

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ $I_F = 2A$	I_R Max (μA)
600, 800	4	1.0	5

Mechanical Data

- Package: GBL
- 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: 2.52 grams (Approximate)

Features

- Glass Passivated Die Construction
- Rating to 800V PRV
- Ideal for Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic
- 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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact_us@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

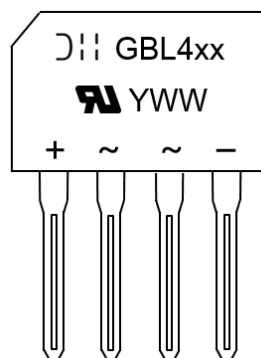


Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
GBL406-TU	Commercial	GBL	25pcs	Tube
GBL408-TU	Commercial	GBL	25pcs	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



- DII = Manufacturer's Marking
 GBL4xx = Product Type Marking Code
 YWW = Date Code Marking
 Y = Year (ex: 1 = 2021)
 WW = Week (01 to 53)

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

Characteristic	Symbol	GBL406	GBL408	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	600	800	V
Maximum RMS Voltage	V _{RMS}	420	560	V
Maximum DC Blocking Voltage	V _{DC}	600	800	V
Maximum Average Rectified Output Current @ T _C = +100°C	I _{F(AV)}	With Heatsink Without Heatsink	4.0 2.4	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	T _J = +25°C T _J = +125°C	150 135	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	T _J = +25°C T _J = +125°C	360 330	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t		93	A ² s
Operating Temperature Range	T _J		-55 to + 150	°C
Storage Temperature Range	T _{STG}		-55 to + 150	°C

Electrical Characteristics

Characteristic	Test Conditions	Symbol	Max	Unit
Forward Voltage	I _F = 2A T _J = +25°C	V _F	1.0	V
Leakage Current	V _R at Rated T _J = +25°C T _J = +125°C	I _R	5 500	μA
Typical Junction Capacitance (Note 5)		C _J	35	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 6)	R _{θJC}	4.2	°C/W
	R _{θJL}	4.0	
	R _{θJA}	10.0	

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Unit mounted on 50mm x 50mm x 1.6mm Cu plate heatsink.

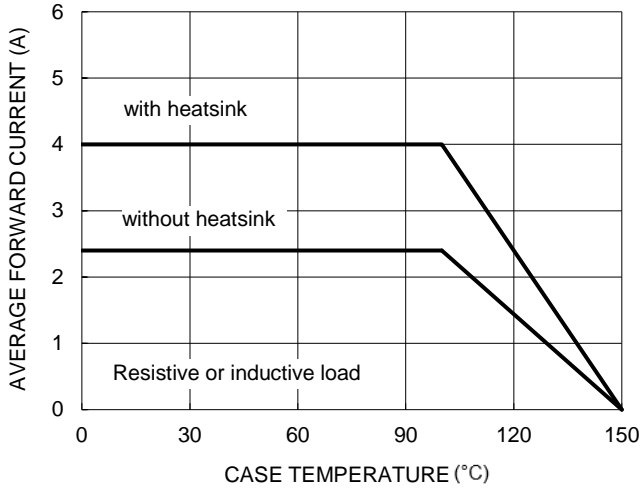


Figure 1. Forward Current Derating Curve

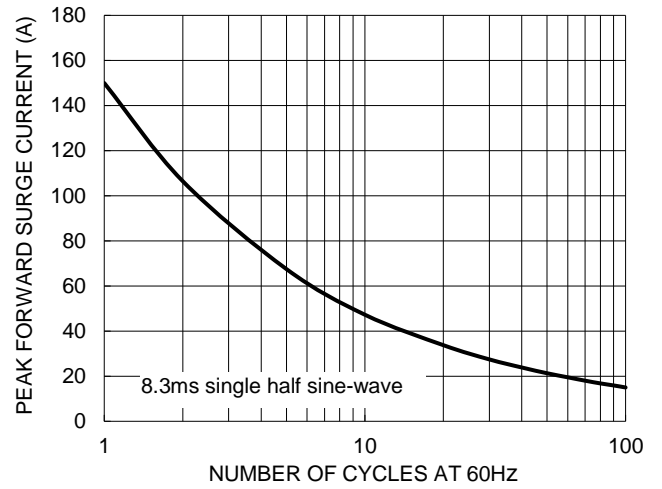


Figure 2. Maximum Non-Repetitive Surge Current

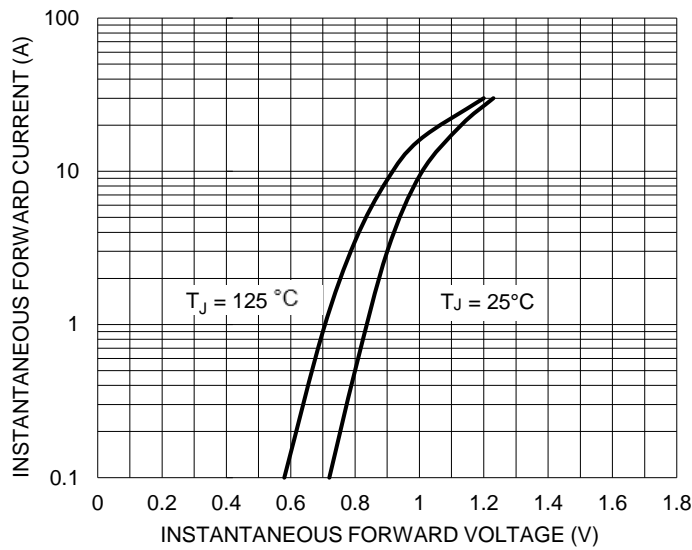


Figure 3. Typical Forward Characteristics

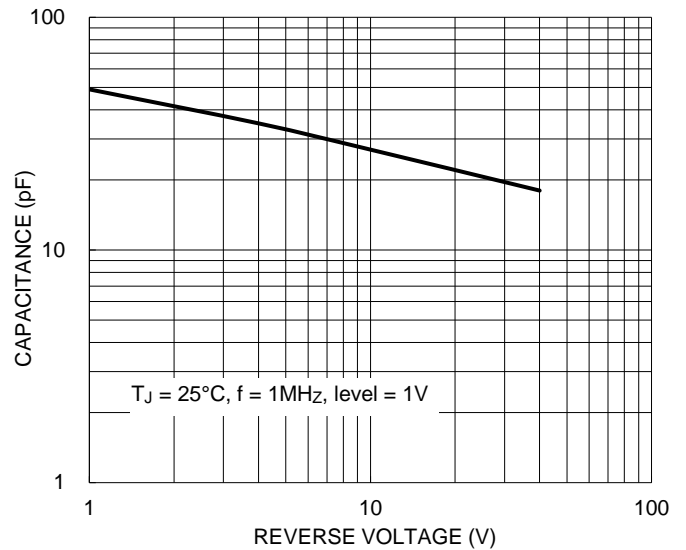


Figure 4. Typical Junction Capacitance

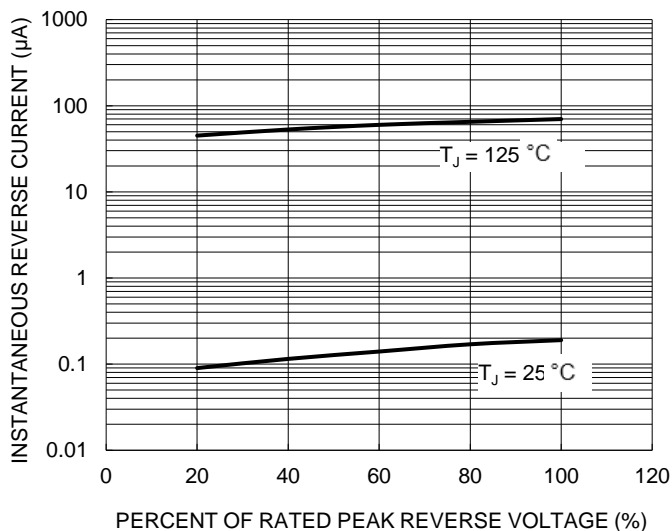


Figure 5. Typical Reverse Characteristics

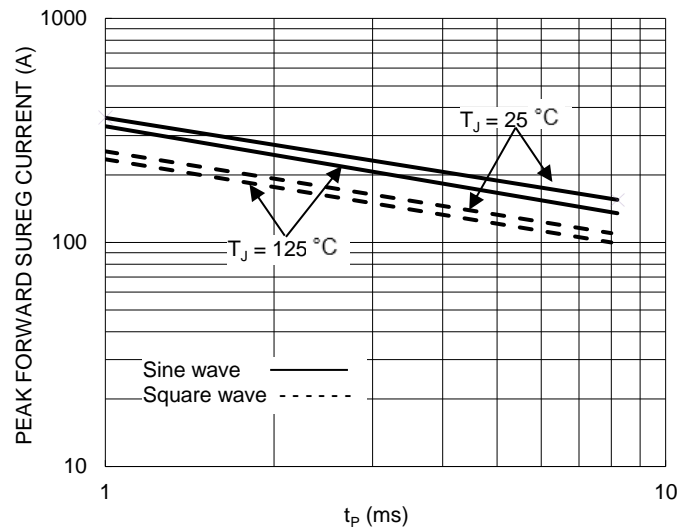
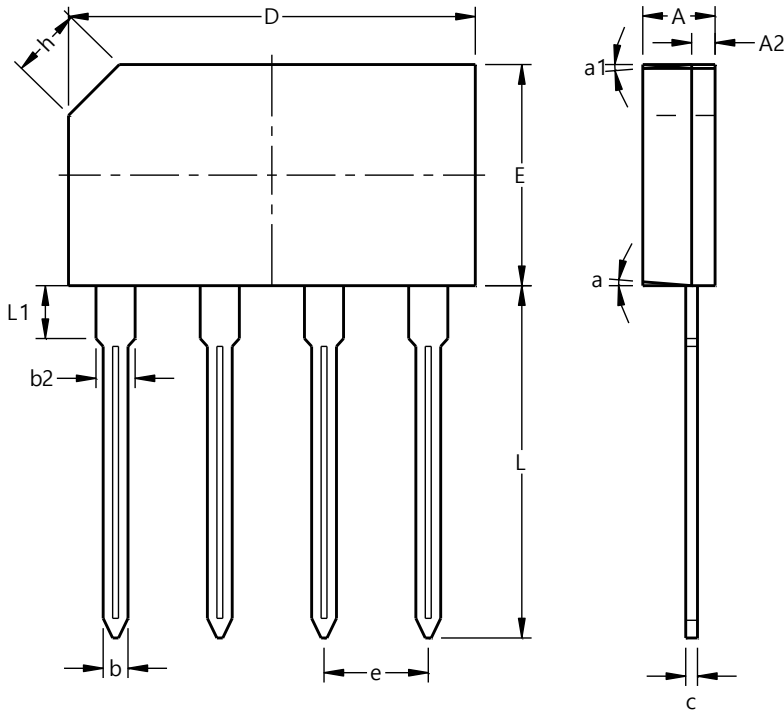


Figure 6. Non-Repetitive Surge Current

Package Outline Dimensions

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

GBL



GBL			
Dim	Min	Max	Typ.
A	3.30	3.70	--
A2	0.80	1.20	--
b	1.02	1.27	--
b2	1.95	2.35	--
c	0.40	0.60	--
D	20.20	20.80	--
E	10.70	11.30	--
e	4.83	5.33	--
h	--	--	0.35
L	17.50	18.00	--
L1	2.30	2.70	--
a	--	5°	--
a1	--	5°	--
All Dimensions in mm			

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