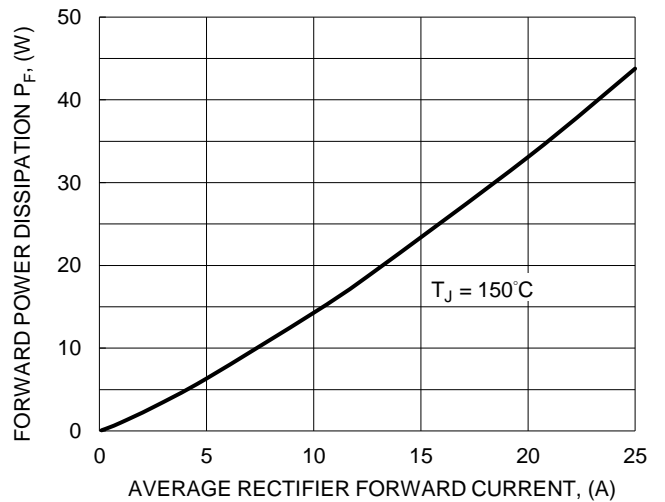
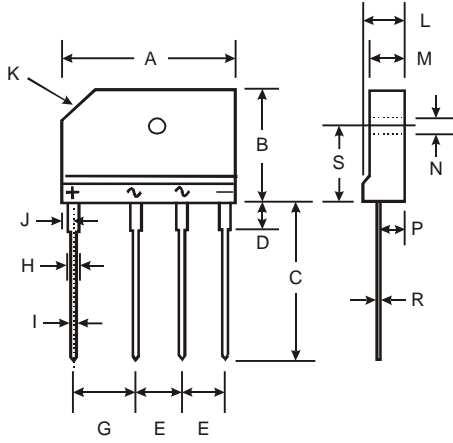


Figure 6. Forward Power Dissipation

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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