SENSITRON

SEMICONDUCTOR

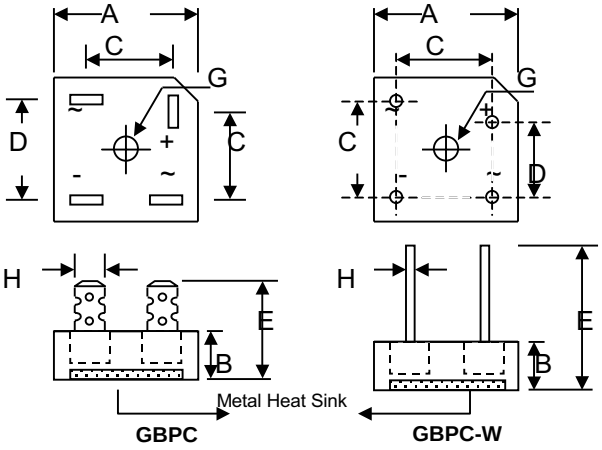
GBPC1000/W – GBPC1010/W

10A GLASS PASSIVATED BRIDGE RECTIFIER

Data Sheet 1336 Rev.B

Features

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E223064



Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #8 Screw
- Weight: GBPC 24 grams (approx.)
  GBPC-W 21 grams (approx.)
- Marking: Type Number

"W" Suffix Designates Wire Leads
No Suffix Designates Faston Terminals
*All Models are Available on B(Height)=7.62mm Max. Epoxy Case

	GBPC		GBPC-W	
Dim	**Min**	**Max**	**Min**	**Max**
A	28.40	28.70	28.40	28.70
B	10.97	11.23	10.97	11.23
C	15.70	16.70	17.10	19.10
D	17.50	18.50	10.90	11.90
E	22.86	25.40	30.50	—
G	Hole for #8 screw, 4.90Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø
All Dimension in mm				

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	GBPC 1000/W	GBPC 1001/W	GBPC 1002/W	GBPC 1004/W	GBPC 1006/W	GBPC 1008/W	GBPC 1010/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_A = 50°C	I_O	10							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							A
Forward Voltage (per element) @I_F = 5.0A	V_{FM}	1.1							V
Peak Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 125°C	I_{RM}	5.0 500							μA
Typical Junction Capacitance (Note 1)	C_j	300							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	5.3							K/W
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500							V
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
2. Thermal resistance junction to case per element mounted on heatsink.

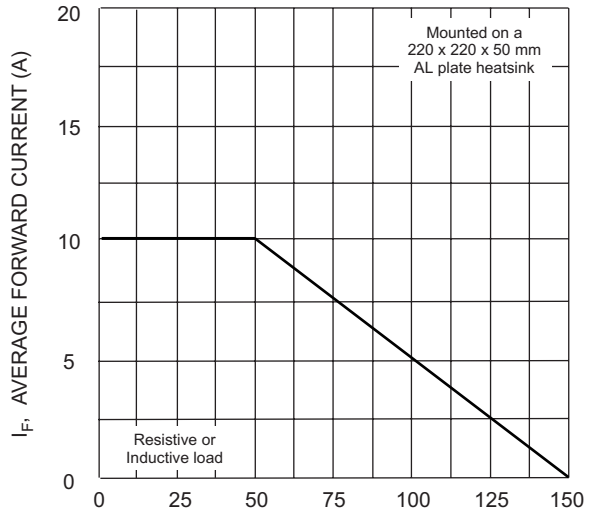


Fig. 1 Forward. Current Derating Curve

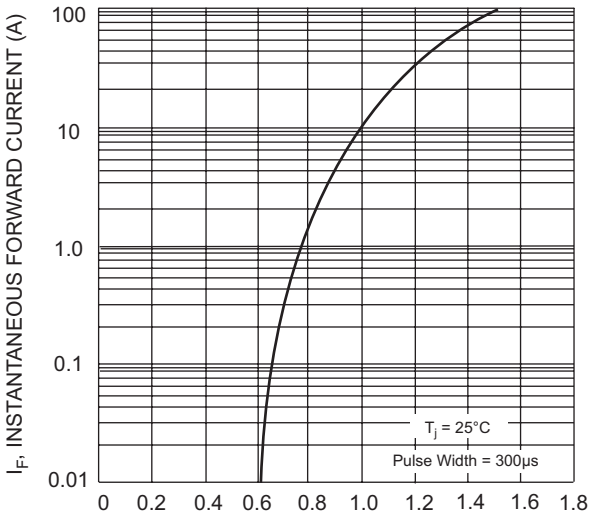


Fig. 2 Typical Forward Characteristics (per element)

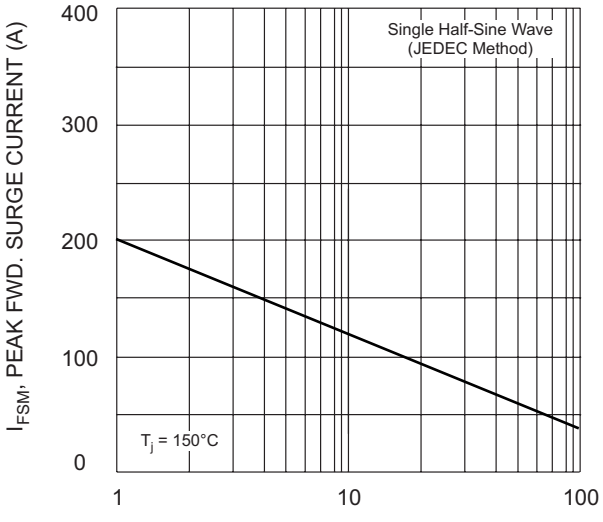


Fig. 3 Max Non-Repetitive Surge Current

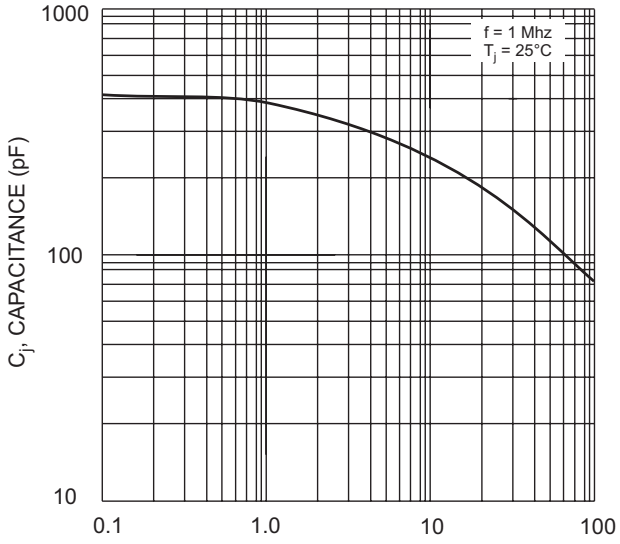


Fig. 4 Typical Junction Capacitance (per element)

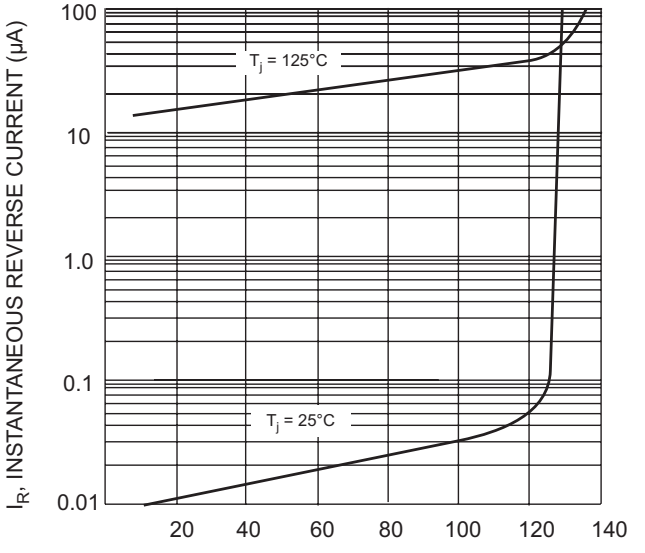


Fig. 5 Typical Reverse Characteristics (per element)

TECHNICAL DATA

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.