


Product Summary

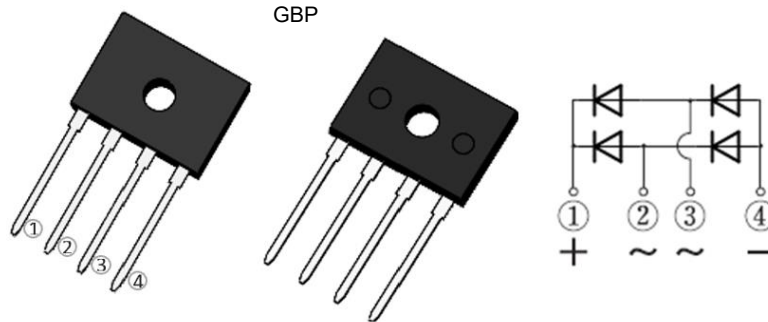
V_{RRM} (V)	I_F (A)	V_F Max (V) @ $I_F = 1.5A$	I_R Max (μA)
600, 800, 1000	3	1.05	5

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 
- Polarity Indicator: Symbol Molded on Body.
- Weight: 1.33 grams (Approximate)

Features

- Glass Passivated Die Construction
 - Rating to 1000V PRV
 - Ideal for Printed Circuit Board
 - Reliable Construction Utilizing Molded Plastic
 - UL Recognized File # E95060
 - 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-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative.**
- <https://www.diodes.com/quality/product-definitions/>

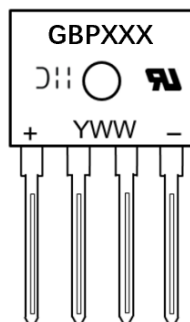


Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
GBP306	GBP	35	Tube
GBP308	GBP	35	Tube
GBP310	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



GBPXXX = Product Type Marking Code
 DII = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 5 = 2025)
 WW = Week Code (01 to 53)

Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic		Symbol	GBP306	GBP308	GBP310	Unit
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	600	800	1000	V
Maximum DC Blocking Voltage		V _{DC}	600	800	1000	V
Maximum Average Rectified Output Current @T _C = +100°C	With Heatsink	I _{F(AV)}	3.0			A
	Without Heatsink		1.8			
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	T _J = +25°C	I _{FSM}	90			A
	T _J = +125°C		72			
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed on Rated Load	T _J = +25°C	I _{FSM}	200			A
	T _J = +125°C		160			
I ² t Rating for Fusing (t = 8.3ms)		I ² t	33			A ² s
Operating Temperature Rage		T _J	-55 to + 150			°C
Storage Temperature Rage		T _{STG}	-55 to + 150			°C

Electrical Characteristics

Characteristic	Test Conditions		Symbol	Max	Unit
Forward Voltage	$I_F = 1.5\text{A}$	$T_J = +25^\circ\text{C}$	V_F	1.05	V
Leakage Current	V_R at Rated	$T_J = +25^\circ\text{C}$ $T_J = +125^\circ\text{C}$	I_R	5 500	μA
Typical Junction Capacitance (Note 5)			C_J	25	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 6)	R_{thJC}	9	$^\circ\text{C/W}$
	R_{thJL}	9	
	R_{thJA}	20	

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal resistance junction to case, lead and ambient. Device mounted on 30mm x 30mm x 1mm Cu plate heatsink.

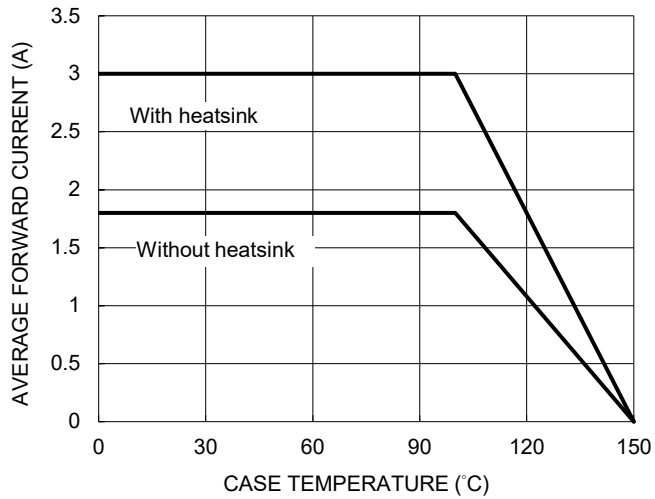


Figure 1. Forward Current Derating Curve

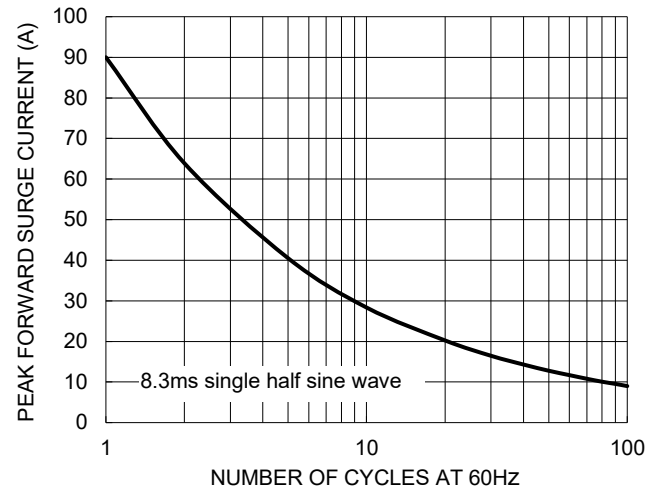


Figure 2. Maximum Non-Repetitive Surge Current

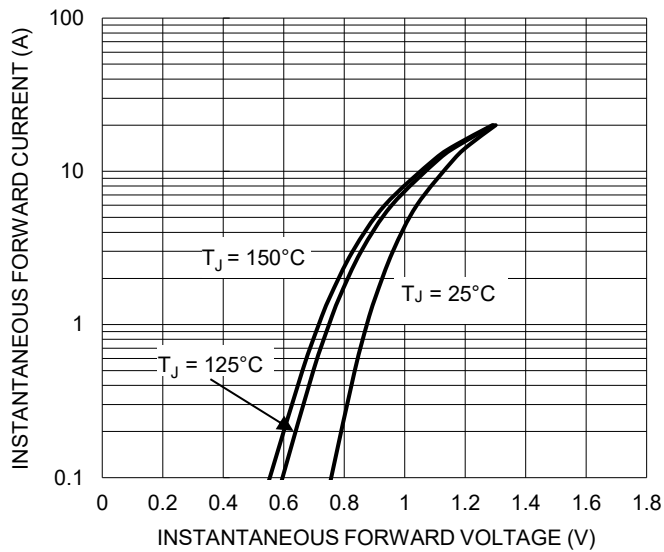


Figure 3. Typical Forward Characteristics

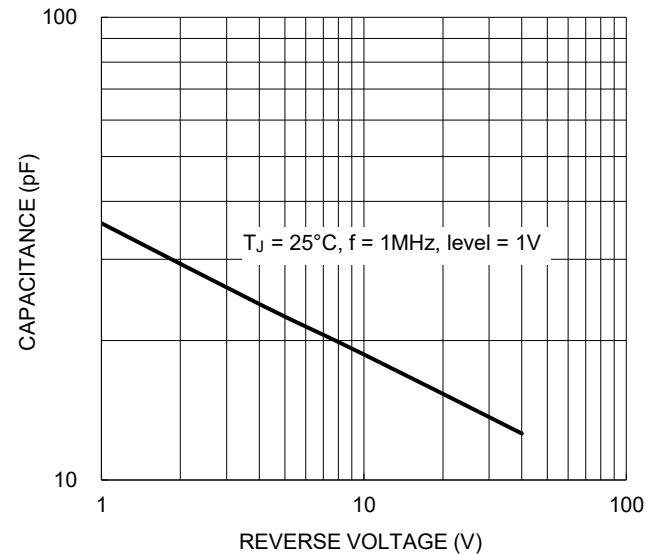


Figure 4. Typical Junction Capacitance

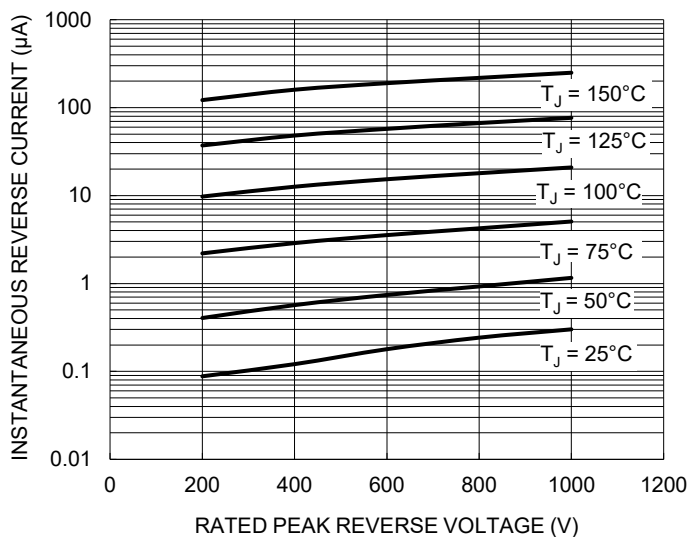


Figure 5. Typical Reverse Characteristics

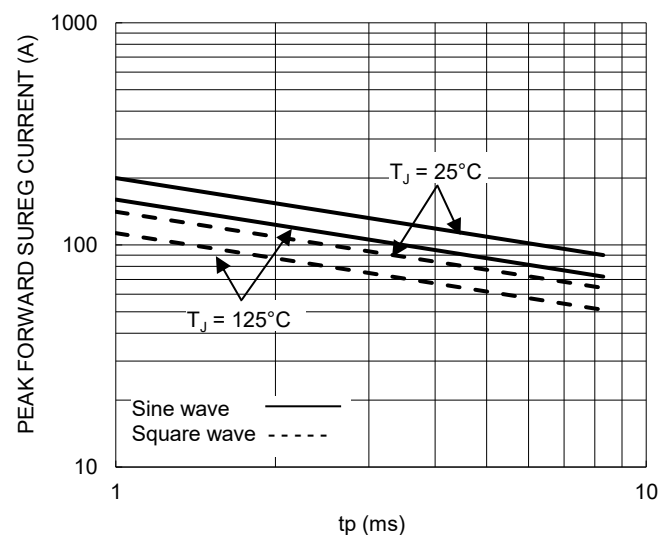
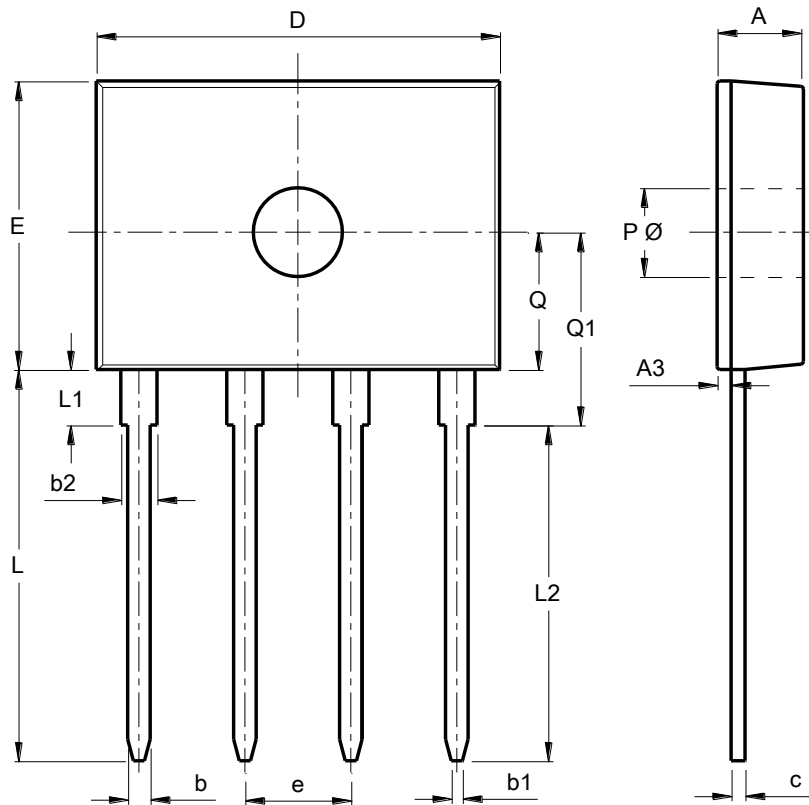


Figure 6. Non-Repetitive Surge Current

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	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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