# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**GBPC50005W THRU GBPC5010W**

*TECHNICAL SPECIFICATIONS OF SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIER*

*VOLTAGE RANGE - 50 to 1000 Volts* *CURRENT - 50 Amperes*

## FEATURES

* Plastic case with heatsink for Maximum Heat Dissipation
* Diffused Junction
* High current capability
* Surge overload ratings - 450 Amperes
* Low forward voltage drop
* High Reliability
* Glass passivated junction

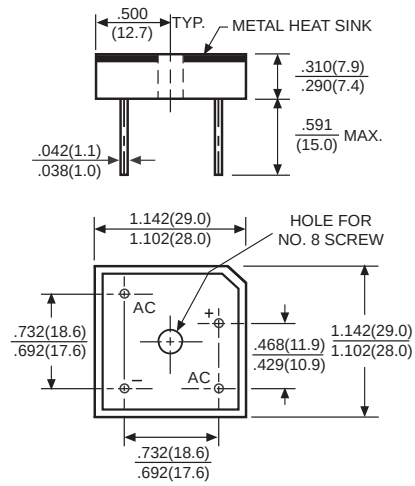
## MECHANICAL DATA

* Case: Molded plastic with heatsink
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
* Polarity: As marked
* Mounting position: Any
* Weight: 25 grams approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MBR-25W




Dimensions in inches and (millimeters)

| | | SYMBOL | GBPC 50005W | GBPC 5001W | GBPC 5002W | GBPC 5004W | GBPC 5006W | GBPC 5008W | GBPC 5010W | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage | | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Output Current at Tc = 50°C | | $I_O$ | 50 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | | $I_{FSM}$ | 450 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 17.5A DC | | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | @$T_A$ = 25°C | $I_R$ | 10 | | | | | | | µAmps |
| | @$T_A$ = 100°C | | 500 | | | | | | | |
| Operating and Storage Temperature Range | | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °C |

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts
2.Thermal Resistance from Junction to Case per leg.

# RATING AND CHARACTERISTIC CURVES (GBPC50005W THRU GBPC5010W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

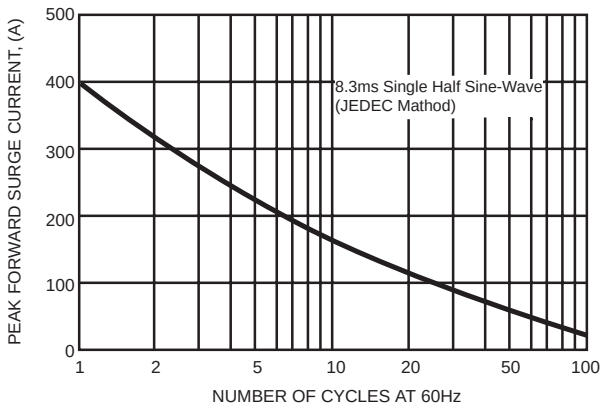



FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

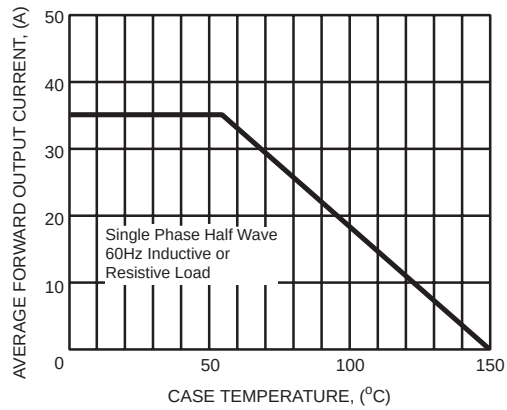



FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

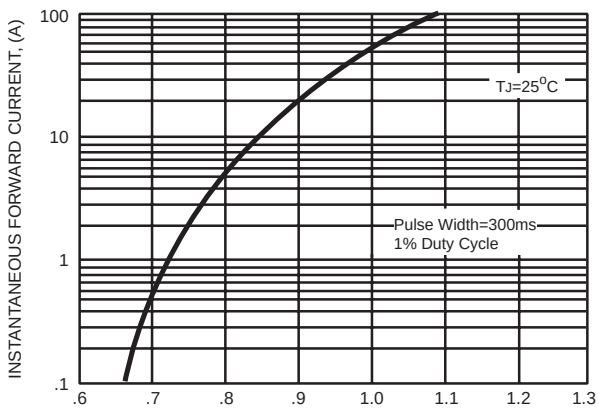



FIG. 4 - TYPICAL REVERSE CHARACTERISTICS