

GBPC25005/W - GBPC2510/W

25A GLASS PASSIVATED BRIDGE RECTIFIER

Features

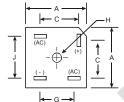
- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 300A Peak
- Metal Base for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 1500V
- UL Listed Under Recognized Component Index, File Number E94661
- Lead Free Finish, RoHS Compliant (Note 4)

Mechanical Data

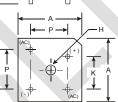
- Case: GBPC / GBPC-W
- Case Material: Molded Plastic with Heatsink Internally Mounted in the Bridge Encapsulation. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Silver. Plated Leads Solderable per MIL-STD-202, Method 208 @3
- Polarity: As Marked on Case
- Mounting: Through Hole for #10 Screw
- Mounting Torque: 8.0 Inch-pounds Maximum
- Ordering Information: See Page 3
- Marking: Type Number
- GBPC Weight: 20 grams (approximate)
- GBPC-W Weight: 14 grams (approximate)



GBPC







GBPC / GBPC-W					
Dim	Min	Max			
Α	28.30	28.80			
В	7.40	8.25			
C	16.10	17.10			
П	18.80	21.30			
G	13.80	14.80			
Н	Hole for #10 screw				
	5.08Ø	5.59Ø			
7	17.60	18.60			
K	10.90	11.90			
٦	0.97Ø	1.07∅			
М	31.80	_			
P	17.60	18.60			
All Dimensions in mm					

"W" Suffix Designates Wire Leads No Suffix Designates Faston Terminals

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%.

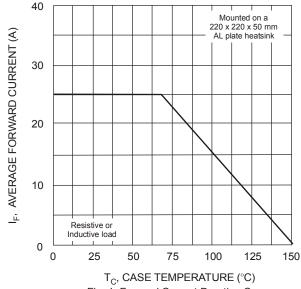
Characteristic	Symbol	GBPC25 005/W	GBPC25 01/W	GBPC25 02/W	GBPC25 04/W	GBPC25 06/W	GBPC25 08/W	GBPC25 10/W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T _C = 60°C	Io	25				Α			
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	м 300				А			
Forward Voltage (per element) @ I _F = 12.5A	V _{FM}	1.1				V			
Peak Reverse Current $@T_C = 25^{\circ}C$ at Rated DC Blocking Voltage $@T_C = 125^{\circ}C$	I _R	I _R 5.0 500				μА			
l ² t Rating for Fusing (Note 1)	l ² t	I ² t 374				A ² s			
Typical Total Capacitance (Note 2)	Ст	300				pF			
Typical Thermal Resistance per Leg (Note 3)	$R_{\theta JC}$	1.3			°C/W				
Operating and Storage Temperature Range	T _{j,} T _{STG}	-65 to +150			°C				

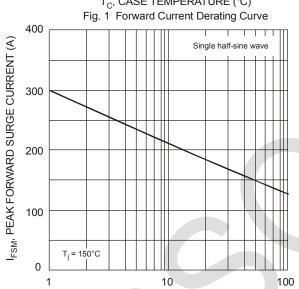
Notes:

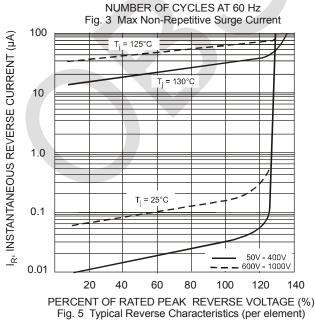
- I. Non-repetitive, for t > 1.0ms and t < 8.3ms.
- 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 3. Thermal resistance junction to case mounted on heatsink.
- 4. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.

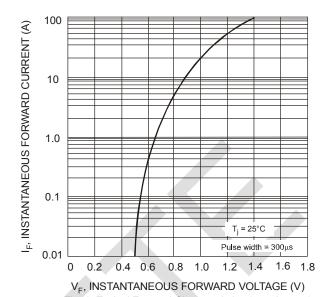












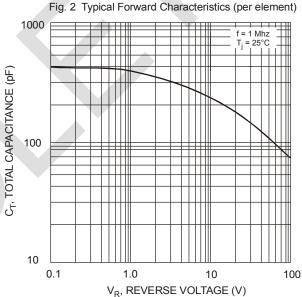


Fig. 4 Typical Total Capacitance (per element)

DS21209 Rev. 10 - 6 GBPC25005/W - GBPC2510/W 2 of 3





Ordering Information (Note 5)

Device	Packaging	Shipping		
GBPC25005	GBPC	100/Tray		
GBPC2501	GBPC	100/Tray		
GBPC2502	GBPC	100/Tray		
GBPC2504	GBPC	100/Tray		
GBPC2506	GBPC	100/Tray		
GBPC2508	GBPC	100/Tray		
GBPC2510	GBPC	100/Tray		
GBPC25005W	GBPC-W	100/Tray		
GBPC2501W	GBPC-W	100/Tray		
GBPC2502W	GBPC-W	100/Tray		
GBPC2504W	GBPC-W	100/Tray		
GBPC2506W	GBPC-W	100/Tray		
GBPC2508W	GBPC-W	100/Tray		
GBPC2510W	GBPC-W	100/Tray		

Note: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02008.pdf.

IMPORTANT NOTICE

DIODES INCORPORATED MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARDS TO THIS DOCUMENT, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION).

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein. Diodes Incorporated does not assume any liability arising out of the application or use of this document or any product described herein; neither does Diodes Incorporated convey any license under its patent or trademark rights, nor the rights of others. Any Customer or user of this document or products described herein in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on Diodes Incorporated website, harmless against all damages.

Diodes Incorporated does not warrant or accept any liability whatsoever in respect of any products purchased through unauthorized sales channel. Should Customers purchase or use Diodes Incorporated products for any unintended or unauthorized application, Customers shall indemnify and hold Diodes Incorporated and its representatives harmless against all claims, damages, expenses, and attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized application.

Products described herein may be covered by one or more United States, international or foreign patents pending. Product names and markings noted herein may also be covered by one or more United States, international or foreign trademarks.

This document is written in English but may be translated into multiple languages for reference. Only the English version of this document is the final and determinative format released by Diodes Incorporated.

LIFE SUPPORT

Diodes Incorporated products are specifically not authorized for use as critical components in life support devices or systems without the express written approval of the Chief Executive Officer of Diodes Incorporated. As used herein:

- A. Life support devices or systems are devices or systems which:
 - 1. are intended to implant into the body, or
 - 2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.
- B. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or to affect its safety or effectiveness.

Customers represent that they have all necessary expertise in the safety and regulatory ramifications of their life support devices or systems, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of Diodes Incorporated products in such safety-critical, life support devices or systems, notwithstanding any devices- or systems-related information or support that may be provided by Diodes Incorporated. Further, Customers must fully indemnify Diodes Incorporated and its representatives against any damages arising out of the use of Diodes Incorporated products in such safety-critical, life support devices or systems.

Copyright © 2013, Diodes Incorporated

www.diodes.com

DS21209 Rev. 10 - 6 GBPC25005/W - GBPC2510/W 3 of 3 www.diodes.com