



THE DATASHEET OF GBP810



Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ $I_F = 4A$	I_R Max (μA)
1000	8.0	1.0	1.0

Mechanical Data

- Package: GBP
- 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 @3
- Polarity Indicator: Symbol Molded on Body
- Weight: 1.33 grams (Approximate)

GBP

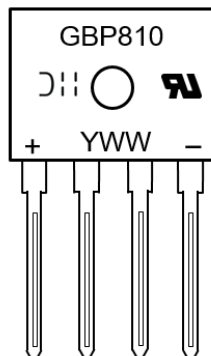


Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
GBP810-TU	Commercial	GBP	35	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



- GBP810 = Product Type Marking Code
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 2 = 2022)
 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
Maximum Average Rectified Output Current T _C = +105°C	I _{F(AV)}	8.0	A
With Heatsink Without Heatsink		1.9	
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	165	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	330	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	112	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	Value	Unit
Forward Voltage	I _F = 4.0A T _J = +25°C	V _F	1.0	V
Leakage Current	V _R = 1000V T _J = +25°C T _J = +125°C	I _R	1.0 100	μA
Typical Junction Capacitance (Note 5)		C _J	45	pF

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Without Heatsink)	R _{θJC}	13	°C/W
	R _{θJL}	17	
	R _{θJA}	35	
Typical Thermal Resistance (Note 6)	R _{θJC}	3	°C/W
	R _{θJL}	6	
	R _{θJA}	8	

- Notes:
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 6. Thermal resistance junction to case, lead and ambient. Unit mounted on attached copper pad 200mm x 200mm x 7mm fin type heatsink.

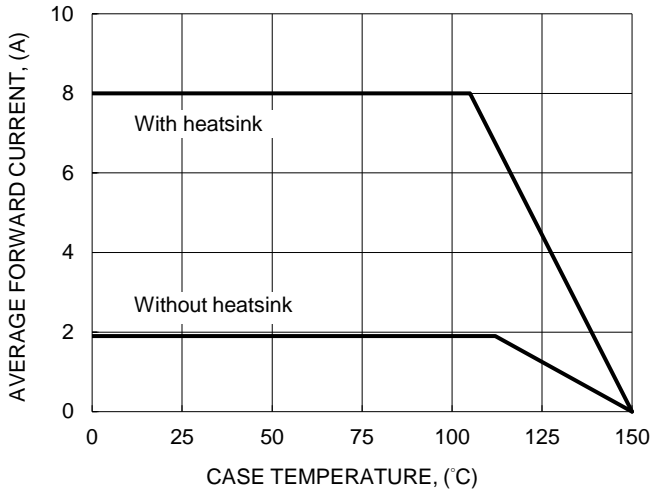


Figure 1. Forward Current Derating Curve

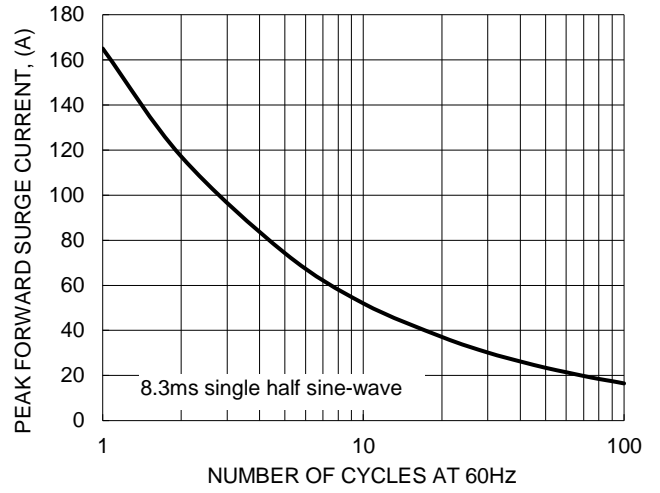


Figure 2. Maximum Non-Repetitive Surge Current

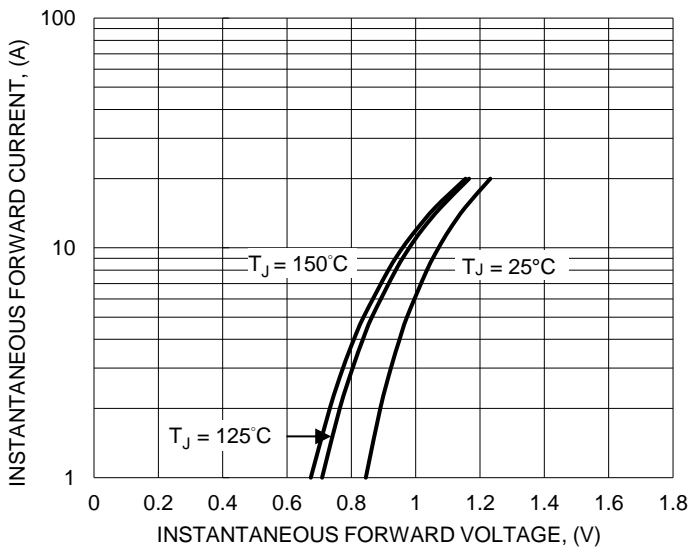


Figure 3. Typical Forward Characteristics

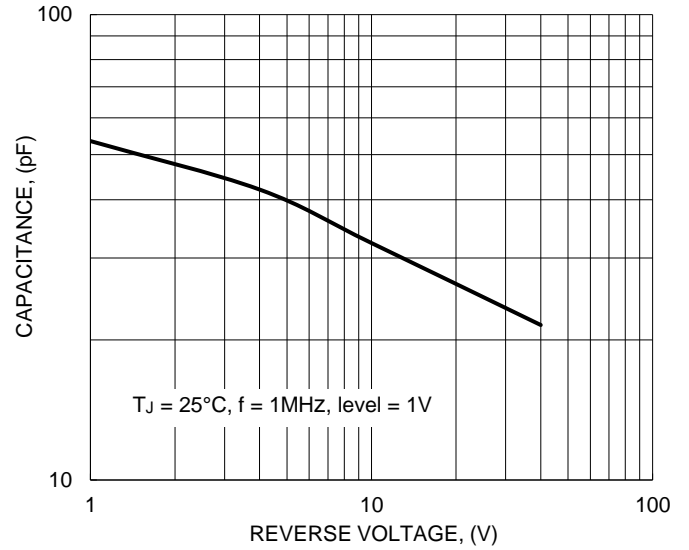


Figure 4. Typical Junction Capacitance

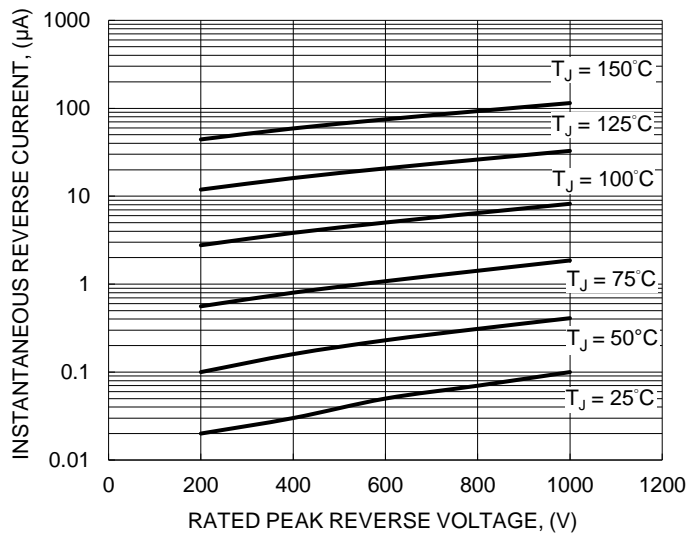
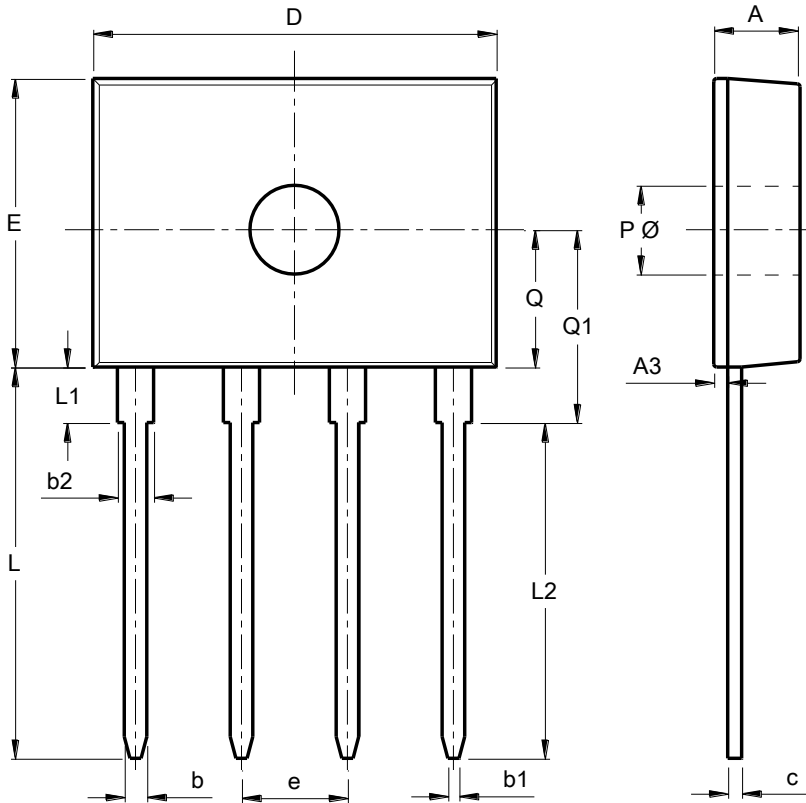


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

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

GBP



GBP			
Dim	Min	Max	TYP
A	2.90	3.30	3.10
A3	0.30	0.70	0.50
b	0.76	0.86	0.81
b1	0.35	0.45	0.40
b2	1.20	1.40	1.30
c	0.40	0.60	0.50
D	14.20	14.70	14.50
E	10.10	10.70	10.40
e	3.71	3.91	3.81
L	13.80	14.40	14.10
L1	1.80	2.20	2.00
L2	12.10 REF		
P Ø	3.20 REF		
Q	4.65	5.25	4.95
Q1	6.65	7.25	6.95
All Dimensions in mm			

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