



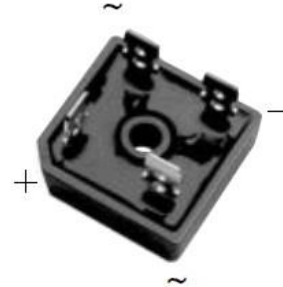
# SINGLE PHASE BRIDGE RECTIFIER GBPC40005 ~ GBPC4010

## 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

<b>Case:</b>	Molded Plastic with integrally mounted heatink
<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 (see Note 3)
<b>Weight:</b>	0.62 ounce, 17.5 gram

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

Symbol	Description	GBPC 40005	GBPC 4001	GBPC 4002	GBPC 4004	GBPC 4006	GBPC 4008	GBPC 4010	Unit	Conditions
<b>VRRM</b>	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
<b>VRMS</b>	Max RMS Voltage	35	70	140	280	420	560	700	V	
<b>VDC</b>	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
<b>I(AV)</b>	Max Average Forward Rectified Current	40							A	At $T_c=55^{\circ}C$ (Note 2)
<b>IFSM</b>	Peak Forward Surge Current	400							A	8.3ms single half sine-wave (JEDEC method)
<b>TJ,TSTG</b>	Operating and Storage Temperature Range	-55 to +150							°C	
<b>I2t</b>	Rating for Fusing	664							A2s	$T < 8.3mS$

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

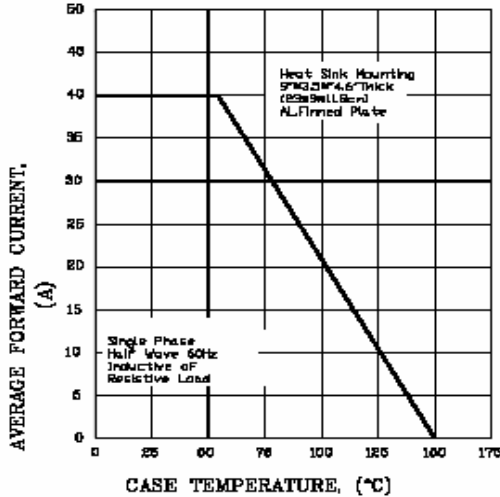
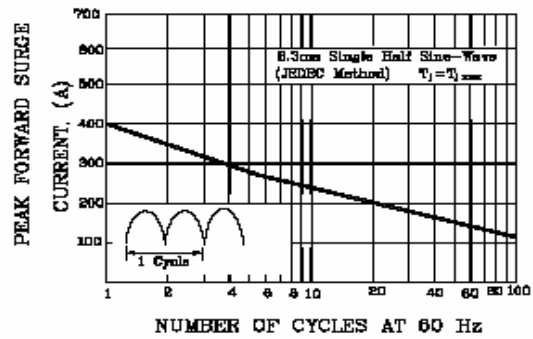
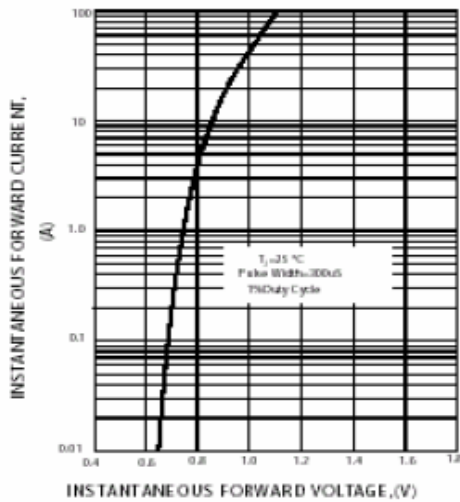
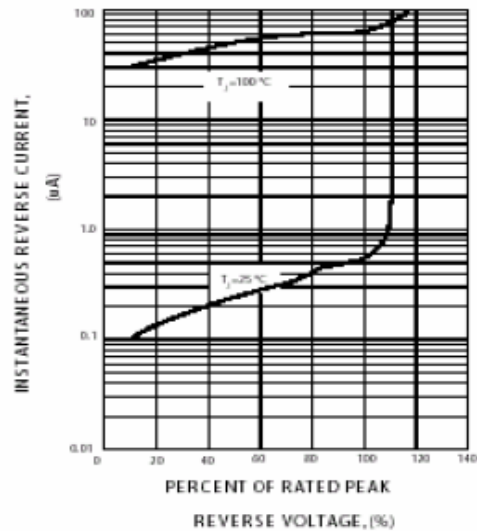
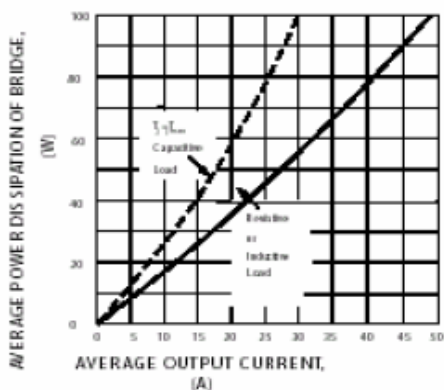
Symbol	Description	GBPC 45005	GBPC 4501	GBPC 4502	GBPC 4504	GBPC 4506	GBPC 4508	GBPC 4510	Unit	Conditions
<b>VF</b>	Max Instantaneous Forward Voltage	1.1							V	Drop per Bridge element 25.0A
<b>IR</b>	Max DC Reverse Current at Rated DC Blocking Voltage	10							µA	TA=25°C
		1.0								Tc=100°C
<b>VISO</b>	Isolation Voltage from case to lugs	2500							V	
<b>Rθ-JC</b>	Typical Thermal Resistance per leg	1.4							°C/W	
<b>CJ</b>	Typical Junction capacitance per leg	/							pF	/

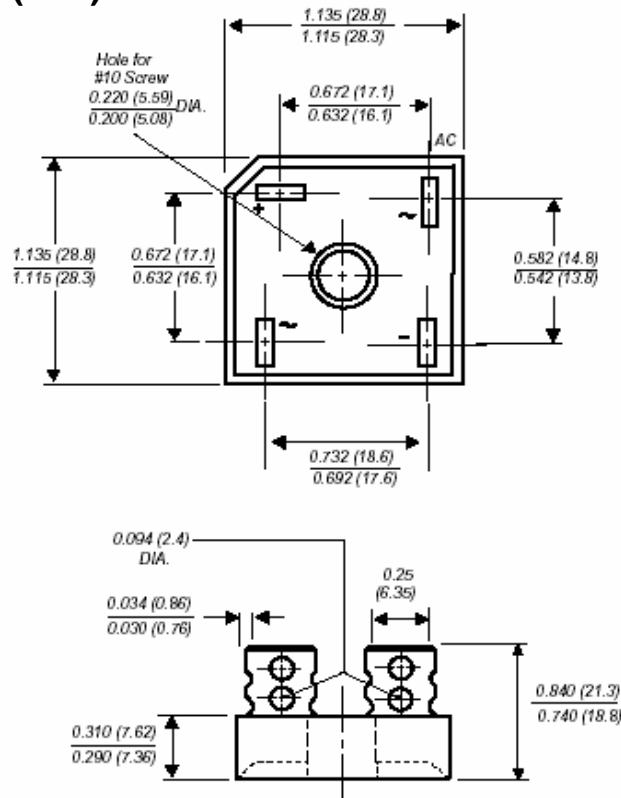
#### Note:

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

# GBPC45005~GBPC4510

## RATINGS AND CHARACTERISTIC CURVES GBPC45005 THRU GBPC4510

**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**


**GBPC45005~GBPC4510**
**Dimensions in inches (mm)**

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