GBPC5002 THRU GBPC5010

50A SINGLE PHASE BRIDGE RECTIFIER

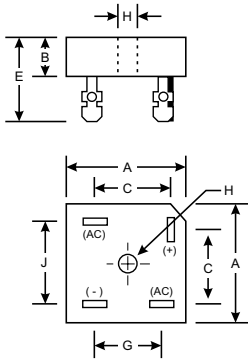
FEATURES

- Surge overload 400A peak
- Low forward voltage drop
- High current capability
- High surge current capability

MECHANICAL DATA

- Case: GBPCW,molded plastic
- Case material: Molded plastic. UL flammability
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Classification rating: 94V-0
- Weight: 29 grams (approximate)

GBPC



GBPC		
Dim	**Min**	**Max**
A	28.30	28.80
B	7.40	8.25
C	16.10	17.10
E	18.80	21.30
G	13.80	14.80
H	Hole for #10 screw	
	5.08∅	5.59∅
J	17.60	18.60
K	10.90	11.90
L	0.97∅	1.07∅
M	31.80	—
P	17.60	18.60
All Dimensions in mm		

Dimensions in inches and (millimeters)

MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	GBPC					Unit
		5002	5004	5006	5008	5010	
Peak repetitive reverse voltage	V_{RRM}	200	400	600	800	1000	V
Working peak reverse voltage	V_{RWM}						
DC blocking voltage	V_{DC}						
RMS reverse voltage	V_{RMS}	140	280	420	560	700	
Average rectified output current @T=55°C (note 1)	I_O	50					A
Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	400					
Typical thermal resistance per leg	$R_{\theta JL}$	1.5					°C/W
Operating and storage temperature range	T_J,T_{STG}	-40 ~ +150					°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Max.	Unit	Conditions
Forward voltage per element	V_{FM}	1.05	V	I_F=25A
Peak reverse current	I_R	10	μA	$V=V_{DC}$
		500		$V=V_{DC}$,T=125°C

Note:

1.Mounted on glass epoxy PC board with 1.3mm^2 solder pad.
2.Measured at 1.0MHz and applied reverse voltage of 4.0VDC.
3.Single Phase, half wave, 60Hz, resistive or inductive load.
4.For capacitive load, derate current by 20%.

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■ Characteristics (Typical)

FIG1:Io-Tc Curve

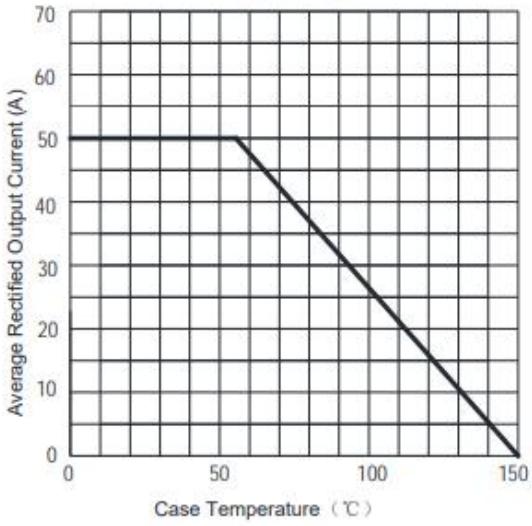

FIG2:Surge Forward Current Capability

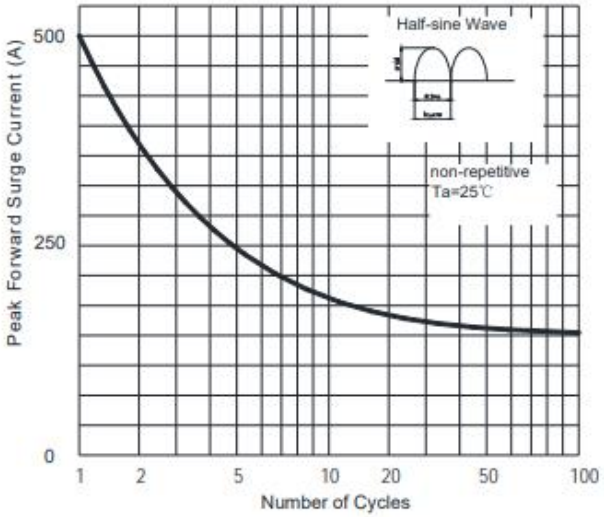

FIG3:Instantaneous Forward Voltage

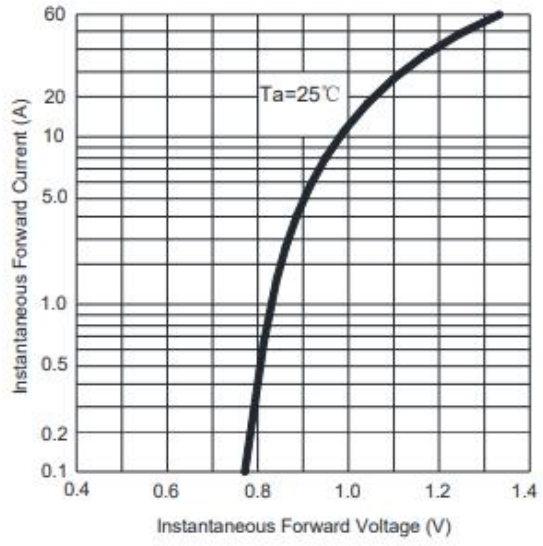

FIG4:Typical Reverse Characteristics