



SINGLE PHASE BRIDGE RECTIFIER GBPC50005 ~ GBPC5010

Single Phase Bridge Rectifier

Features

- Plastic package has UL flammability classification 94V-0
- Integrally molded heatsink provides very low thermal Resistance for maximum heat dissipation
- High forward surge capability
- Glass passivated chip junction
- High isolation voltage from case to lugs
- High temperature soldering guaranteed:
260°C/10 seconds

GBPC



Mechanical Data

Case:	Molded Plastic with integrally mounted heatink
Polarity	Polarity symbols marked on case
Terminals:	Plated 0.25" (6.35mm) lug
Mounting torque	/
Mounting position:	Thru hole for #10 screw, 20 in-lbs torque max (see Note 3)
Weight:	0.62 ounce, 17.5 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	GBPC 50005	GBPC 5001	GBPC 5002	GBPC 5004	GBPC 5006	GBPC 5008	GBPC 5010	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current	50							A	At Tc=55°C (Note 2)
IFSM	Peak Forward Surge Current	500							A	8.3ms single half sine-wave (JEDEC method)
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150							°C	
I2t	Rating for Fusing	1037							A2s	T<8.3mS

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

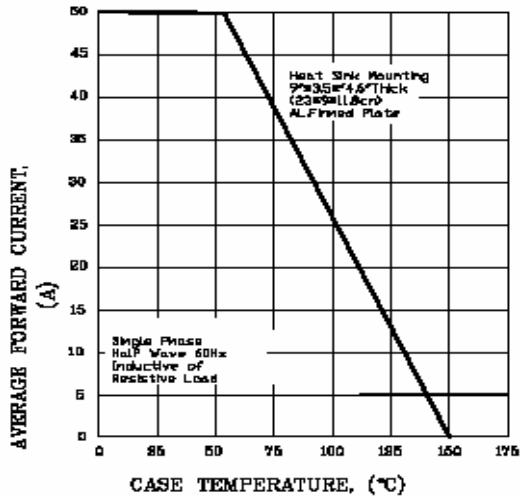
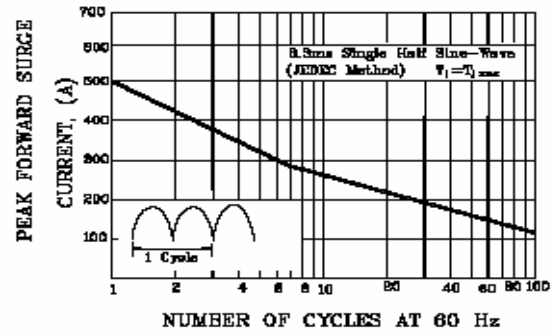
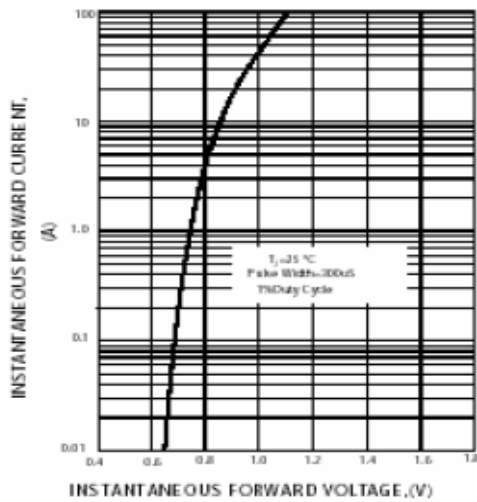
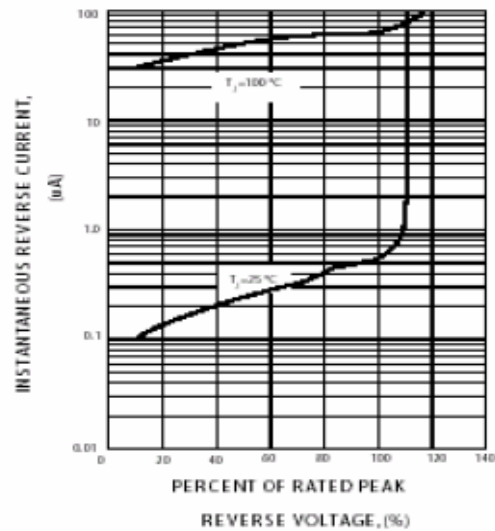
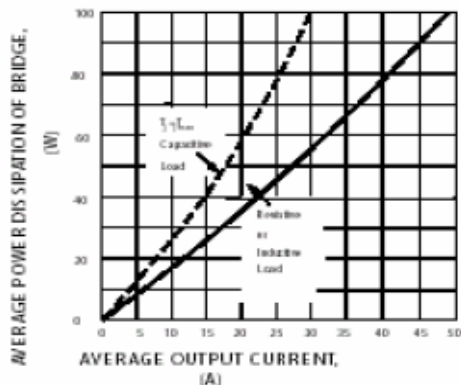
Symbol	Description	GBPC 50005	GBPC 5001	GBPC 5002	GBPC 5004	GBPC 5006	GBPC 5008	GBPC 5010	Unit	Conditions
V _F	Max Instantaneous Forward Voltage	1.1							V	Drop per Bridge element 25.0A
I _R	Max DC Reverse Current at Rated DC Blocking Voltage	10							μA	TA=25°C
		1.0								Tc=100°C
VISO	Isolation Voltage from case to lugs	2500							V	
Rθ-JC	Typical Thermal Resistance per leg	2.0							°C/W	
C _J	Typical Junction capacitance per leg	/							pF	/

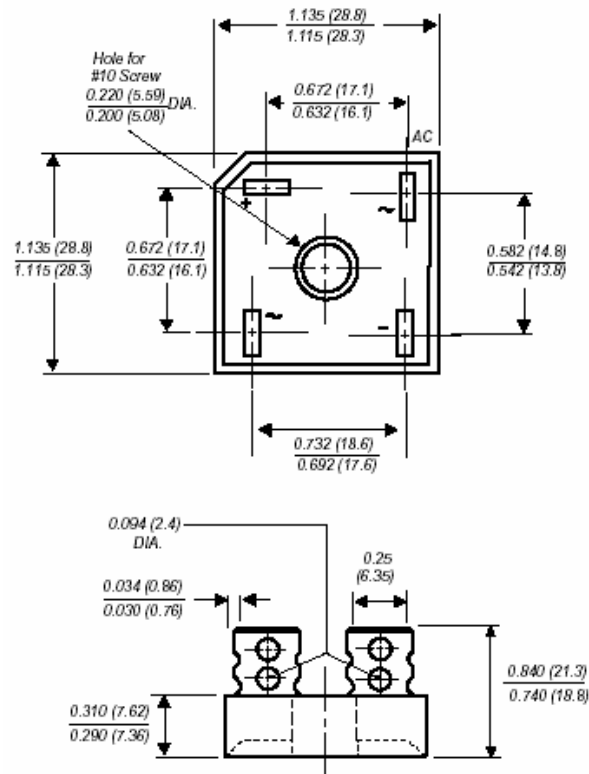
Note:

1. Unit mounted on 9" x 3.5" x 4.6" (23cm x 9cm x 11.8cm) AL plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer with #10 screw

GBPC50005~GBPC5010

RATINGS AND CHARACTERISTIC CURVES GBPC50005 THRU GBPC5010

**FIG.1- DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT**

**FIG.2- MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER LEG**

**FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT**

**FIG.4-TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT**

FIG.6-MAXIMUM POWER DISSIPATION


Dimensions in inches (mm)

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