

# GBPC35005 - GBPC3510

# GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS

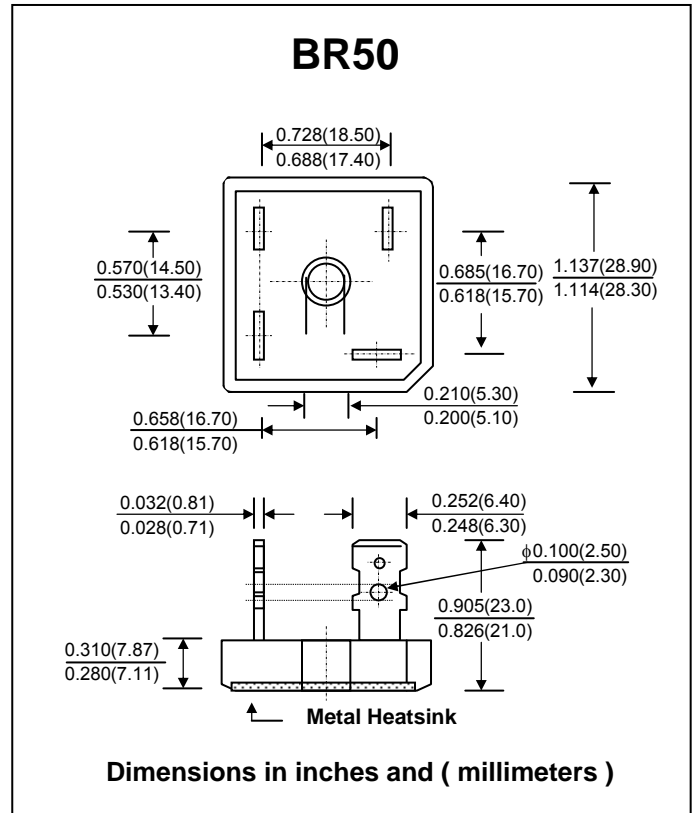
**PRV : 50 - 1000 Volts**  
**Io : 35 Amperes**

**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-0 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**

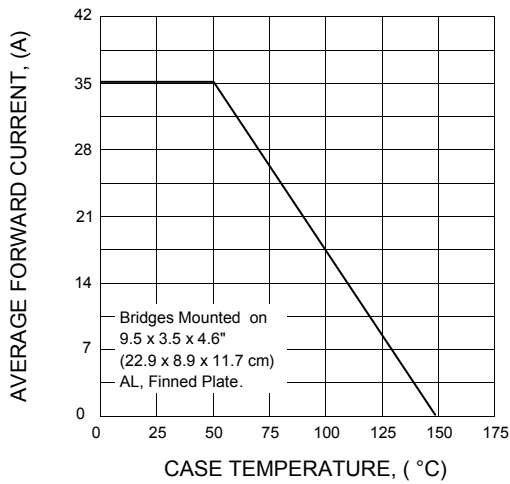
Rating at 25 °C ambient temperature unless otherwise noted.

RATING	SYMBOL	GBPC 35005	GBPC 3501	GBPC 3502	GBPC 3504	GBPC 3506	GBPC 3508	GBPC 3510	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 $T_c = 50\text{ }^\circ\text{C}$ (Fig.1)	$I_{F(AV)}$	35							A
Peak Forward Surge Current Single Sine Wave Superimposed on Rated Load	$I_{FSM}$	400							A
Rating for fusing (non-repetitive, 1ms < t < 8.3 ms)	$I^2t$	660							A <sup>2</sup> sec
Maximum Instantaneous Forward Voltage Drop Per Diode at $I_F = 17.5\text{ A}$	$V_F$	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 <sup>(1)</sup>	$R_{\theta JC}$	1.4							$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 55 to + 150							$^\circ\text{C}$

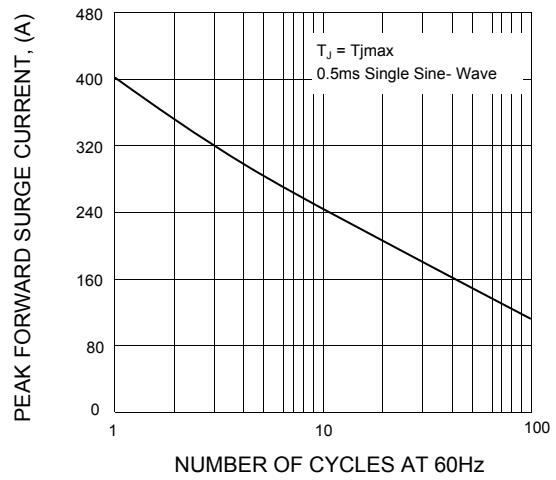
Note : (1) With heatsink

**RATING AND CHARACTERISTIC CURVES ( GBPC35005 - GBPC3510 )**

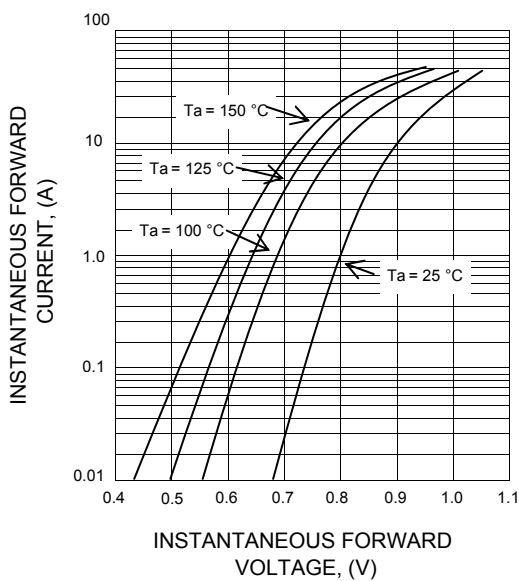
**FIG.1 - DERATING CURVE OUTPUT RECTIFIED CURRENT**



**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**

