

GBPC35005 - GBPC3510

PRV : 50 - 1000 Volts
Io : 35 Amperes

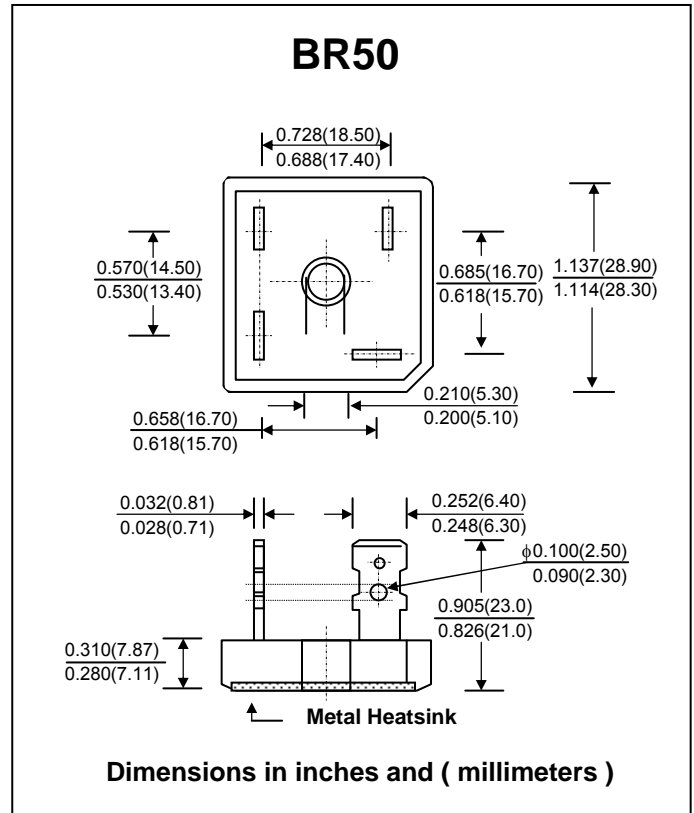
FEATURES :

- * 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

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS



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 ² 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 | | | | | | | μA |
| Rated DC Blocking Voltage Per Diode $T_a = 125\text{ }^\circ\text{C}$ | $I_{R(H)}$ | 500 | | | | | | | μA |
| Typical Junction Capacitance Per Diode (at 4 V, 1MHz) | C_J | 300 | | | | | | | pF |
| Typical Thermal Resistance form Junction to Case ⁽¹⁾ | $R_{\theta JC}$ | 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

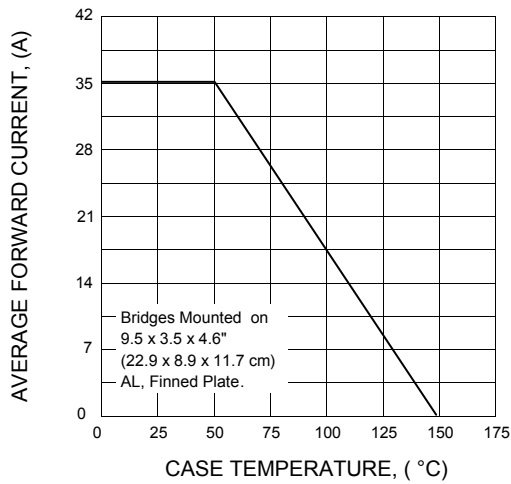


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER DIODE

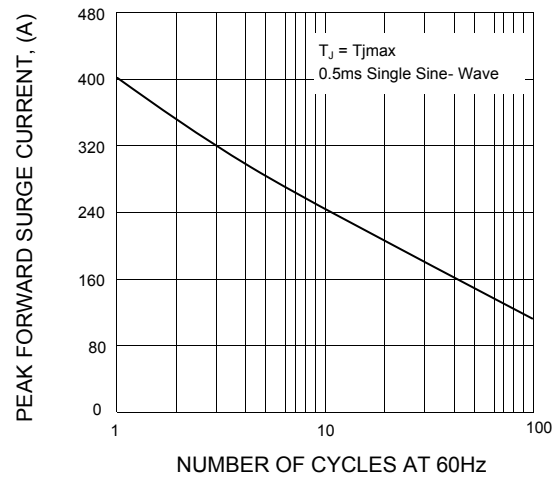


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

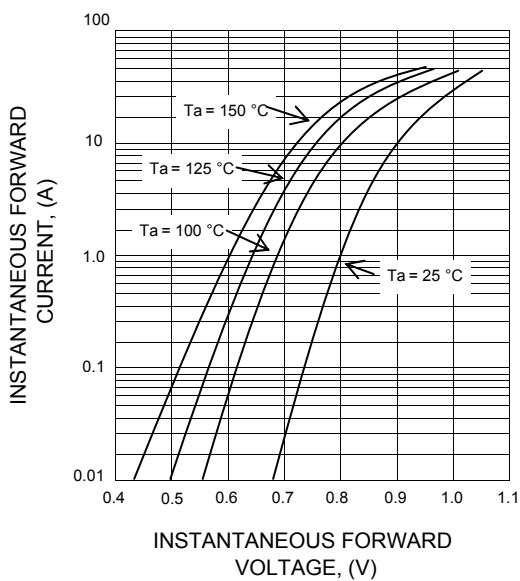


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

