

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 
- 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)

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	V _{RRM}	1,000	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	700	V
Average Forward Rectified Current (Note 5)	With Heatsink	4.0	A
	Without Heatsink	2.4	
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}	V
Peak Reverse Current at Rated DC Blocking Voltage	@ T _J = +25°C	5	μA
	@ T _J = +125°C	500	
I ² t Rating for Fusing (Note 6)	I ² _t	93	A ² s
Typical Total Capacitance per Element (Note 7)	C _T	35	pF
Typical Thermal Resistance Junction to Case (Note 5)	R _{θJC}	4.2	°C/W
Typical Thermal Resistance Junction to Lead	R _{θJL}	4.0	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	R _{θJA}	10	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

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

FIG.1 - FORWARD CURRENT DERATING CURVE

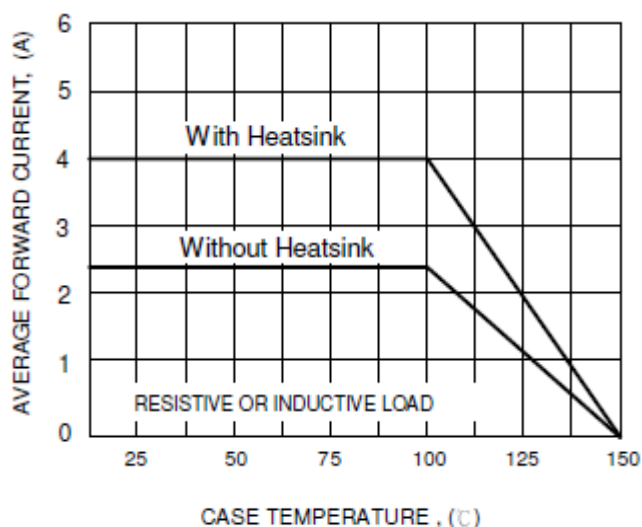


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

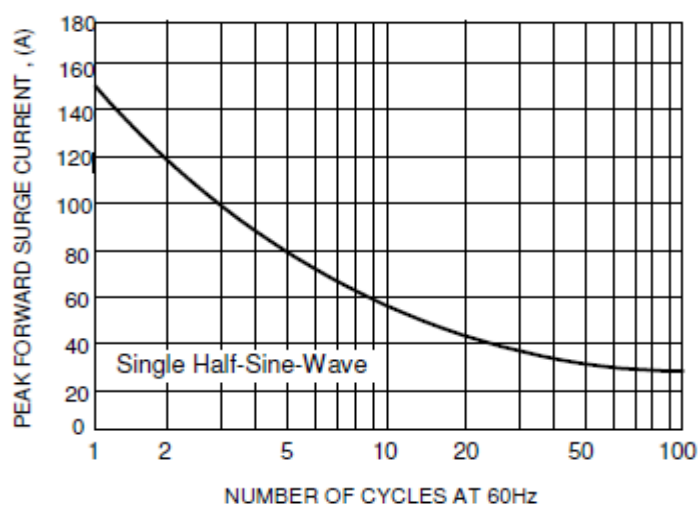


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

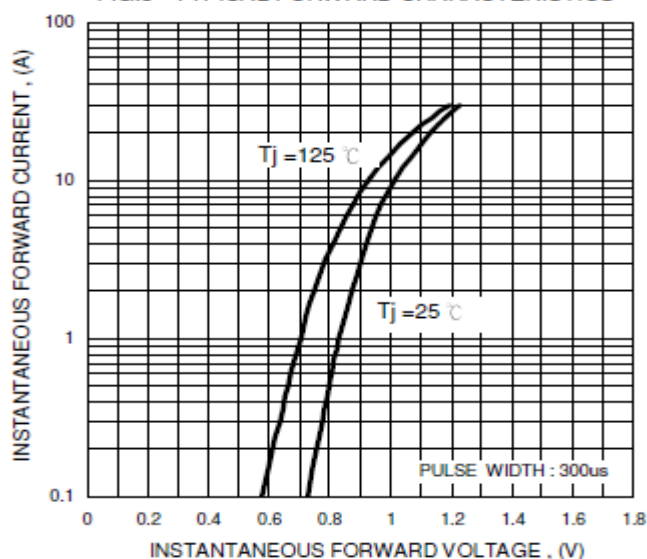


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

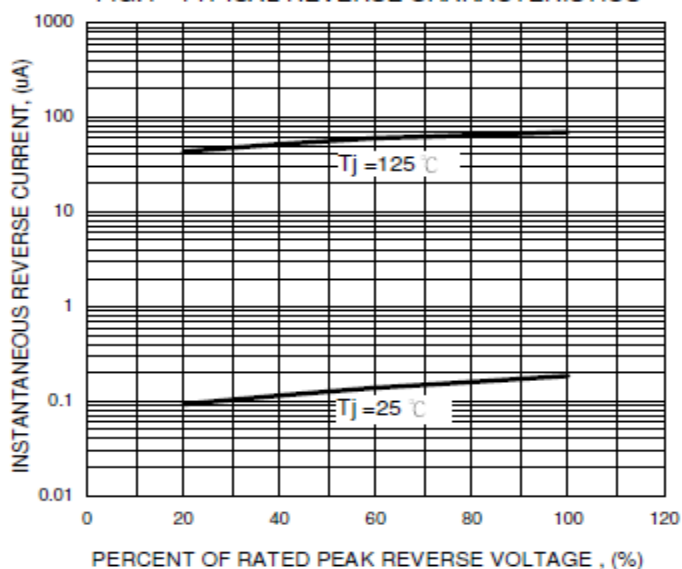


FIG.5 - TYPICAL JUNCTION CAPACITANCE

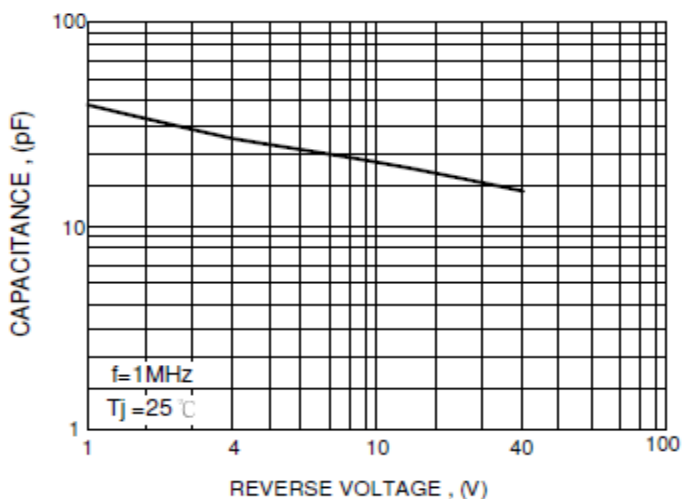
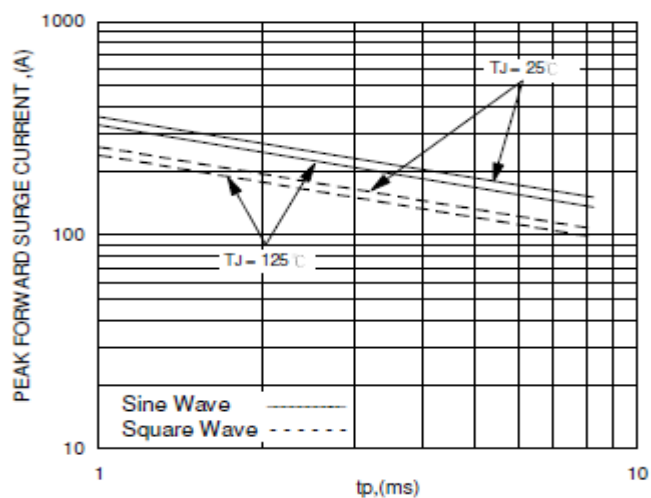


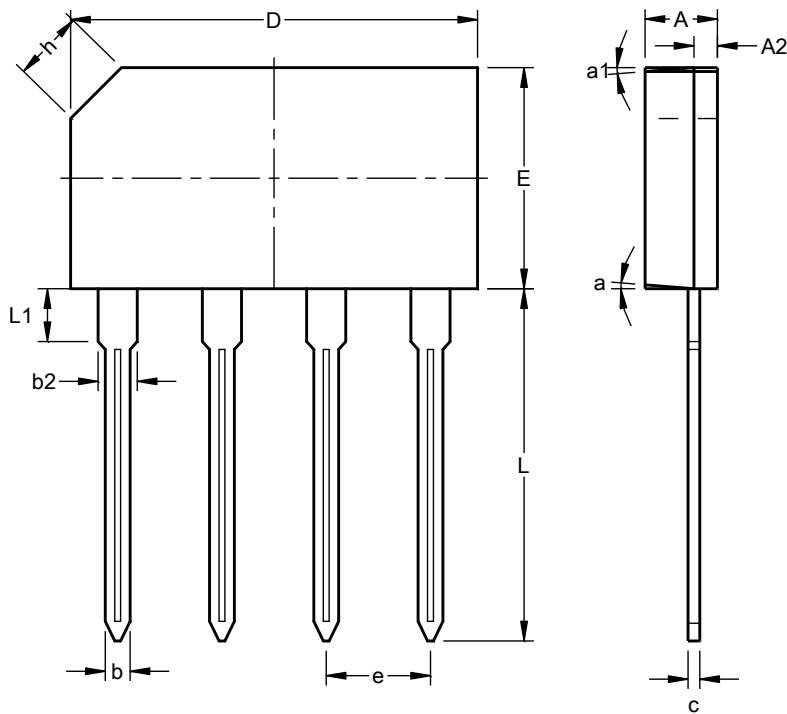
FIG.6 - NON-REPETITIVE SURGE CURRENT



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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