



**THE DATASHEET OF
GBU10V06-TU**



Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 5A	I _R Max (μA)
600, 800	10	0.92	5

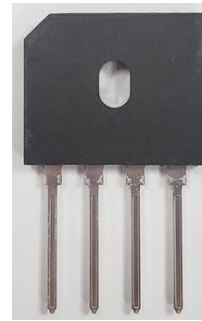
Mechanical Data

- 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)
- Mounting Position: Any

Features

- Glass Passivated Die Construction
- Low-Forward Voltage Drop
- Ideal for Printed Circuit Board
- 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](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

GBU

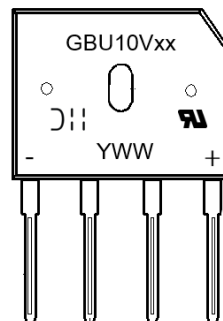


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
GBU10V06-TU	GBU	20	Tube
GBU10V08-TU	GBU	20	Tube

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

Marking Information



GBU10Vxx = Product Type Marking Code
 JII = 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	GBU10V06	GBU10V08	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	600	800	V
Average Rectified Output Current With Heatsink @T _C = +85°C Without Heatsink @T _C = +100°C	I _{F(AV)}		10 2.9	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave T _J = +25°C T _J = +125°C	I _{FSM}		250 220	A
Peak Forward Surge Current 1.0ms Single Half Sine-Wave T _J = +25°C T _J = +125°C	I _{FSM}		500 450	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t		260	A ² s
Mounting Torque (Recommended Torque: 0.5 N.m)	T _{OR}		0.8	N.m
Storage Temperature Range	T _{STG}		-40 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	Max	Unit
Forward Voltage	I _F = 5A T _J = +25°C T _J = +125°C	V _F	0.92 0.85	V
Leakage Current	V _R at Rated T _J = +25°C T _J = +125°C	I _R	5 500	μA

Thermal Characteristics

Characteristic	Symbol	Typ.	Unit
Typical Thermal Resistance (Note 5)	R _{θJC}	2	°C/W
	R _{θJL}	4	
	R _{θJA}	10	
Typical Thermal Resistance (Without Heatsink)	R _{θJC}	3	°C/W
	R _{θJL}	18	
	R _{θJA}	35	

Note: 5. Unit Mounted on 150mm x 150mm x 2mm Cu Plate Heatsink.

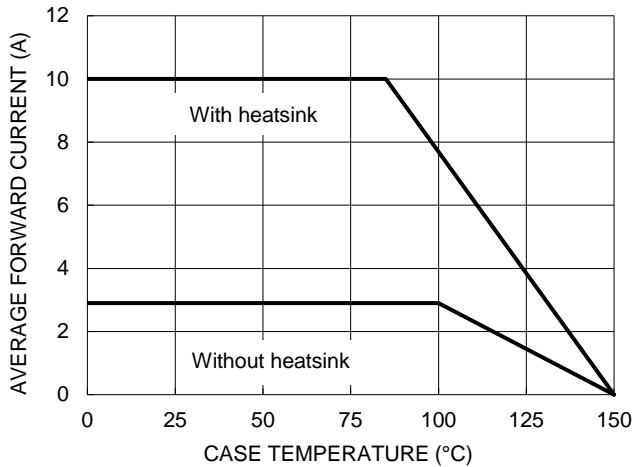


Figure 1. Forward Current Derating Curve

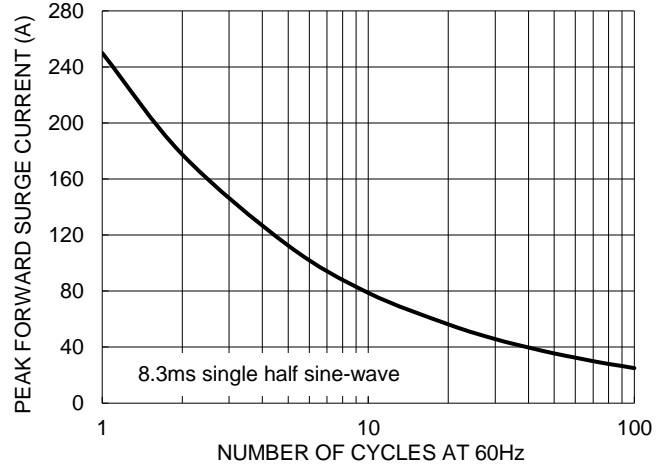


Figure 2. Maximum Non-repetitive Surge Current

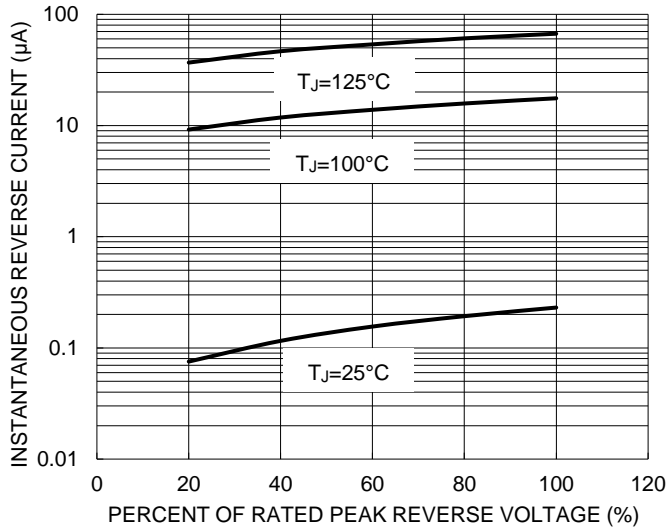


Figure 3. Typical Reverse Characteristics

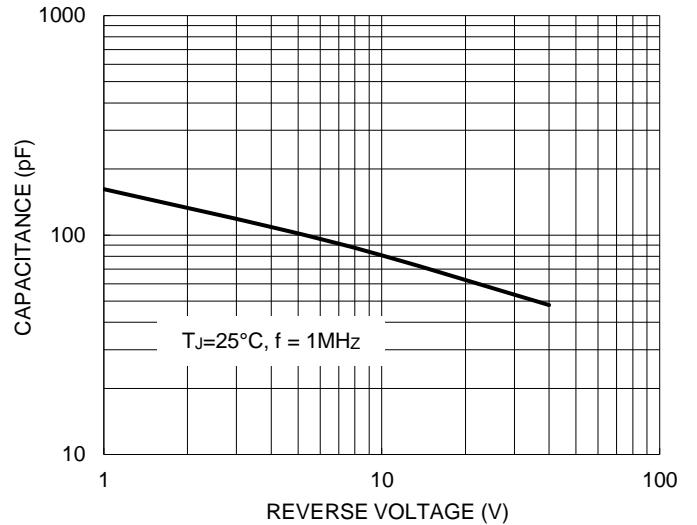


Figure 4. Typical Junction Capacitance

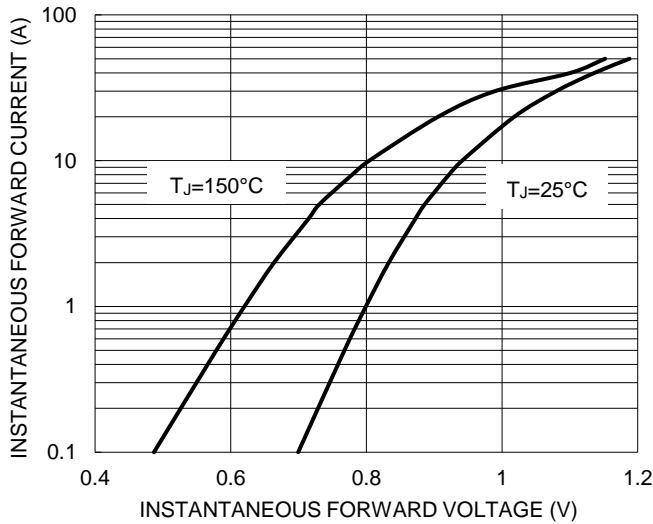


Figure 5. Typical Forward Characteristics

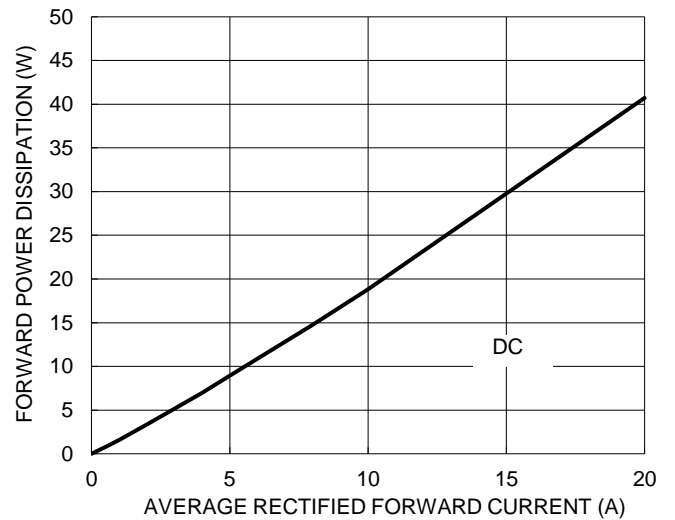
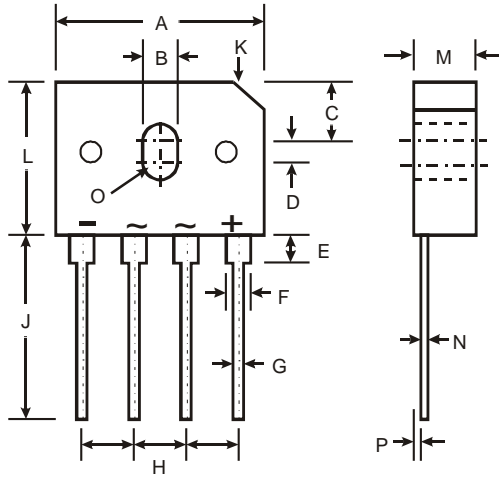


Figure 6. Forward Power Dissipation

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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