



# SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER GBPC5005A ~ GBPC5010A

## Single Phase Glass Passivated Bridge Rectifier

### Features

- Low cost
- High isolation voltage from case to lugs
- High forward surge current capability  
low thermal resistance
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.375"(9.5mm) lead length at 5lbs (2.3kg)tension

### Mechanical Data

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

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

Symbol	Description	GBPC 5005A	GBPC 501A	GBPC 502A	GBPC 504A	GBPC 506A	GBPC 508A	GBPC 5010A	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	50.0							A	At TC= 50°C (note2)
IFSM	Peak Forward Surge Current	500							A	8.3ms single half sine-wave (JEDEC method)
TJ,TSTG	Operating and Storage Temperature Range	-65 to +150							°C	
I2t	Rating for Fusing	1037.0							A2s	T<8.3mS

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

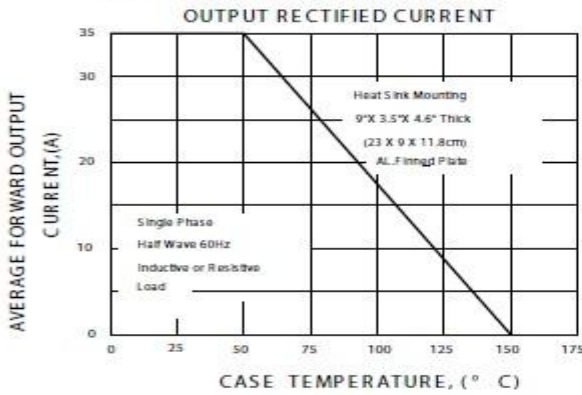
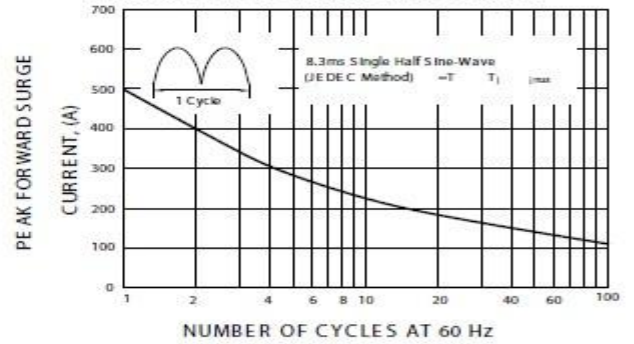
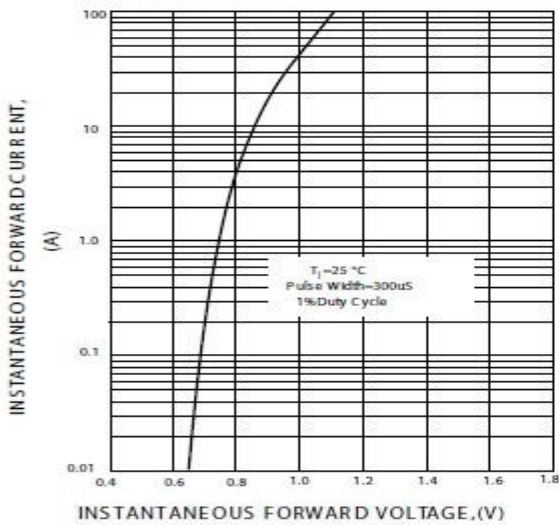
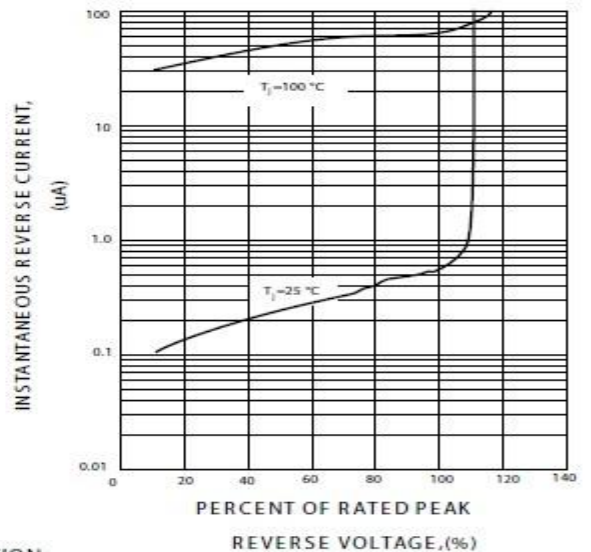
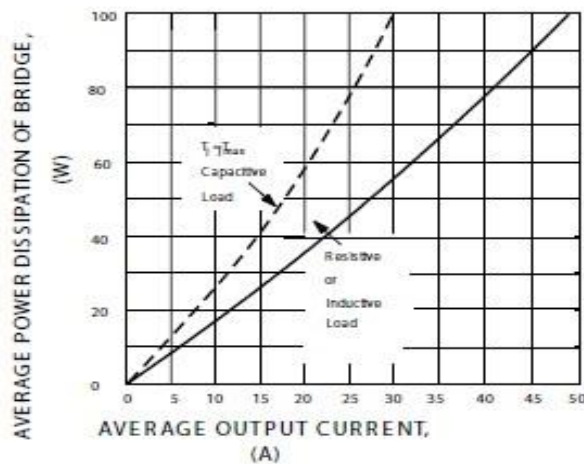
Symbol	Description	GBPC 5005A	GBPC 501A	GBPC 502A	GBPC 504A	GBPC 506A	GBPC 508A	GBPC 5010A	Unit	Conditions
V <sub>F</sub>	Max Instantaneous Forward Voltage	1.1							V	Drop per Bridge element 25A
I <sub>R</sub>	Max DC Reverse Current at Rated DC Blocking Voltage	10.0							μA	T <sub>A</sub> =25°C
		1								T <sub>c</sub> =100°C
V <sub>ISO</sub>	Isolation Voltage from case to lugs	2500							V <sub>ac</sub>	
R <sub>Jc</sub>	Typical Thermal Resistance	2.0							°C/W	Note 1 and note 2

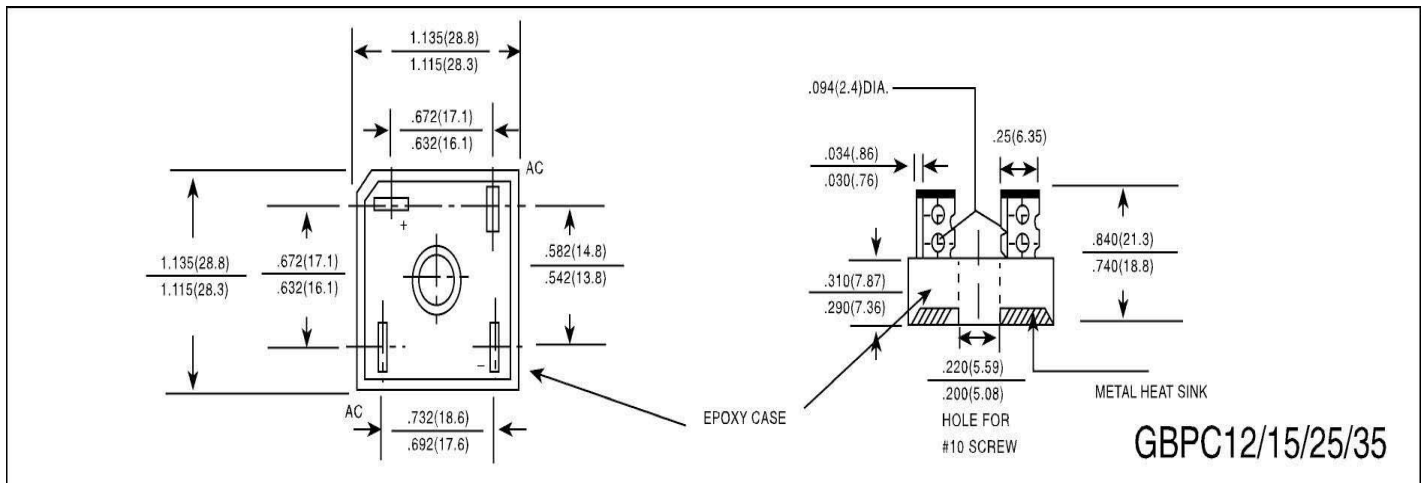
**Note:**

1. Unit mounted on 9.0" 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 #6 screw

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## RATINGS AND CHARACTERISTIC CURVES GBPC5005 THRU GBPC5010A

**FIG.1-DERATING CURVE FOR**

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

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

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

**FIG.6-MAXIMUM POWER DISSIPATION**


**GBPC5005A ~ GBPC5010A**
**Dimensions in inches (mm)**

**Contact us:**
**US HEADQUARTERS**
**MEI SEMI INC.**
**2902** Corvin Drive, Santa Clara, CA95051, USA

Tel: 1-408-733-0808 Fax: 1-408-733-2828