SENSITRON
SEMICONDUCTOR

GBPC1000S-G – GBPC1010S-G

10A GLASS PASSIVATED IN-LINE BRIDGE RECTIFIER

Data Sheet 1424, Rev.B

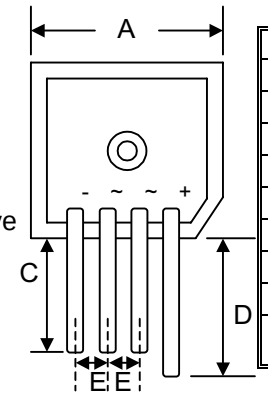
Green Products

Features

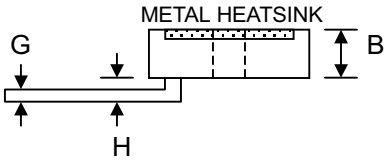
- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Designed for Saving Mounting Space
- UL Recognized File # E223064
- Green Products in Compliance with the RoHS Directive

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: As Marked on Body
- Weight: 30 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



KBPC-S				
Dim	Min	Max	Min	Max
A	28.40	28.70	1.118	1.130
B	10.97	11.23	0.432	0.442
C	13.90	—	0.547	—
D	19.10	—	0.752	—
E	5.10	—	0.201	—
G	1.20 Ø TYPICAL		0.047 Ø TYPICAL	
H	3.05	3.60	0.120	0.142
	In mm		In inch	



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 1000S-G	GBPC 1001S-G	GBPC 1002S-G	GBPC 1004S-G	GBPC 1006S-G	GBPC 1008S-G	GBPC 1010S-G	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_R	5.0 500							μA
Rating for Fusing (t < 8.3ms) (Note 1)	I^2t	374							A^2s
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.0							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. Non-repetitive for t > 1ms and < 8.3ms.
2. Thermal resistance junction to case per element mounted on 220 x 220 x 50mm thick AL plate.

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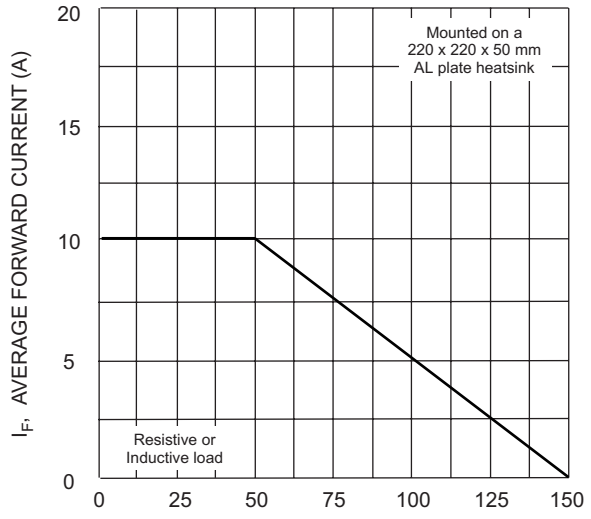

Fig. 1 Forward. Current Derating Curve

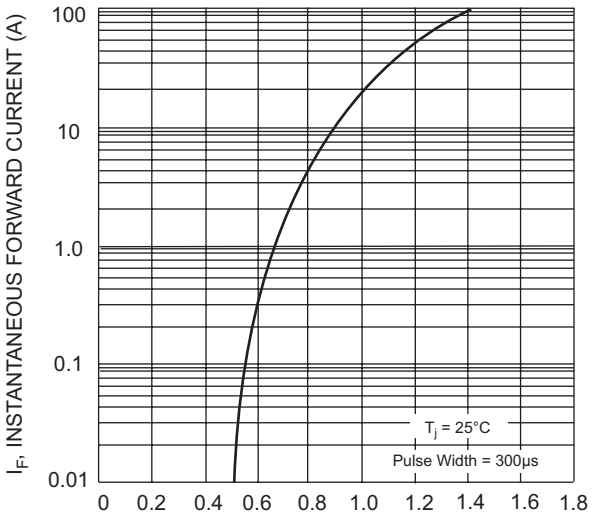

Fig. 2 Typical Forward Characteristics (per element)

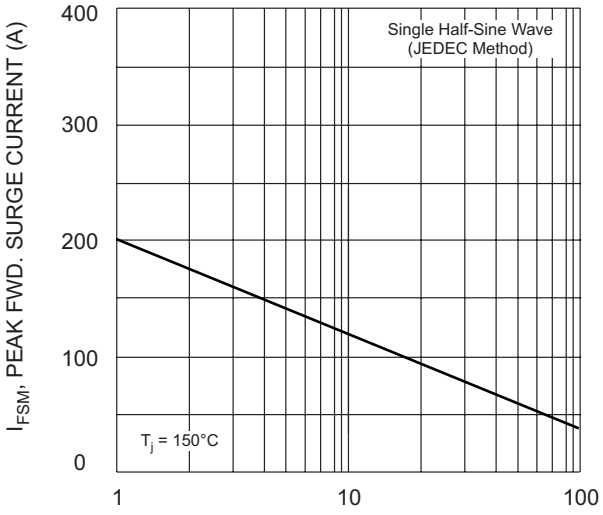

Fig. 3 Max Non-Repetitive Surge Current

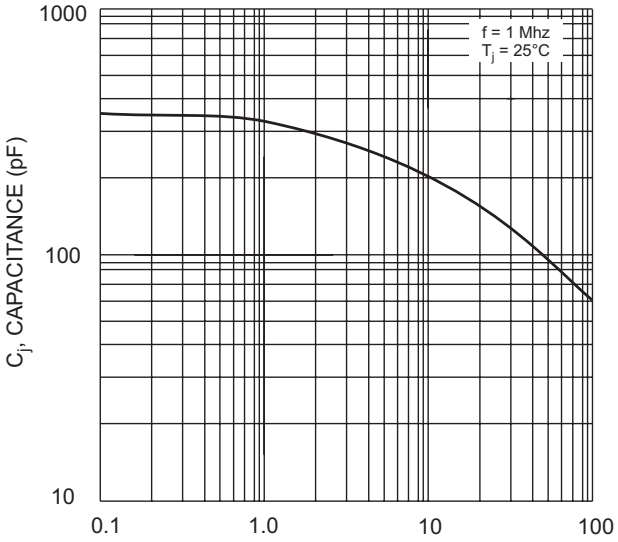

Fig. 4 Typical Junction Capacitance (per element)

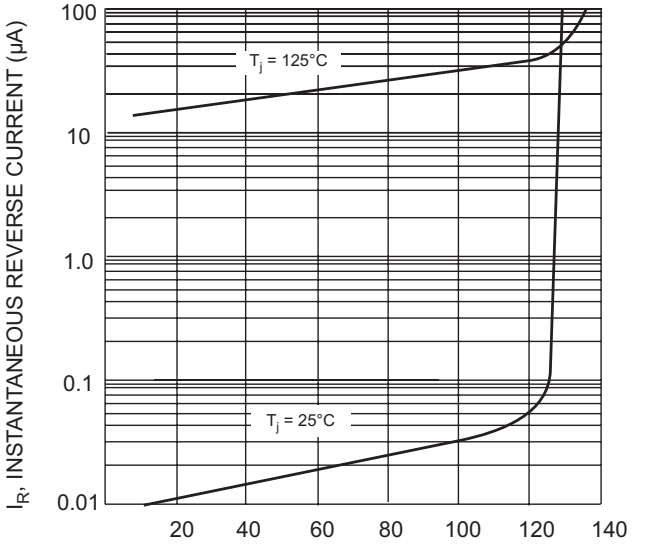

Fig. 5 Typical Reverse Characteristics (per element)

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