

## Bridge Rectifiers



### Features

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

### Mechanical Data

- **Package:** GBPC  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBPC50005	GBPC50001	GBPC50002	GBPC50004	GBPC50006	GBPC50008	GBPC5010
Device marking code			GBPC50005	GBPC50001	GBPC50002	GBPC50004	GBPC50006	GBPC50008	GBPC5010
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, T <sub>c</sub> =55°C	I <sub>O</sub>	A	50						
Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	500						
Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> S	1040						
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150						
Junction Temperature	T <sub>j</sub>	°C	-55 ~+150						
Dielectric Strength, Terminals to case, AC 1 minute	V <sub>dis</sub>	KV	2.5						
Mounting Torque	TOR	kg·cm	10						

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GBPC50005	GBPC50001	GBPC50002	GBPC50004	GBPC50006	GBPC50008	GBPC5010
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =25A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM</sub>	μA	V <sub>RM</sub> =V <sub>RRM</sub>	10						

### ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBPC50005	GBPC50001	GBPC50002	GBPC50004	GBPC50006	GBPC50008	GBPC5010
Thermal Resistance Between junction and case, With heatsink	R <sub>θ J-C</sub>	°C/W	0.95						



# GBPC50005 THRU GBPC5010

## Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GBPC50005~GBPC5010	A1	Approximate 13.8	50	50	500	Paper Box

## Characteristics (Typical)

FIG1:Io-Tc Curve

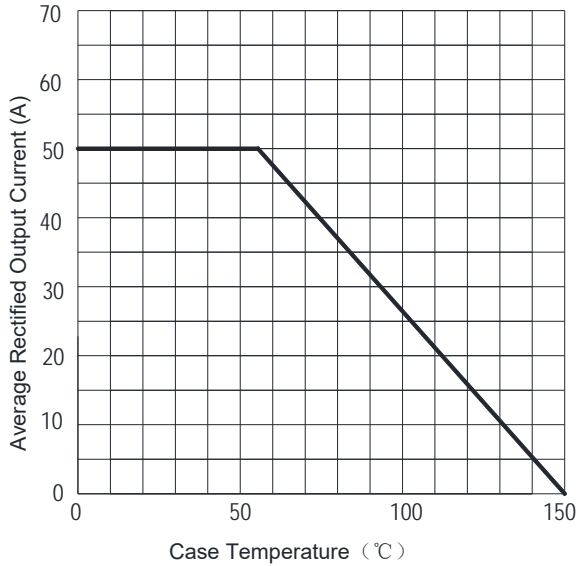


FIG2:Surge Forward Current Capability

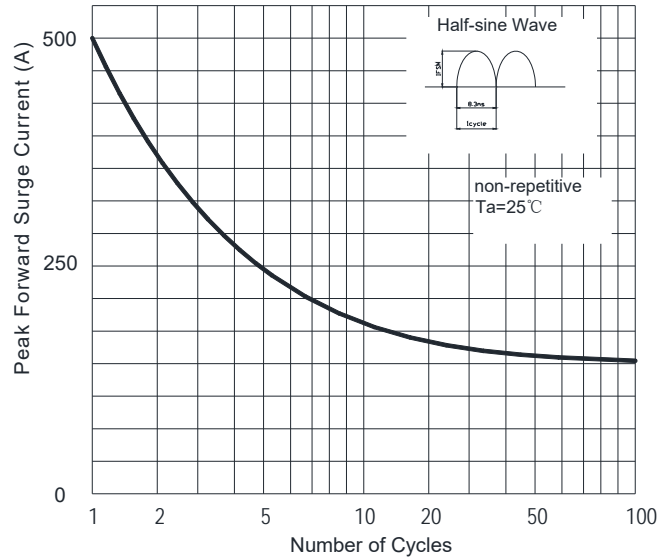


FIG3:Instantaneous Forward Voltage

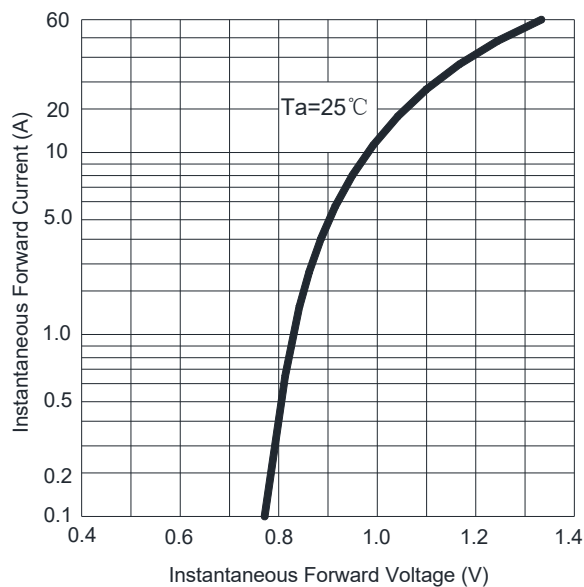
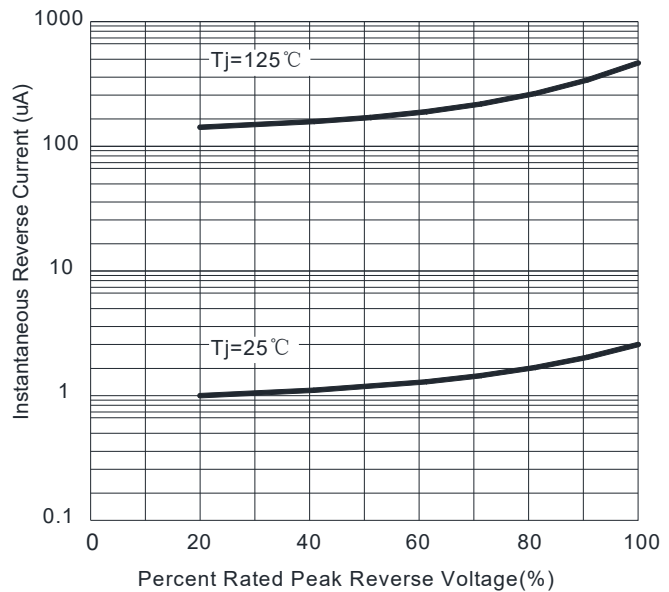


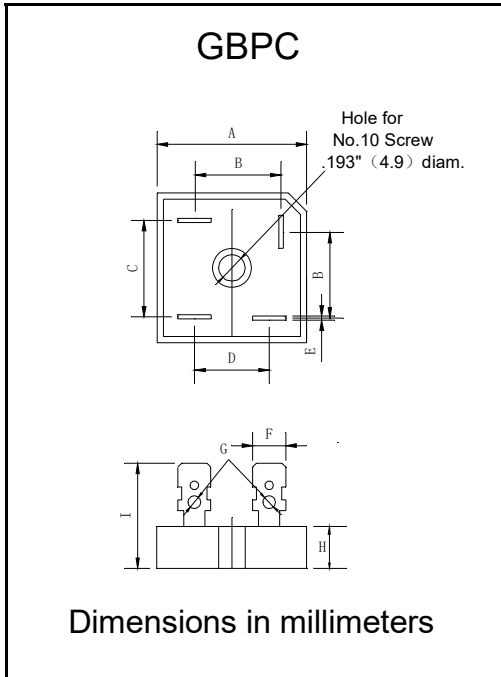
FIG4:Typical Reverse Characteristics





# GBPC50005 THRU GBPC5010

## ■ Outline Dimensions



GBPC		
Dim	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	



## GBPC50005 THRU GBPC5010

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