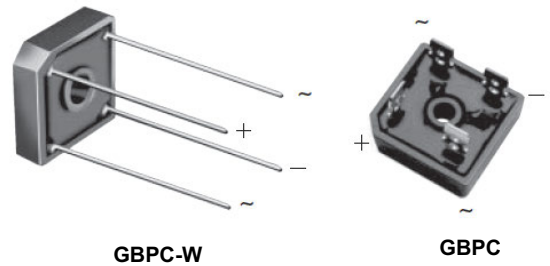


# GBPC50 Series

Glass Passivated Bridge Rectifiers  
 Reverse Voltage 50 to 1000V Forward Current 50A

## Features

- Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 max. 7s, per JESD 22-B106

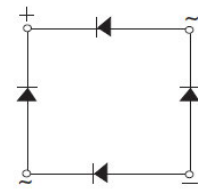


## Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, home appliances, office equipment, industrial automation applications.

## Typical Applications

- **Package:** GBPC, GBPC-W  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102  
Suffix letter "W" added to indicate wire leads



Schematic Diagram

## Absolute Maximum Ratings ( $T_C=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	GBPC 50005	GBPC 5001	GBPC 5002	GBPC 5004	GBPC 5006	GBPC 5008	GBPC 5010	Unit
		GBPC 50005-W	GBPC 5001-W	GBPC 5002-W	GBPC 5004-W	GBPC 5006-W	GBPC 5008-W	GBPC 5010-W	
Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Average Rectified Output Current @ 60Hz Sine Wave, R-Load, With Heatsink, $T_C=55^\circ\text{C}$	$I_o$	50							A
Surge (Non-Repetitive) Forward Current @ 60Hz Half-Sine Wave, 1 Cycle, $T_A=25^\circ\text{C}$	$I_{FSM}$	500							A
Current Squared Time @ 1ms t 8.3ms, $T_J=25^\circ\text{C}$ , Rating of per Diode	$I^2t$	1040							$\text{A}^2\text{S}$
Storage Temperature	$T_{STG}$	-55 To +150							$^\circ\text{C}$
Junction Temperature	$T_J$	-55 To +150							$^\circ\text{C}$
Dielectric Strength, Terminals to Case, AC 1 Minute	$V_{dis}$	2.5							KV
Mounting Torque	TOR	10							Kg.cm
Thermal Resistance, Junction to Case, With Heatsink	$R_{\theta JC}$	0.95							$^\circ\text{C}/\text{W}$

## Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Value	Unit
Maximum Instantaneous Forward Voltage Drop Per Diode	$V_{FM}$	$I_{FM}=25\text{A}$	1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage Per Diode	$I_{RRM}$	$V_{RM}=V_{RRM}$	10	$\mu\text{A}$

## Typical Electrical and Thermal Characteristic Curves

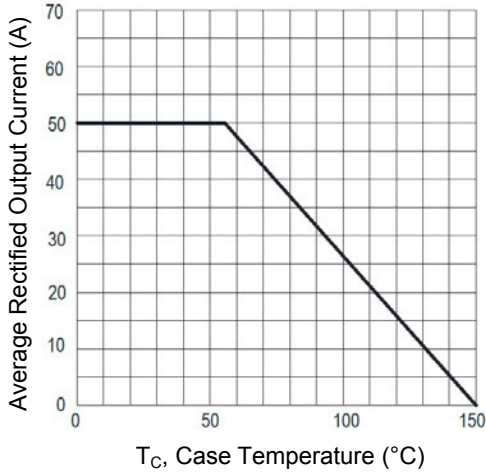


Figure 1.  $I_o$ - $T_c$  Curve

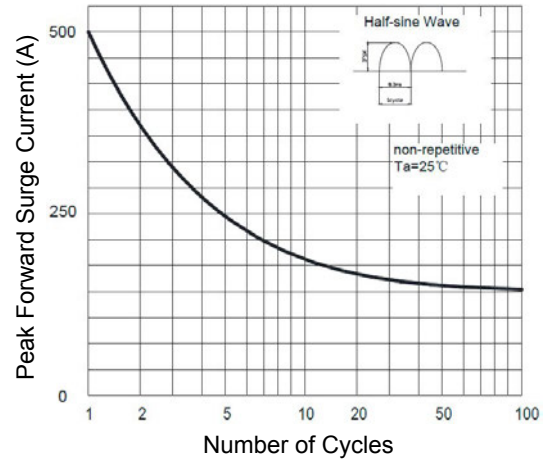


Figure 2. Surge Forward Current Capability

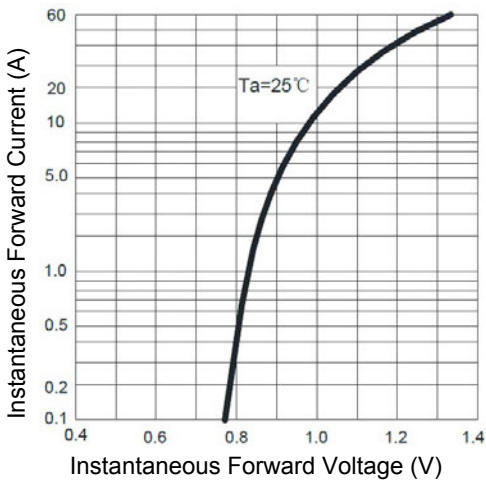


Figure 3. Instantaneous Forward Voltage (V)

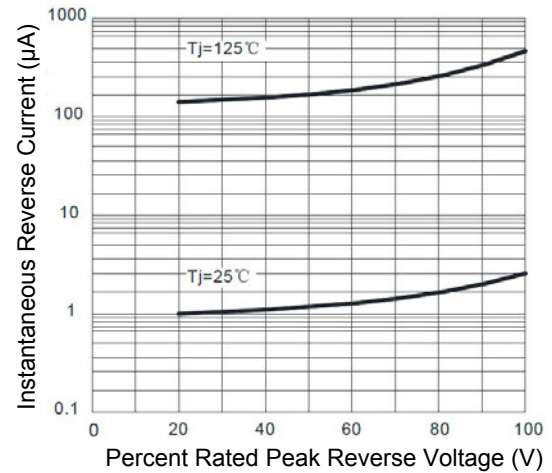


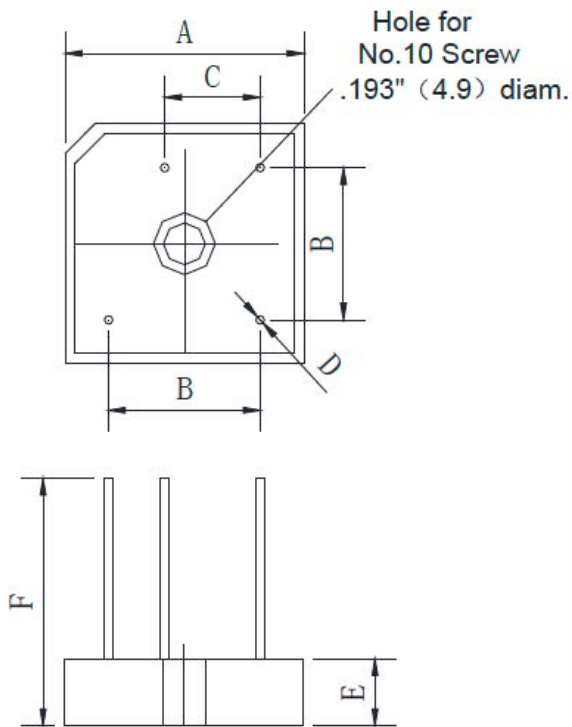
Figure 4. Typical Reverse Characteristics

# GBPC50 Series

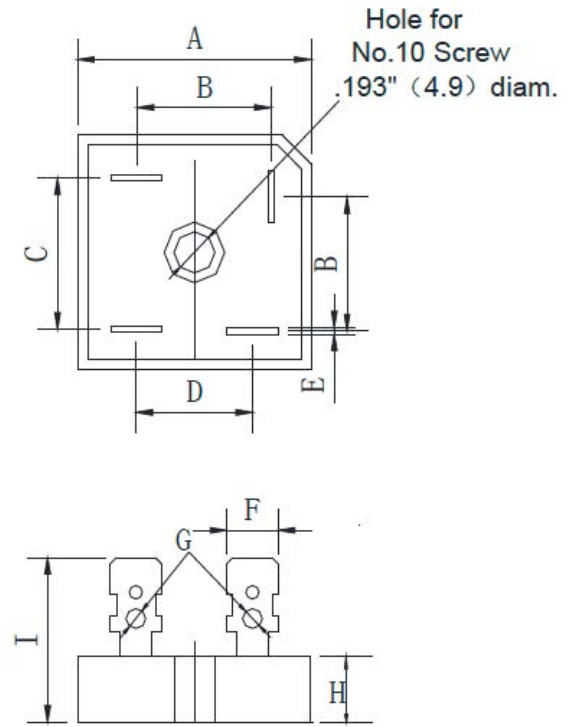
Glass Passivated Bridge Rectifiers  
 Reverse Voltage 50 to 1000V Forward Current 50A

## Package Outline Dimensions

**GBPC-W**



**GBPC**



GBPC-W		
Symbol	Dimensions in Millimeters	
	Min	Max
A	28.2	28.8
B	17.1	19.1
C	10.4	12.4
D	0.95	1.05
E	7.6	8.2
F	30.0	-

GBPC		
Symbol	Dimensions in Millimeters	
	Min	Max
A	28.2	28.8
B	15.3	17.3
C	17.1	19.1
D	13.2	15.2
E	0.75	0.85
F	6.2	6.4
G	2.2	2.6
H	7.6	8.2
I	19.0	-