

SILICON BRIDGE RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 50 A

Features

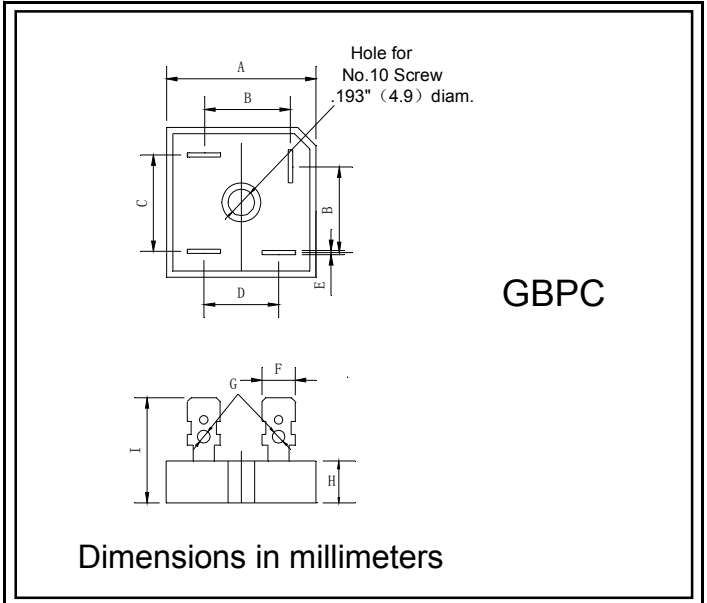
- Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

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 ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBPC50005	GBPC5001	GBPC5002	GBPC5004	GBPC5006	GBPC5008	GBPC5010
Device marking code			GBPC50005	GBPC5001	GBPC5002	GBPC5004	GBPC5006	GBPC5008	GBPC5010
Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, $T_c=55^\circ\text{C}$	I_O	A	50						
Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$	I_{FSM}	A	500						
Current Squared Time @1ms $\leq t \leq$ 8.3ms $T_j=25^\circ\text{C}$, Rating of per diode	I^2t	A ² S	1040						
Storage Temperature	T_{stg}	°C	-55 ~+150						
Junction Temperature	T_j	°C	-55 ~+150						
Dielectric Strength, Terminals to case, AC 1 minute	V_{dis}	KV	2.5						
Mounting Torque	TOR	kg-cm	10						

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GBPC5005	GBPC5001	GBPC5002	GBPC5004	GBPC5006	GBPC5008	GBPC5010
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=25A$	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	μA	$V_{RM}=V_{RRM}$	10						

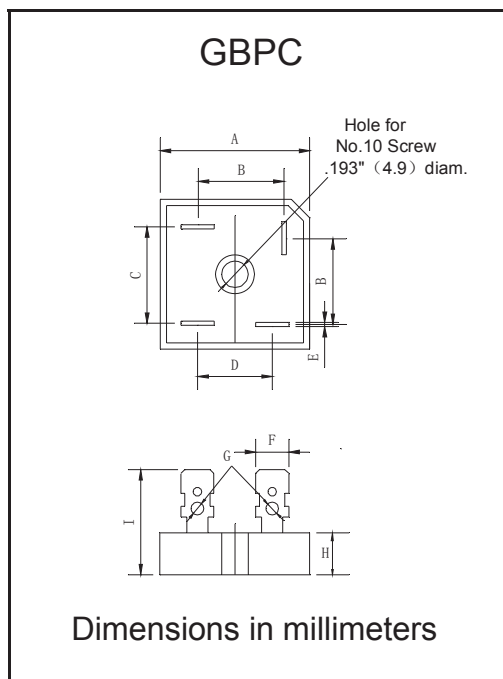
■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBPC5005	GBPC5001	GBPC5002	GBPC5004	GBPC5006	GBPC5008	GBPC5010
Thermal Resistance Between junction and case, With heatsink	$R_{\theta J-C}$	°C/W	0.95						

■ Ordering Information (Example)

PREFERED 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

■ 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	

FIG1:Io-Tc Curve

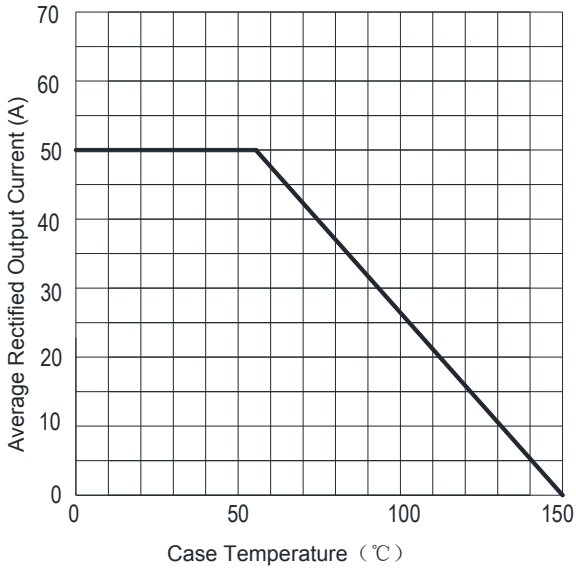


FIG2:Surge Forward Current Capability

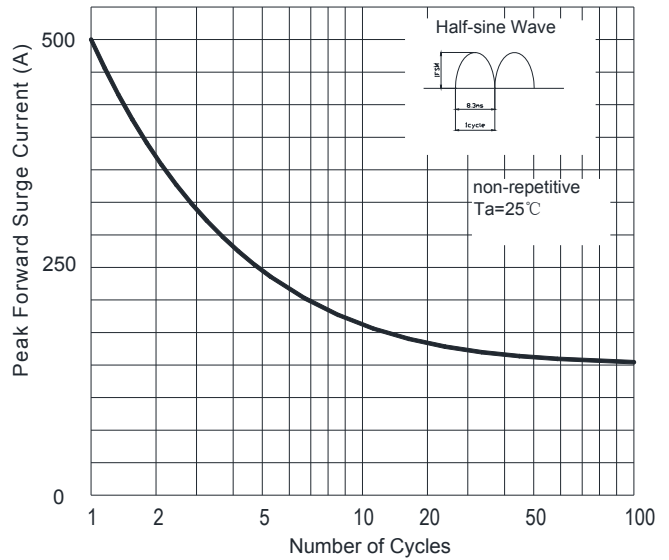


FIG3:Instantaneous Forward Voltage

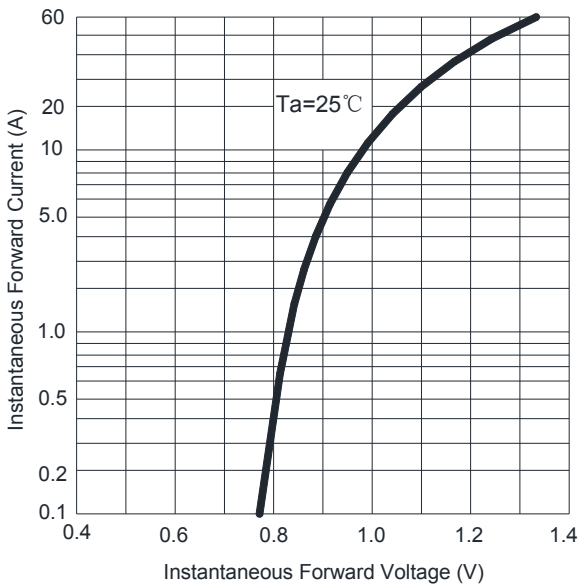


FIG4:Typical Reverse Characteristics

