6A STANDARD RECOVERY BRIDGE RECTIFIER

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ I_F = 3A	I_R Max (μA)
1000	6	0.95	5

Features

- Glass Passivated Die Construction
- Rating to 1000V 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 or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

Mechanical Data

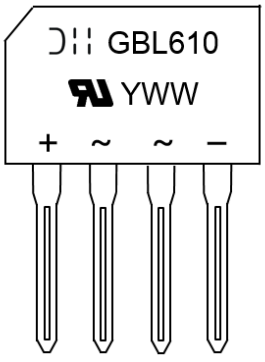
- Package: GBL
- Package Material: Plastic Material, UL Flammability Classification 94V-0 (No Br. Sb, Cl)
- Terminals: Finish – Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208 (e3)
- Polarity Indicator: Symbol Molded on Body
- Weight: 2.52 grams (Approximate)

Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
GBL610-TU	Commercial	GBL	25	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



GBL610 = Product Type Marking Code
= Manufacturer's Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 1 = 2021)
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}	1000	V
Average Rectified Output Current		$I_{F(AV)}$	6	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed On Rated Load	T_J = +25°C T_J = +125°C	I_{FSM}	160 128	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed On Rated Load	T_J = +25°C T_J = +125°C	I_{FSM}	320 256	A
I^2t Rating for Fusing (t = 8.3ms)		I^2t	106	A^2s
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 = 3A	T_J = +25°C T_J = +125°C	V_F	0.95 0.80	V
Leakage Current	V_R = 1000V	T_J = +25°C T_J = +125°C	I_R	5 100	µA
Typical Junction Capacitance (Note 5)			C_J	47	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	3.0 2.0 10	°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 JSED-51. Unit mounted on 100mm x 75mm x 27mm Fin heatsink.

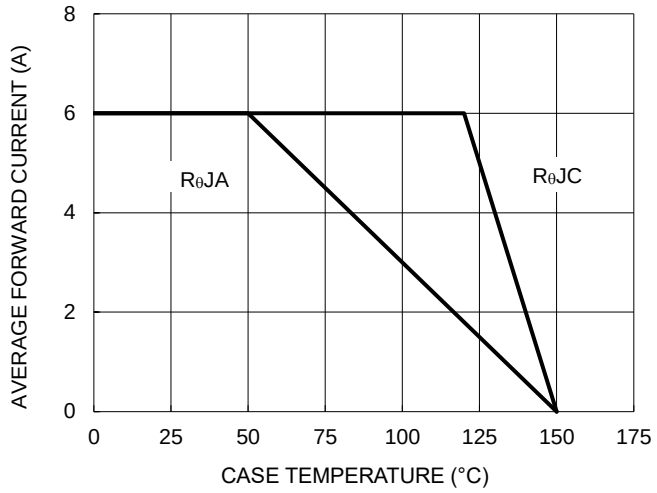


Figure 1. Forward Current Derating Curve

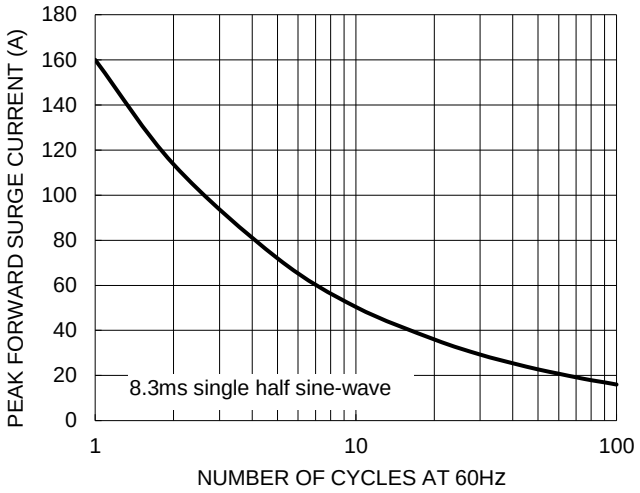


Figure 2. Maximum Non-Repetitive Surge Current

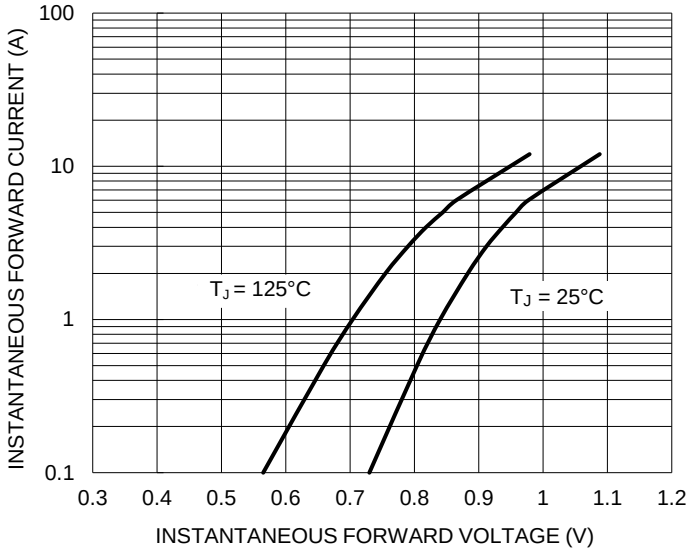


Figure 3. Typical Forward Characteristics

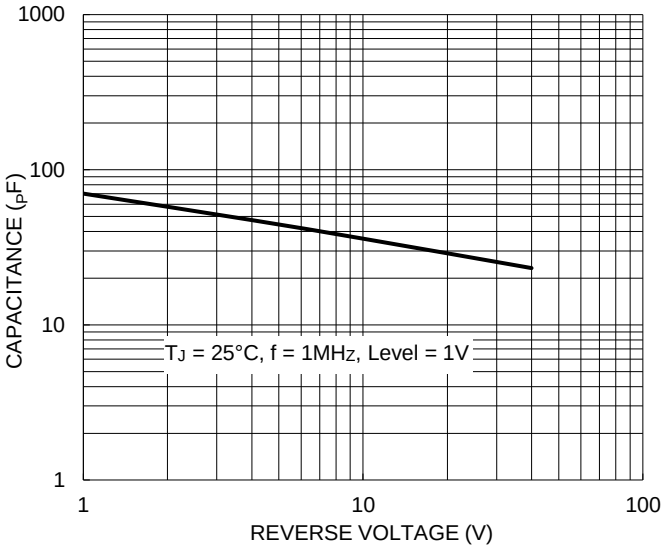


Figure 4. Typcial Junction Capacitance

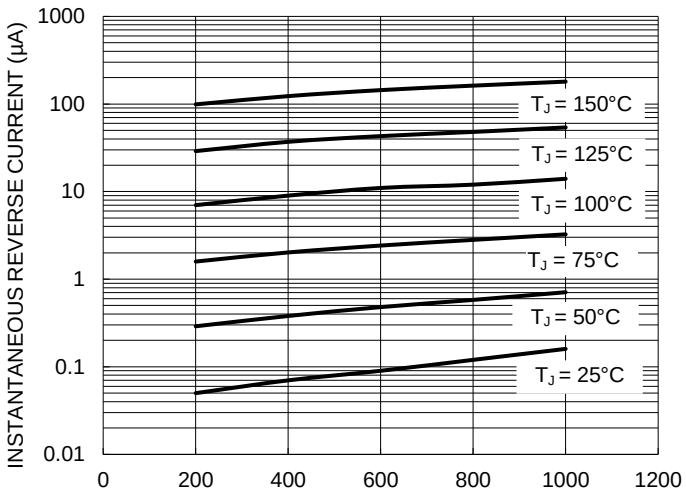
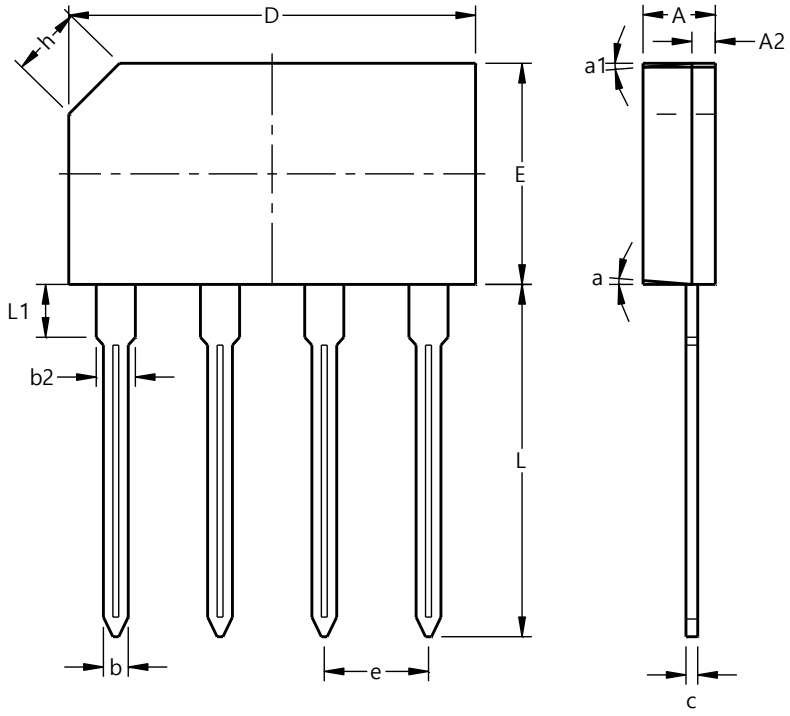


Figure 5. Typical Reverse Characteristics

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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