

GBPC15005 - GBPC1510

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts

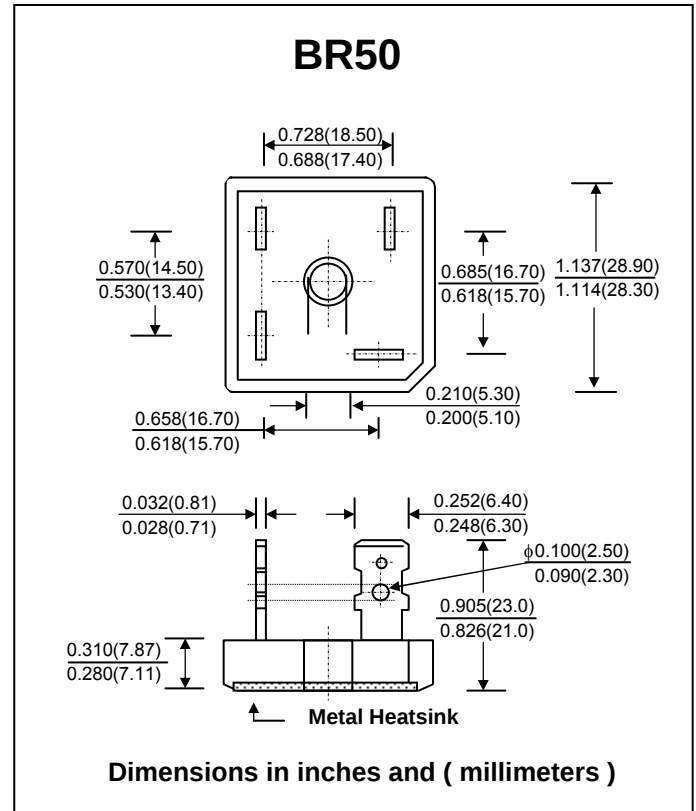
Io : 15 Amperes

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 15005	GBPC 1501	GBPC 1502	GBPC 1504	GBPC 1506	GBPC 1508	GBPC 1510	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)	$I_{F(AV)}$	15							A
Peak Forward Surge Current Single Sine Wave Superimposed on Rated Load	I_{FSM}	300							A
Rating for fusing (non-repetitive, $1\text{ms} < t < 8.3\text{ms}$)	I^2t	375							A ² sec
Maximum Instantaneous Forward Voltage Drop Per Diode at $I_F = 7.5\text{ A}$	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⁾	$R_{\theta JC}$	1.9							$^{\circ}\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 55 to + 150							$^{\circ}\text{C}$

Note : (1) With heatsink

RATING AND CHARACTERISTIC CURVES (GBPC15005 - GBPC1510)

FIG.1 - DERATING CURVE OUTPUT RECTIFIED CURRENT

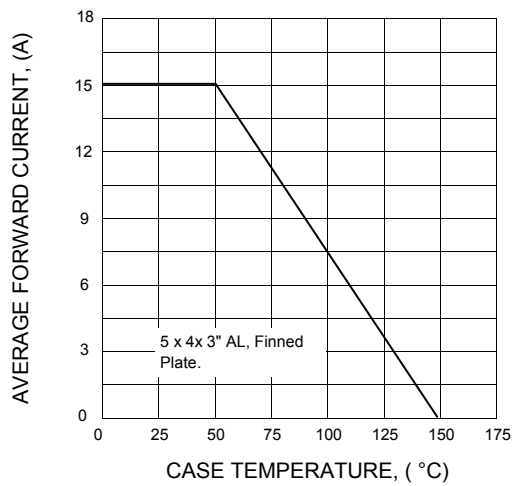


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER DIODE

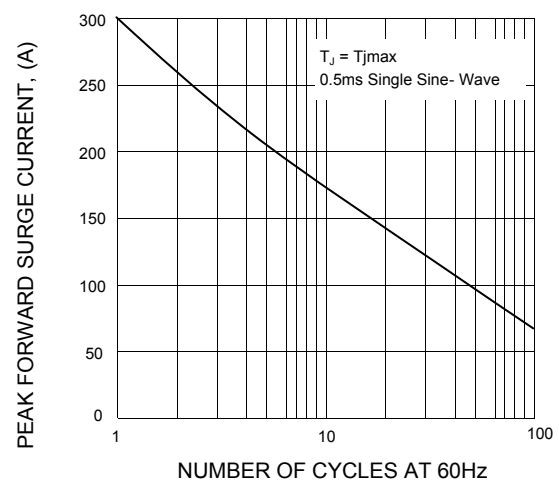


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

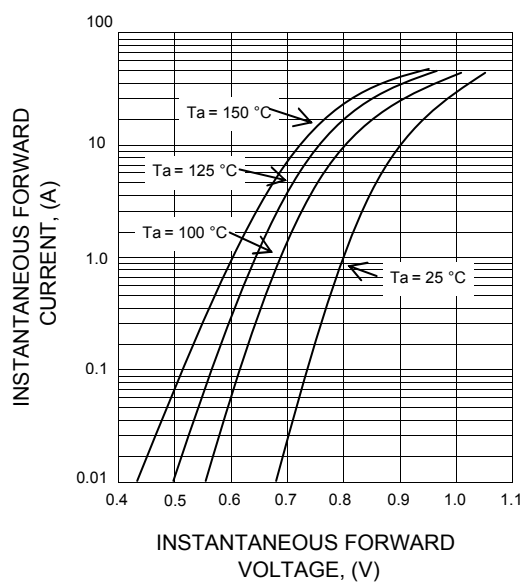


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

