

# GBPC25005 - GBPC2510

# GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS

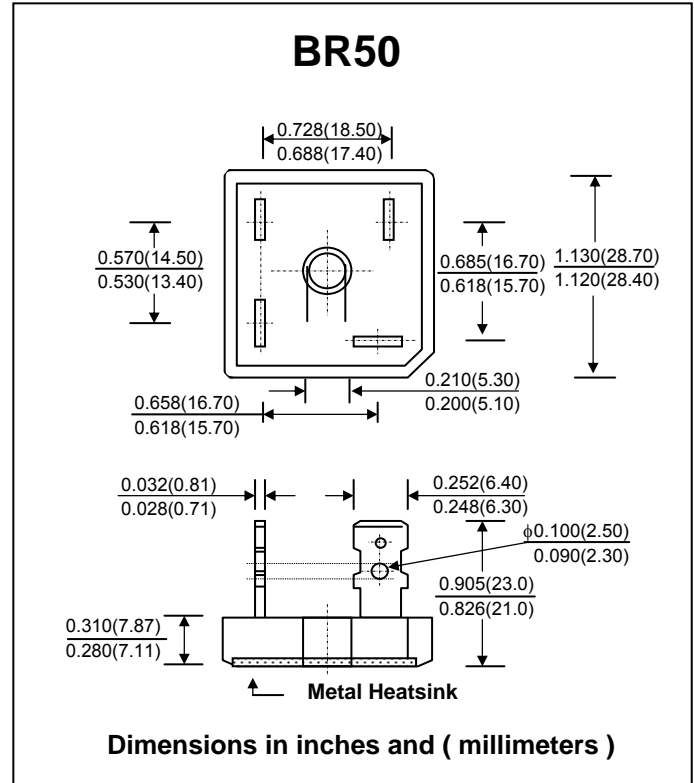
**PRV : 50 - 1000 Volts**  
**Io : 25 Amperes**

### FEATURES :

- \* Glass passivated junction chip
- \* High surge current capability
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : plated .25" (6.35 mm). Faston
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency.
- \* Weight : 17.1 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

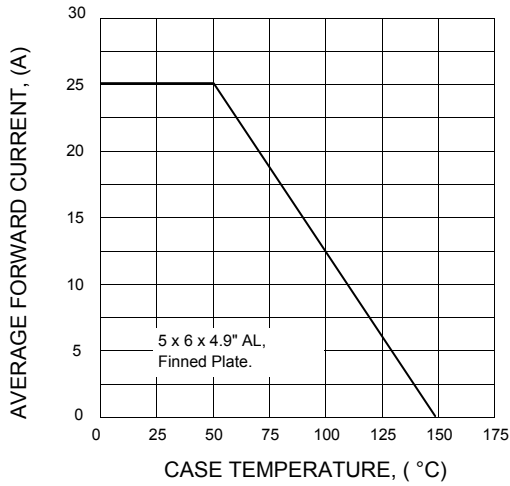
Rating at 25 °C ambient temperature unless otherwise noted.

RATING	SYMBOL	GBPC 25005	GBPC 2501	GBPC 2502	GBPC 2504	GBPC 2506	GBPC 2508	GBPC 2510	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Current $T_c = 50\text{ }^\circ\text{C}$ <sup>(1)</sup>	$I_{F(AV)}$					25			A
Peak Forward Surge Current Single Sine Wave Superimposed on Rated Load	$I_{FSM}$					300			A
Rating for fusing (non-repetitive, 1ms < t < 8.3 ms)	$I^2t$					375			A <sup>2</sup> sec
Maximum Instantaneous Forward Voltage Drop Per Diode at $I_F = 12.5\text{ A}$	$V_F$					1.1			V
Maximum DC Reverse Current at $T_a = 25\text{ }^\circ\text{C}$	$I_R$					5			$\mu\text{A}$
Rated DC Blocking Voltage Per Diode $T_a = 125\text{ }^\circ\text{C}$	$I_{R(H)}$					500			$\mu\text{A}$
Typical Junction Capacitance Per Diode (at 4 V, 1MHz)	$C_J$					300			pF
Typical Thermal Resistance form Junction to Case	$R_{\theta JC}$					1.9			$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$					- 55 to + 150			$^\circ\text{C}$

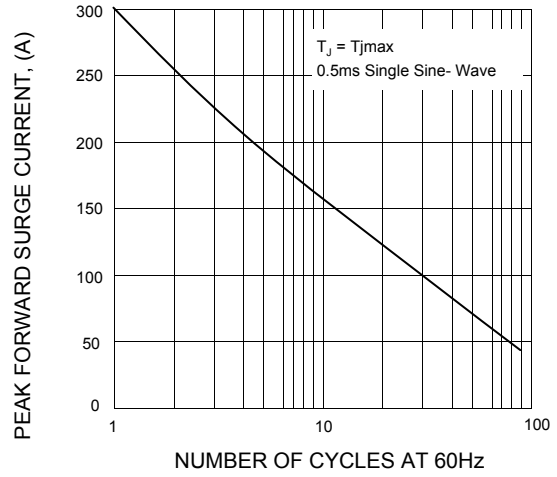
Note : (1) Unit mounted on 5 x 6 x 4.9" AL, Finned Plate.

**RATING AND CHARACTERISTIC CURVES ( GBPC25005 - GBPC2510 )**

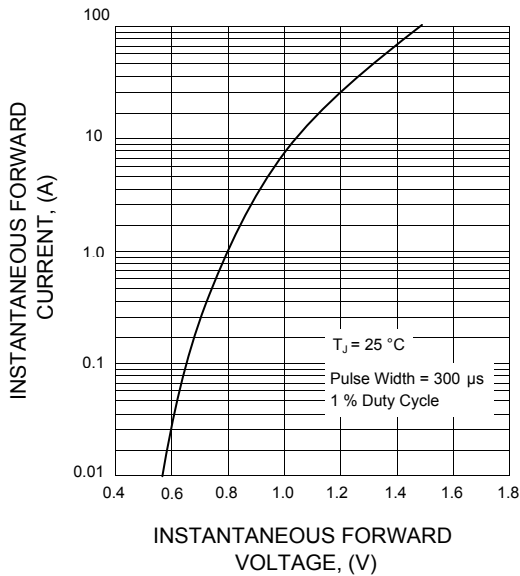
**FIG.1 - DERATING CURVE OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

