

## 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)**

## 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 3)

Part Number	Qualification	Case	Packaging
GBL410	Commercial	GBL	20/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> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information

GBL



GBL410 = Product Type Marking Code  
 = Manufacturers' Code Marking  
 YWW = Date Code Marking  
 Y = Last Digit of Year (ex: 7 = 2017)  
 WW = Week Code (01 – 53)

**Maximum Ratings and Electrical Characteristics** (@T<sub>A</sub> = +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 <sub>RRM</sub>	1,000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	700	V
Average Forward Rectified Current (Note 4)	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 <sub>FSM</sub>	150	A
Forward Voltage (Per Element)	@ I <sub>F</sub> = 2.0A V <sub>FM</sub>	1.0	V
Peak Reverse Current at Rated DC Blocking Voltage	@ T <sub>J</sub> = +25°C	5	μA
	@ T <sub>J</sub> = +125°C	500	
I <sup>2</sup> t Rating for Fusing (Note 5)	I <sup>2</sup> t	93	A <sup>2</sup> s
Typical Total Capacitance per Element (Note 6)	C <sub>T</sub>	35	pF
Typical Thermal Resistance Junction to Case (Note 4)	R <sub>θJC</sub>	4.2	°C/W
Typical Thermal Resistance Junction to Lead	R <sub>θJL</sub>	4.0	°C/W
Typical Thermal Resistance Junction to Ambient (Note 4)	R <sub>θJA</sub>	10	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

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

FIG.1 - FORWARD CURRENT DERATING CURVE

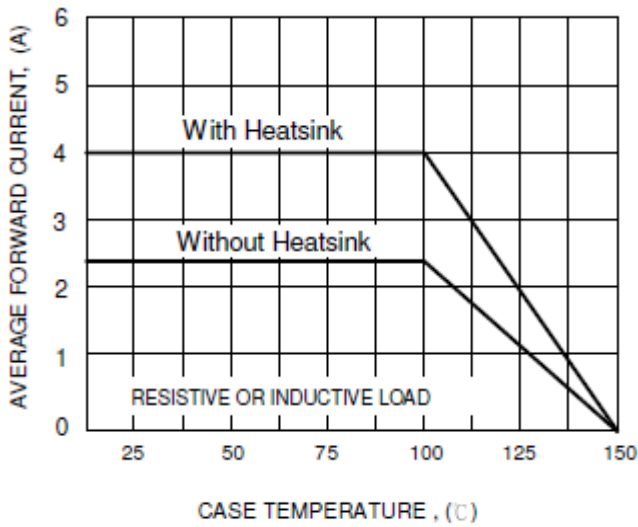


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

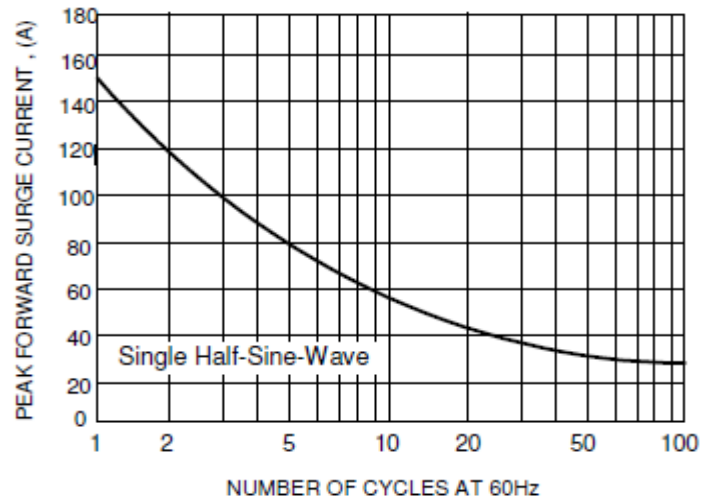


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

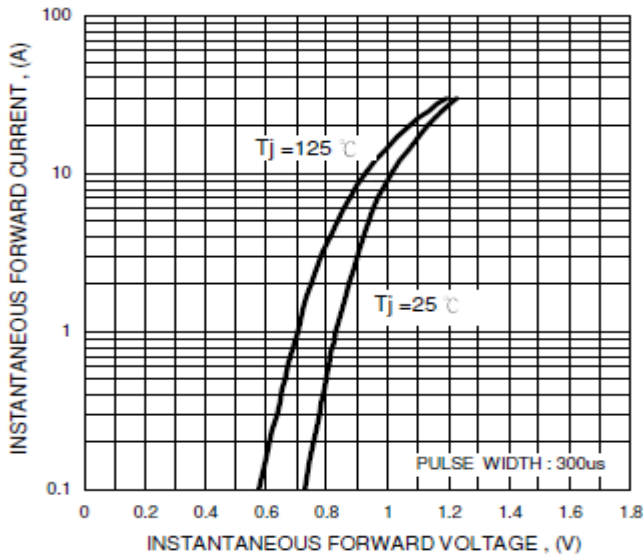


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

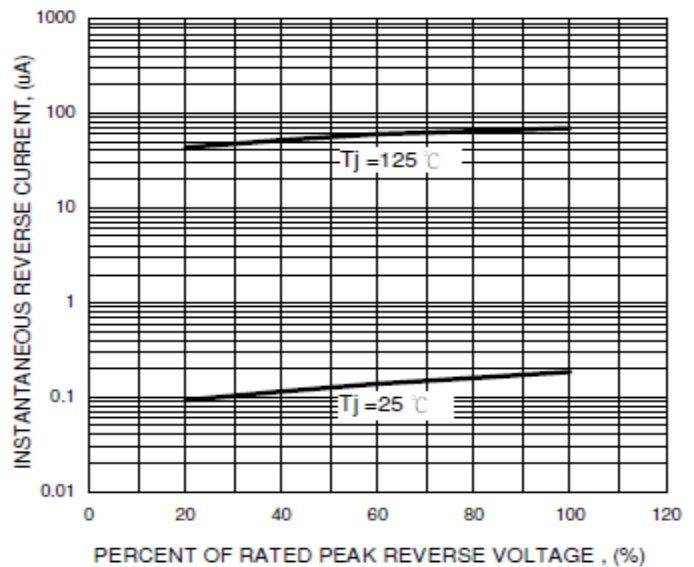


FIG.5 - TYPICAL JUNCTION CAPACITANCE

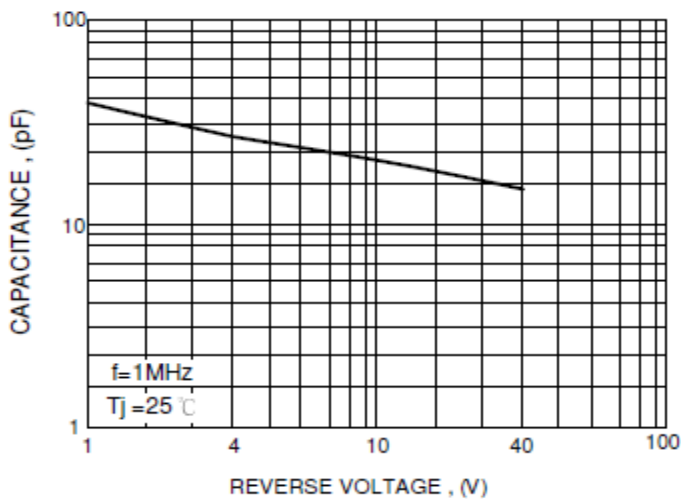
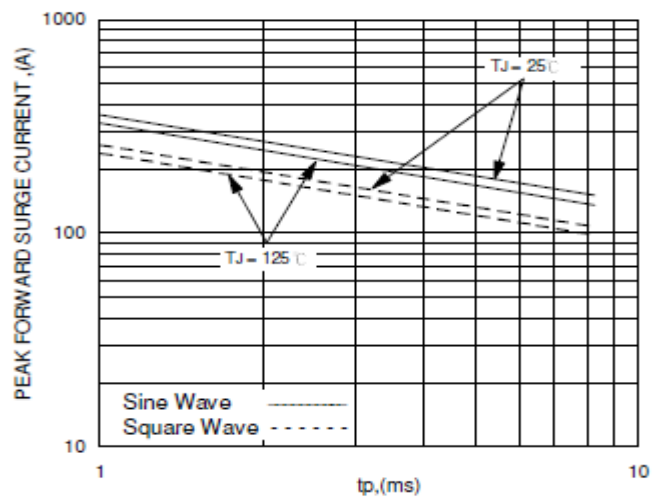


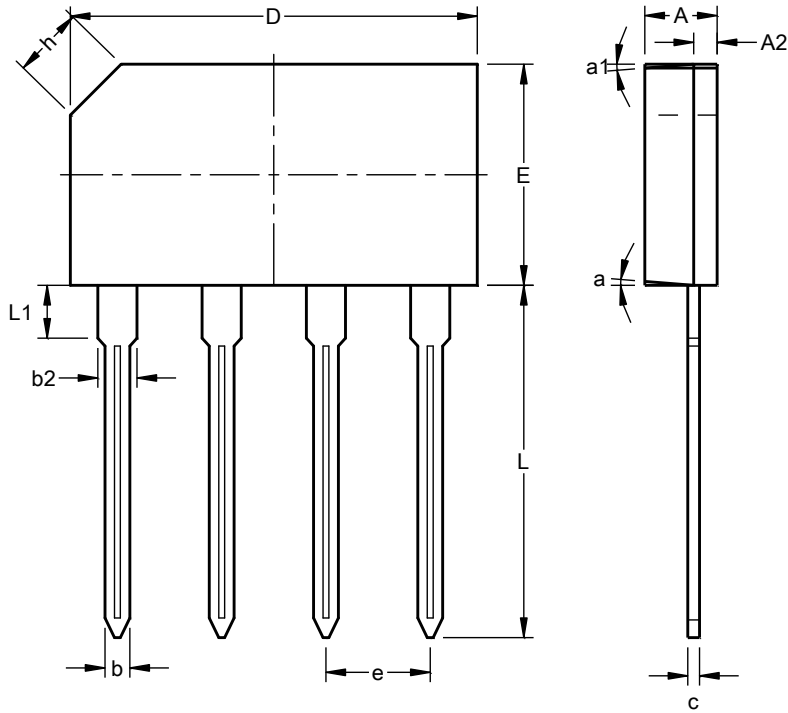
FIG.6 - NON-REPETITIVE SURGE CURRENT



**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			

NEW PRODUCT

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