



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

**GBPC25005W  
THRU  
GBPC2510W**

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

**VOLTAGE RANGE - 50 to 1000 Volts**

**CURRENT - 25 Amperes**

**FEATURES**

- \* Plastic case with heatsink for Maximum Heat Dissipation
- \* Diffused Junction
- \* High current capability
- \* Surge overload ratings - 350 Amperes
- \* Low forward voltage drop
- \* High Reliability
- \* Glass passivated junction

**MECHANICAL DATA**

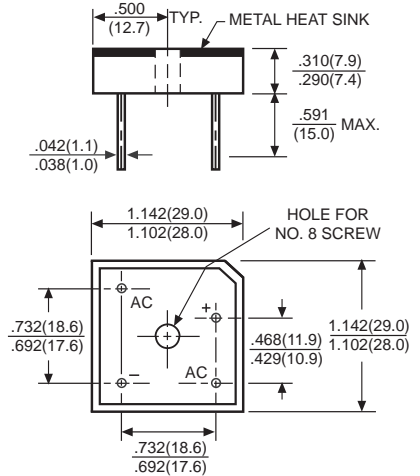
- \* Case: Molded plastic with heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 25 grams approx.

**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 25005W	GBPC 25010W	GBPC 25020W	GBPC 25040W	GBPC 25060W	GBPC 25080W	GBPC 25100W	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at T <sub>c</sub> = 50°C	I <sub>o</sub>	25							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>					350			Amps
Maximum Forward Voltage Drop per element at 12.5A DC	V <sub>F</sub>					1.1			Volts
Maximum DC Reverse Current at Rated	I <sub>R</sub>	@ T <sub>A</sub> = 25°C				10		μAmps	
DC Blocking Voltage per element		@ T <sub>A</sub> = 100°C				500			
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t					374			A <sup>2</sup> Sec
Typical Junction Capacitance (Note1)	C <sub>J</sub>					300			pF
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>					2.5			°C/W
Operating and Storage Temperature Range	T <sub>J,TSTG</sub>					-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 (GBPC25005W THRU GBPC2510W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

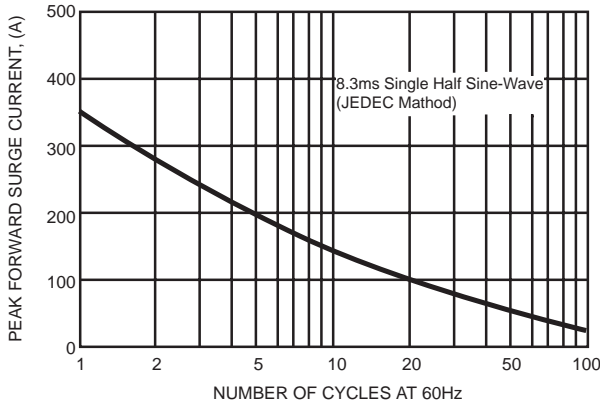


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

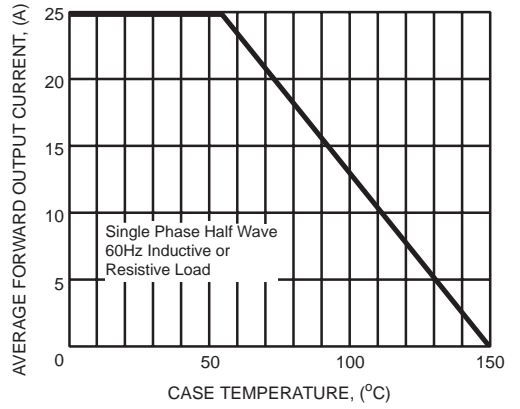


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

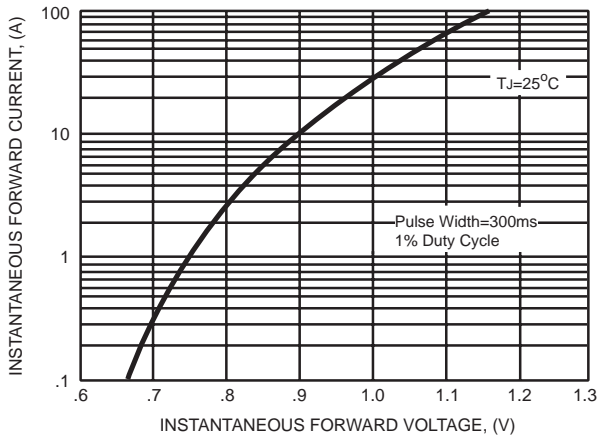
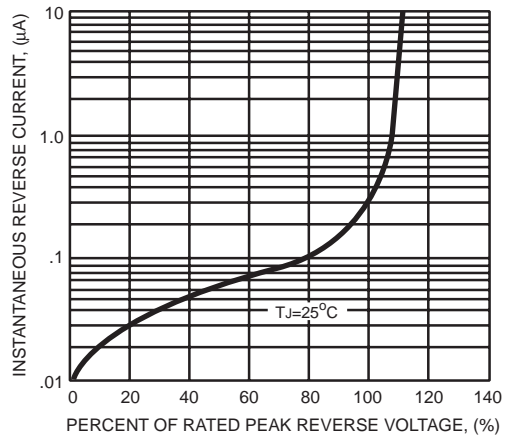


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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