

30A STANDARD RECOVERY BRIDGE RECTIFIER
Product Summary

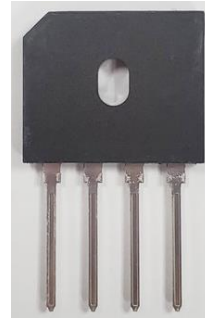
V_{RRM} (V)	I_F (A)	V_F Max (V) @ $I_F = 15A$	I_R Max (μA)
800	30	1.1	10

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
- Polarity Indicator: As Marked on The Body
- Weight: 3.8 grams (Approximate)
- Mounting Position: Any

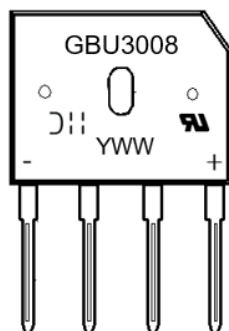
Features

- Glass Passivated Die Construction
- Rating to 800V PRV
- Ideal for Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic Technique
- 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/quality/product-definitions/) or your local Diodes representative.**
<https://www.diodes.com/quality/product-definitions/>


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
GBU3008-TU	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


GBU3008 = Product Type Marking Code
 DII = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 3 = 2023)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	800	V
Average Rectified Output Current	I _{F(AV)}	30	A
With Heatsink		3.4	
Peak Forward Surge Current 8.3ms Single Half Sine Wave	I _{FSM}	T _J = +25°C	350
		T _J = +125°C	280
Peak Forward Surge Current 1.0ms Single Half Sine Wave	I _{FSM}	T _J = +25°C	700
		T _J = +125°C	560
I ² t Rating for Fusing (t = 8.3ms)	I ² t	508	A ² s
Storage Temperature Range	T _{STG}	-55 to +150	°C
Operating Junction Temperature Range	T _J	-40 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Test Condition	Symbol	Value	Unit
Forward Voltage	I _F = 15A T _J = +25°C	V _F	1.1	V
Leakage Current	V _R = 800V T _J = +25°C	I _R	10	μA
Typical Junction Capacitance (Note 5)		C _T	108	pF

Thermal Characteristics

Characteristic	Symbol	Typ.	Unit
Typical Thermal Resistance (Note 6)	R _{θJC}	1.6	°C/W
	R _{θJL}	2.2	

- Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal resistance junction to case and lead in accordance with JESD-51.
Unit mounted on (attached aluminum pad 170mm * 170mm * 4.3mm fin type heatsink free air fan.

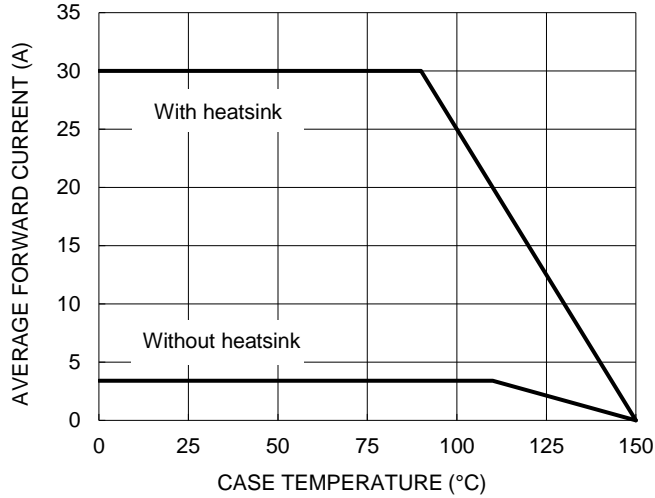


Figure 1. Forward Current Derating Curve

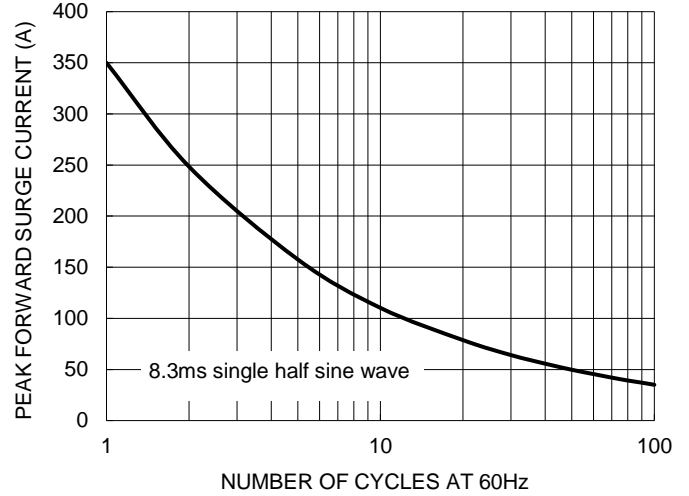


Figure 2. Maximum Non-Replicative Surge Current

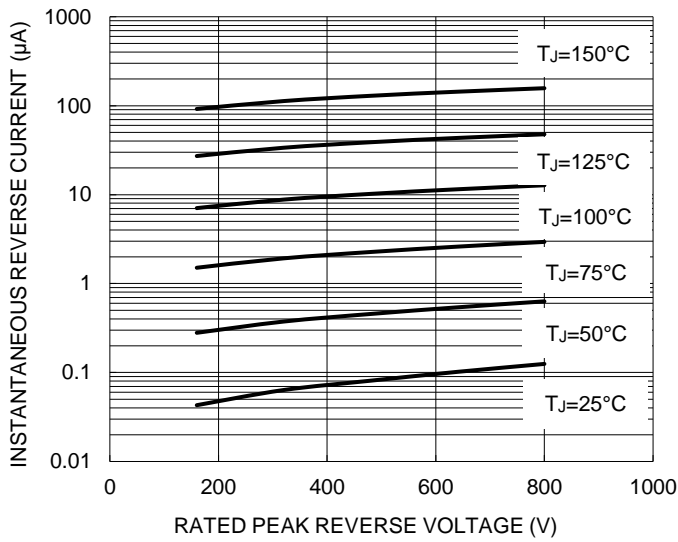


Figure 3. Typical Reverse Characteristics

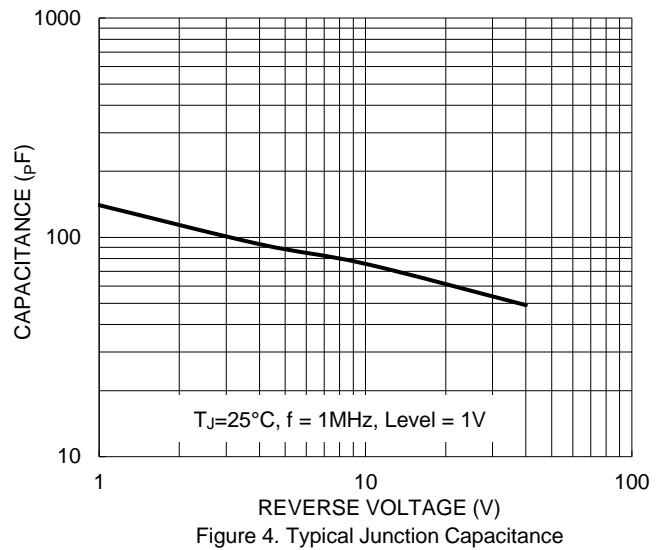


Figure 4. Typical Junction Capacitance

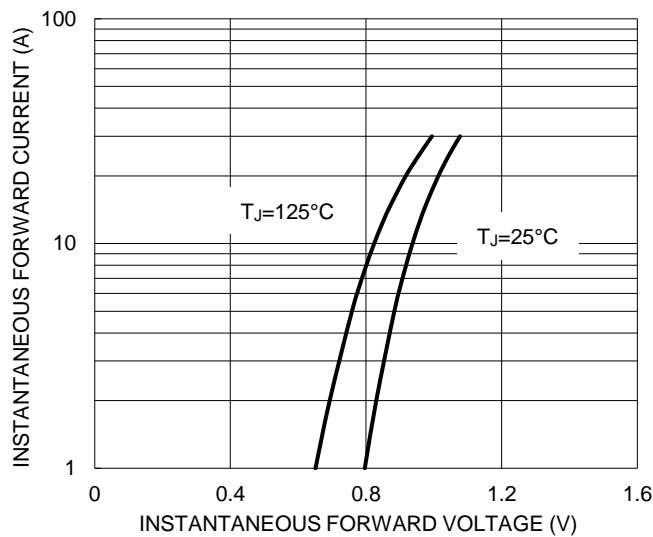
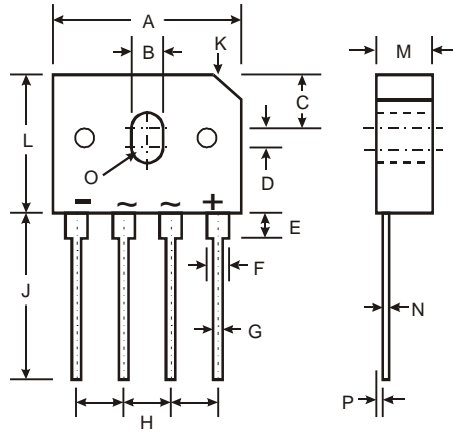


Figure 5. Typical Forward Characteristics

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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