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GBPC15005(W)-GBPC1510(W)

Single-Phase 15.0A Glass Passivated Bridge Rectifier

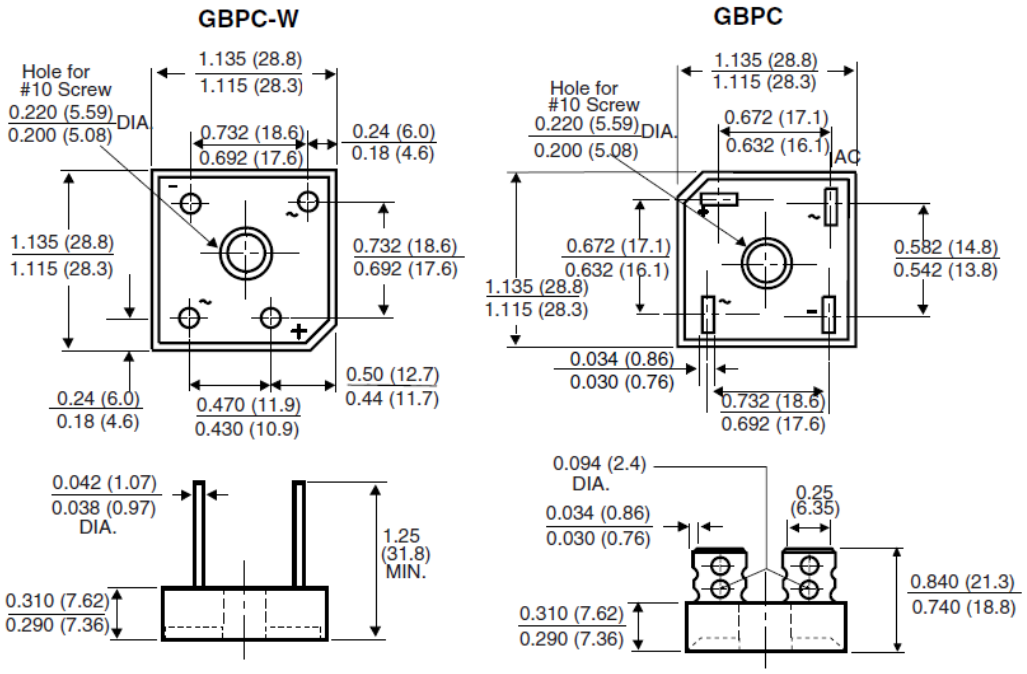
Features:

- Universal 3-way terminals: snap-on, wire wrap-around, or P.C.B. mounting
- Typical IR less than 0.3 μA
- High surge current capability
- Low thermal resistance
- Solder Dip 260 °C, 40 seconds
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- This is a Pb − Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

Mechanical Data:

- Case: GBPC, GBPC-W, Molded plastic
- Terminals: Nickel plated on faston lugs or Silver plated on wire leads, solderable per J-STD-002B and JESD22-B102D. E4 suffix for commercial grade. Suffix letter "W" added to indicate wire leads (e.g.GBPC15005W).
- Polarity: As marked, positive lead by belevled corner
- Mounting Position: Any
- Marking: Type Number
- Mounting Torque: 20 inches-lbs. max.

Mechanical Dimensions: In Inches/mm



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Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Type Number	Symbol	GBPC 15005	GBPC 1501	GBPC 1502	GBPC 1504	GBPC 1506	GBPC 1508	GBPC 1510	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{DC}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum average forward rectified output current (see Fig. 1)	$I_{F(AV)}$	15							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							A
Maximum instantaneous forward drop per diode @I_F =7.5A	V_F	1.1							V
Maximum reverse DC current at rated DC blocking voltage per diode	I_R @TA = 25°C	5.0							μA
	I_R @TA = 125°C	500							
Typical Junction Capacitance(per leg) @ 4 V, 1 MHz	C_J	300							pF
Typical Thermal Resistance (per leg)	$R_{\theta JC}$	1.9							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C
Case Style	GBPC/ GBPC-W								

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RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

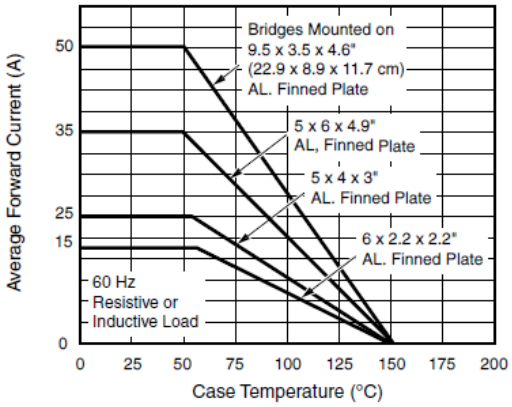

Figure 1. Maximum Output Rectified Current

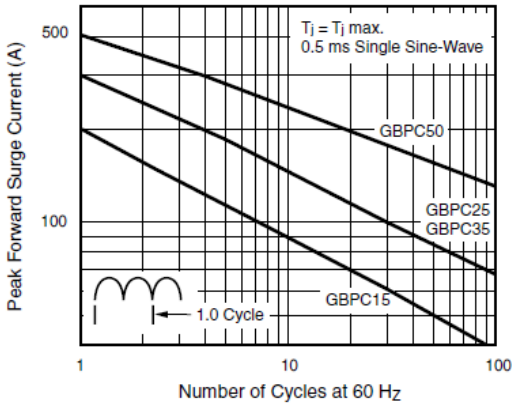

Figure 4. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

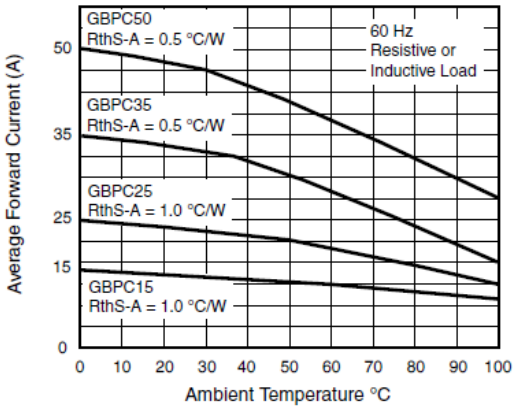

Figure 2. Maximum Output Rectified Current

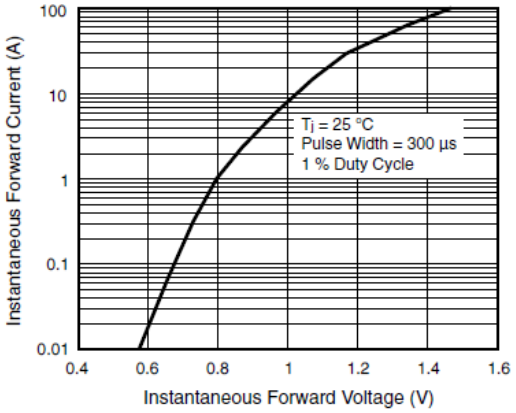

Figure 5. Typical Instantaneous Forward Characteristics Per Diode

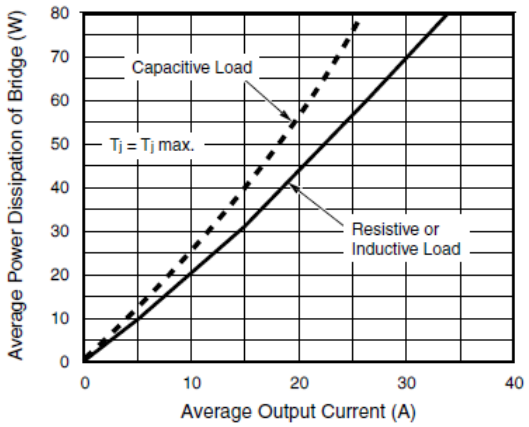

Figure 3. Maximum Power Dissipation

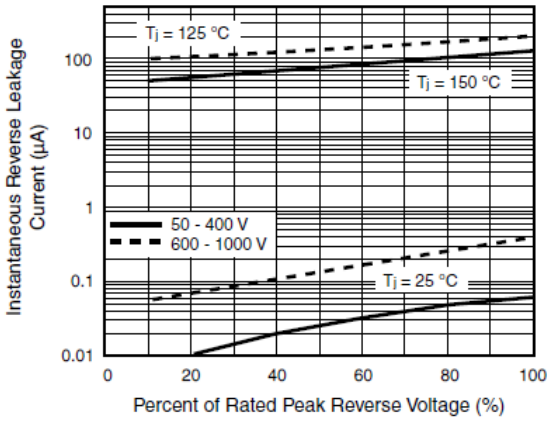

Figure 6. Typical Reverse Leakage Characteristics Per Diode

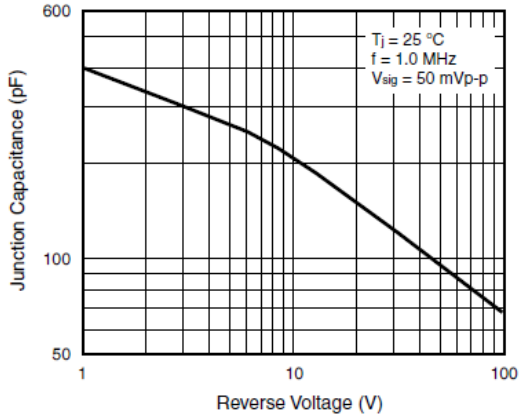

Figure 7. Typical Junction Capacitance Per Diode

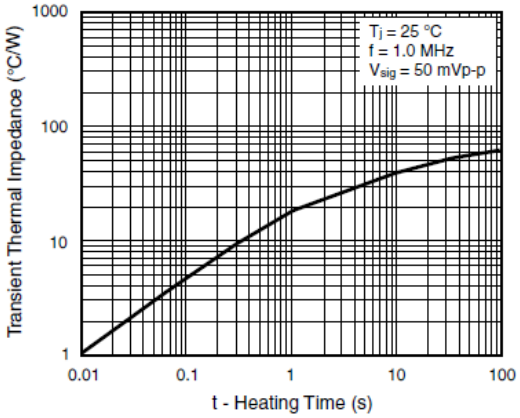

Figure 8. Typical Transient Thermal Impedance Per Diode

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