

Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 7.5A	I _R Max (μA)
800	15	0.90	10

Mechanical Data

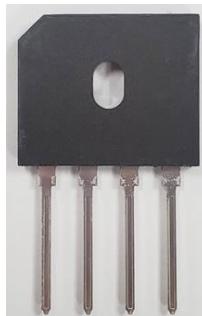
- Package: GBU
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 (e3)
- Polarity Indicator: As Marked on the Body
- Weight: 4.0 grams (Approximate)

Features

- Glass Passivated Die Construction
- Low-Forward Voltage Drop
- Ideal for Printed Circuit Board
- High Surge Current Capability
- UL Recognized File # E95060
- 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](#) or your local Diodes representative.

<https://www.diodes.com/quality/product-definitions/>

GBU



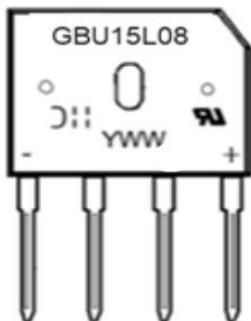
Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
GBU15L08	GBU	20	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



GBU15L08 = Product Type Marking Code

DII = Manufacturer's Code Marking

YWW = Date Code Marking

Y = Last Digit of Year (ex: 5 = 2025)

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}	800	V
Average Rectified Output Current	With Heatsink Without Heatsink	$T_J = +150^\circ\text{C}$ $T_J = +150^\circ\text{C}$	$I_{F(AV)}$	15 4	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave		$T_J = +25^\circ\text{C}$ $T_J = +125^\circ\text{C}$	I_{FSM}	250 170	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave		$T_J = +25^\circ\text{C}$ $T_J = +125^\circ\text{C}$	I_{FSM}	550 450	A
I^2t Rating for Fusing ($t = 8.3\text{ms}$)			I^2t	259.4	A^2s
Storage Temperature Range			T_{STG}	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature Range			T_J	-40 to +150	$^\circ\text{C}$

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

Characteristic	Test Condition	Symbol	Min	Typ	Max	Unit
Breakdown Voltage	$I_R = 10\mu\text{A}, T_J = +25^\circ\text{C}$	V_B	800	—	—	V
Forward Voltage	$I_F = 7.5\text{A}, T_J = +25^\circ\text{C}$	V_F	—	0.86	0.9	V
Leakage Current	$V_R = 800\text{V}, T_J = +25^\circ\text{C}$	I_R	—	—	10	μA
Typical Junction Capacitance (Note 5)		C_T		160		pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Without Heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	6 9 28	$^\circ\text{C/W}$
Typical Thermal Resistance (Notes 6 & 7)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	1 3 6	$^\circ\text{C/W}$

Notes:

- 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 6. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.
- 7. Device mounted on 200mm x 200mm x 5mm CU plate heatsink.

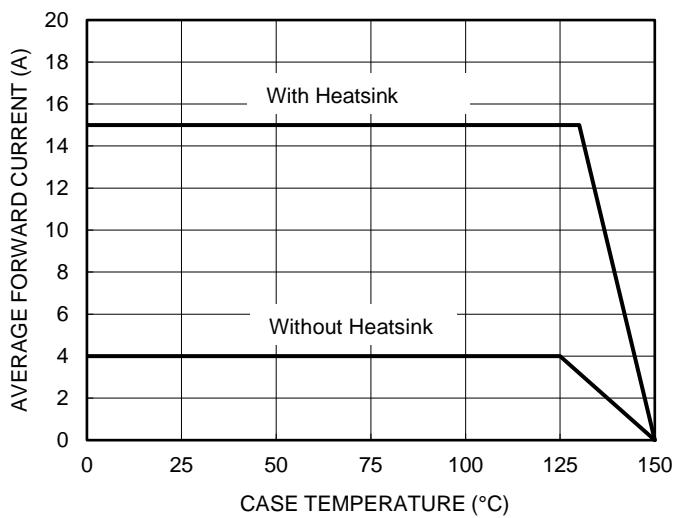


Figure 1. Forward Current Derating Curve

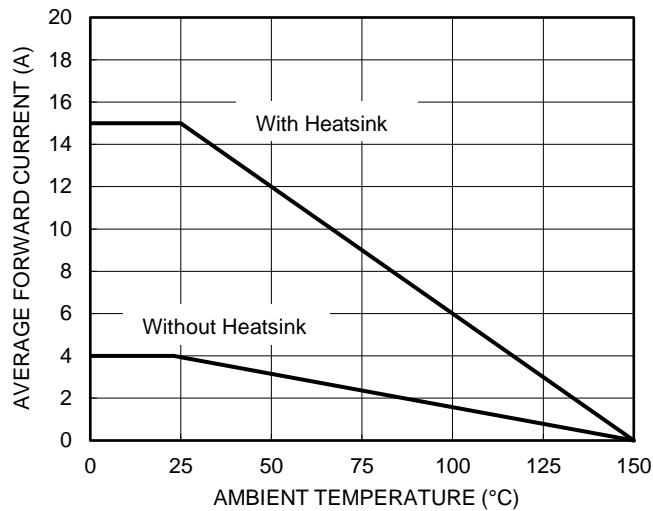


Figure 2. Forward Current Derating Curve

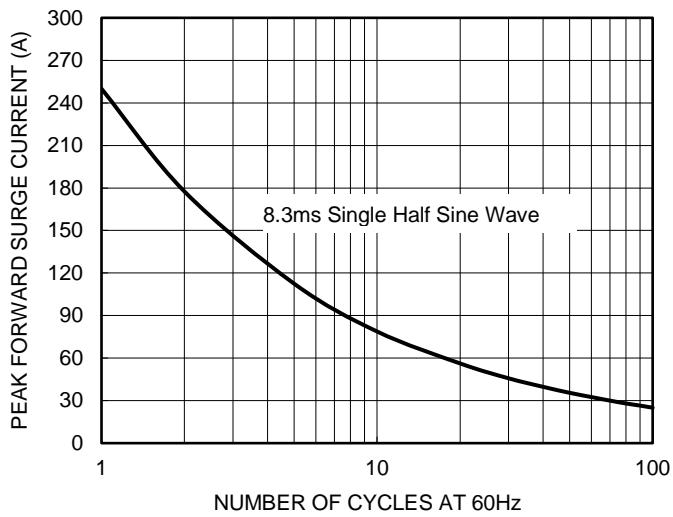


Figure 3. Maximum Non-Repetitive Surge Current

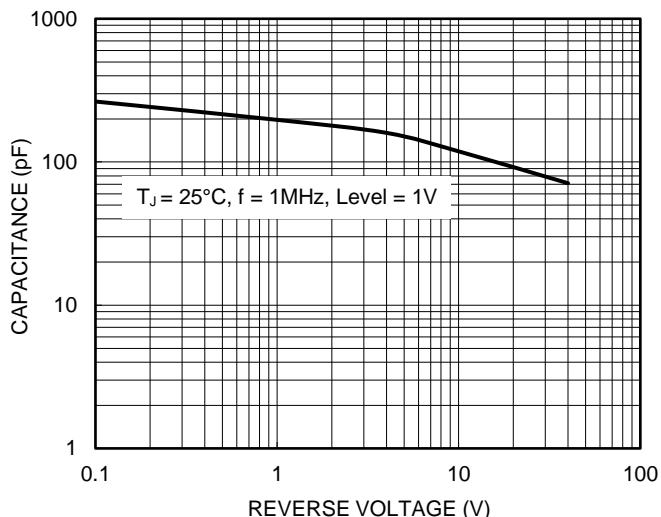


Figure 4. Typical Junction Capacitance

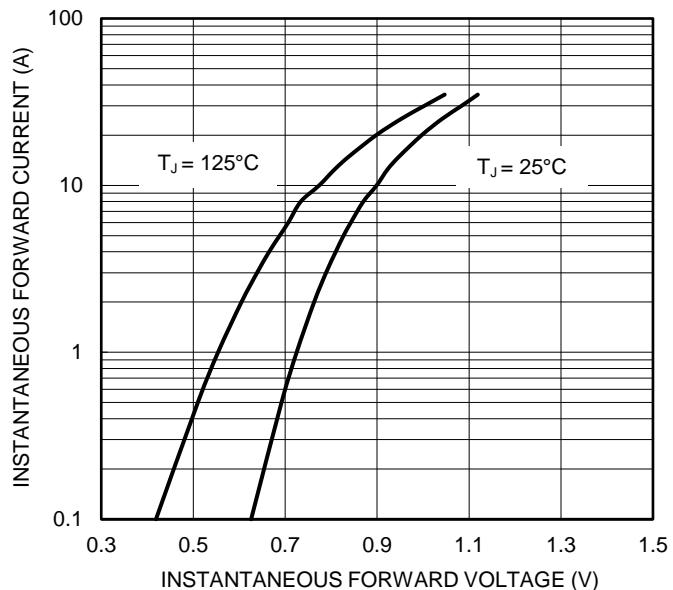


Figure 5. Typical Forward Characteristics

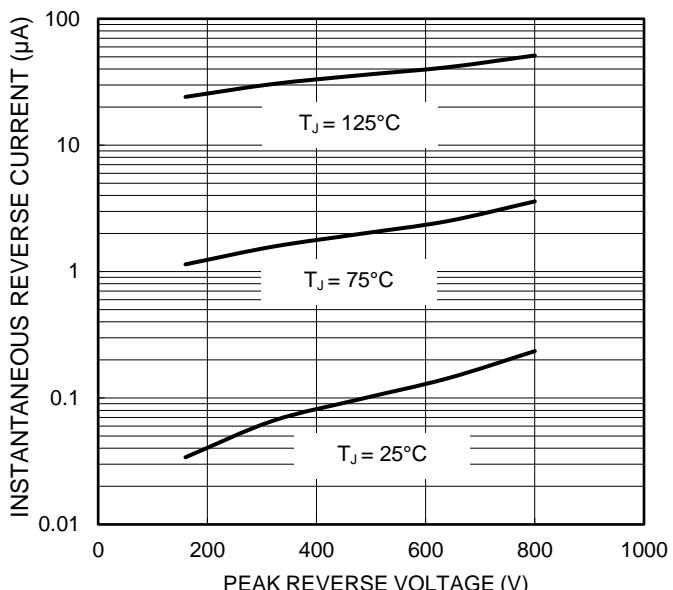
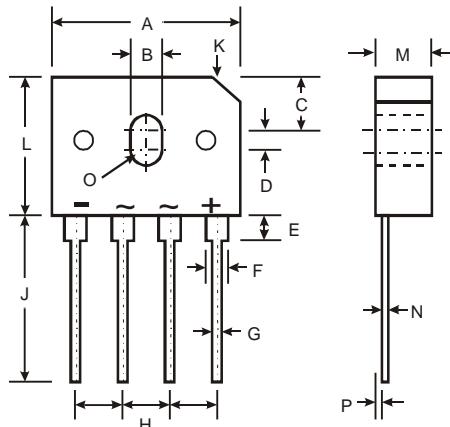


Figure 6. Typical Reverse Characteristics

Package Outline Dimensions

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

GBU



GBU		
Dim	Min	Max
A	21.8	22.3
B	3.5	4.1
C	7.4	7.9
D	1.65	2.16
E	2.25	2.75
F	1.95	2.35
G	1.02	1.27
H	4.83	5.33
J	17.5	18.0
K	3.2 X 45°	
L	18.3	18.8
M	3.30	3.56
N	0.46	0.56
O	1.90R	
P	0.76	1.0

All Dimensions in mm

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