THE DATASHEET OF

GBL410_HF

4A GLASS PASSIVATED BRIDGE RECTIFIER

NEW PRODUCT

Features

- Glass Passivated Die Construction
- Rating to 1,000V PRV
- Low Reverse Leakage Current
- Surge Overload Rating to 150A Peak
- Ideal for Printed Circuit Board Applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: GBL
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish. Solderable per MIL-STD 202, Method 208 e3
- Polarity: Marked on Body, See "Marking Information" Below
- Marking: Date Code and Type Number
- Weight: 2.52 grams (Approximate)

Ordering Information (Note 4)

Part Number	Qualification	Case	Packaging
GBL410_HF	Commercial	GBL	25/Tube

Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com/quality/lead_free.html 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 http://www.diodes.com/products/packages.html.

Marking Information

GBL_HF

GBL410 = Product Type Marking Code
= Manufacturers' Code Marking
YBWW = Date Code Marking
Y = Last Digit of Year (ex: 7 = 2017)
B = Designator for "Green" Molding Compound
WW = Week Code (01 – 53)

NEW PRODUCT

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

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V_{RRM} V_{RWM} V_R	1,000	V
RMS Reverse Voltage		$V_{R(RMS)}$	700	V
Average Forward Rectified Current (Note 5)	With Heatsink Without Heatsink	$I_{(AV)}$	4.0 2.4	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	150	A
Forward Voltage (Per Element)	@ I_F = 2.0A	V_{FM}	1.0	V
Peak Reverse Current at Rated DC Blocking Voltage	@T_J = +25°C @TJ = +125°C	I_R	5 500	μA
I^2t Rating for Fusing (Note 6)		I^2t	93	A^2s
Typical Total Capacitance per Element (Note 7)		C_T	35	pF
Typical Thermal Resistance Junction to Case (Note 5)		$R_{\theta JC}$	4.2	°C/W
Typical Thermal Resistance Junction to Lead		$R_{\theta JL}$	4.0	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)		$R_{\theta JA}$	10	°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150	°C

Notes:
5. Unit mounted on 50x50x1.6mm Cu plate heatsink.
6. Non-repetitive, for t > 3.0ms and < 8.3ms.
7. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

NEW PRODUCT

FIG.1 - FORWARD CURRENT DERATING CURVE

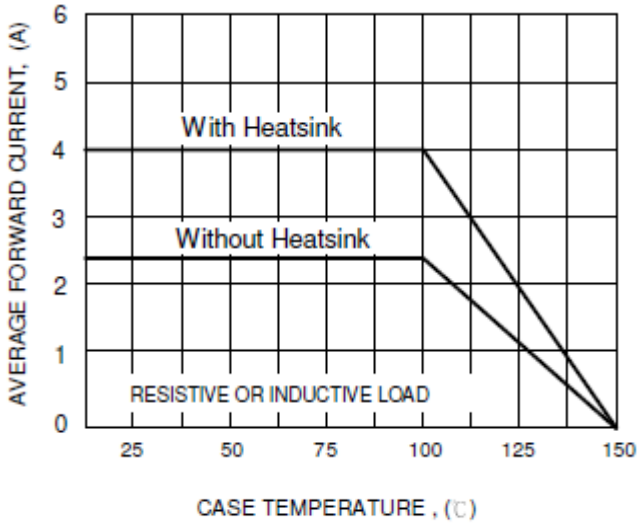


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

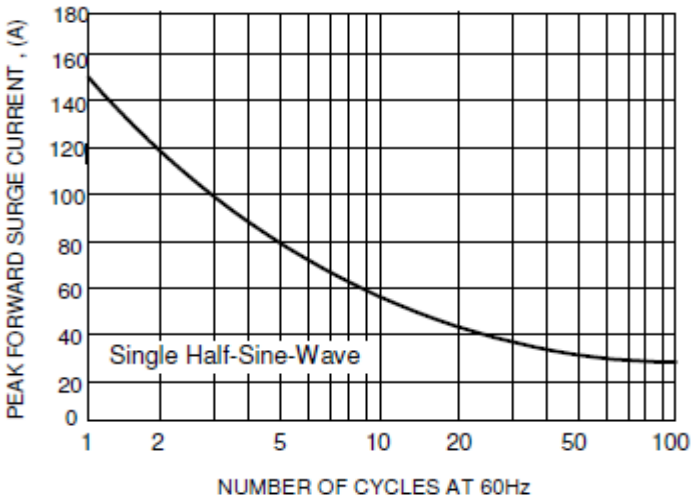


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

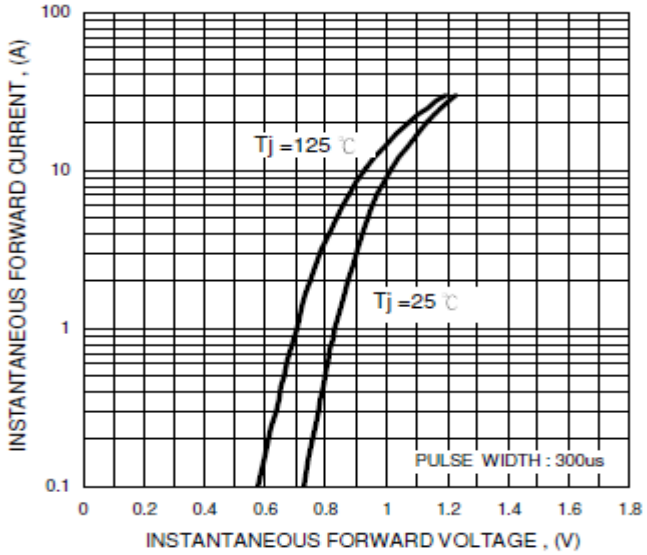


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

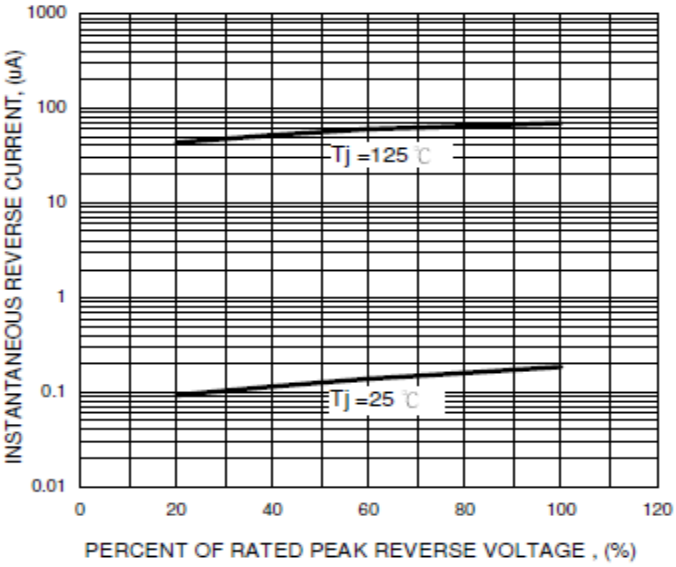


FIG.5 - TYPICAL JUNCTION CAPACITANCE

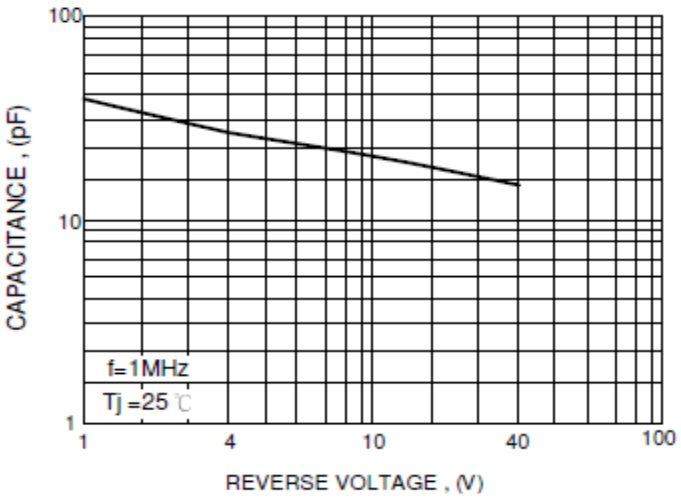
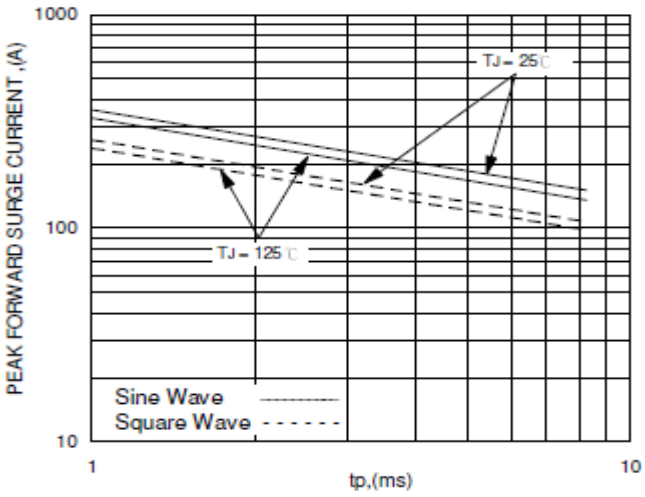


FIG.6 - NON-REPETITIVE SURGE CURRENT

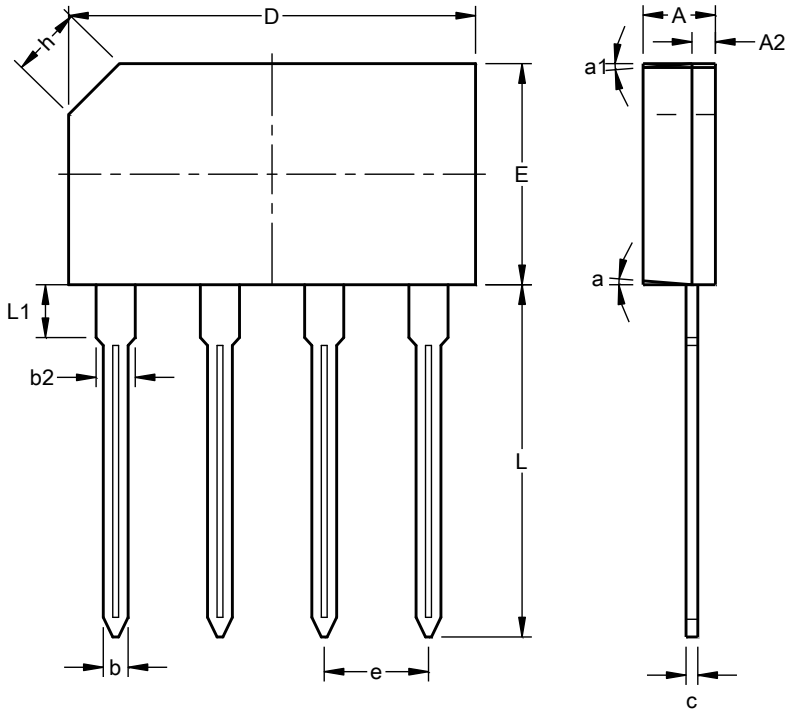


NEW PRODUCT

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			

NEW PRODUCT

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