

## Silicon Bridge Rectifier

**V<sub>RRM</sub> = 50 V - 1000 V**  
**I<sub>F</sub> = 15 A**

### Features

- Integrally molded heat sink provides low thermal resistance for maximum heat dissipation
- Types up to 1000 V V<sub>RRM</sub>
  - Void-free junction by using vacuum soldering
  - High surge current capability
  - High temperature soldering guaranteed: 260°C/ 10 seconds at 5 lbs(2.3 kg) tension
  - Universal 3-way terminals: snap on, wire-around, or P.C board mounting

**GBPC-T/W Package**



### Mechanical Data

Case: Molded plastic with heat sink mounted in the bridge  
Mounting position: Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface  
Terminals: Either nickel plated 0.25"(6.35 mm) Faston lugs or 0.040"(1.02 mm) diameter copper leads.  
Weight: 15 grams or 0.53 ounces  
Mounting torque: 20 inch-lbs max  
Polarity: Marked on body

**Maximum ratings, at T<sub>j</sub> = 25 °C, unless otherwise specified (GBPCXXXXT uses GBPC-T package while GBPCXXXXW uses GBPC-W package)**

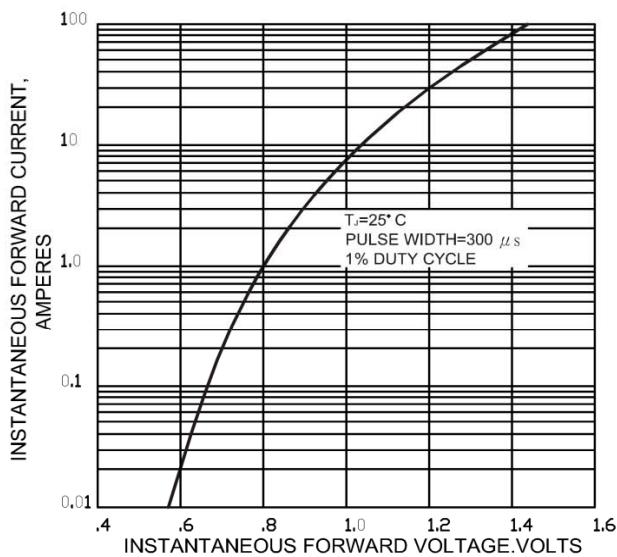
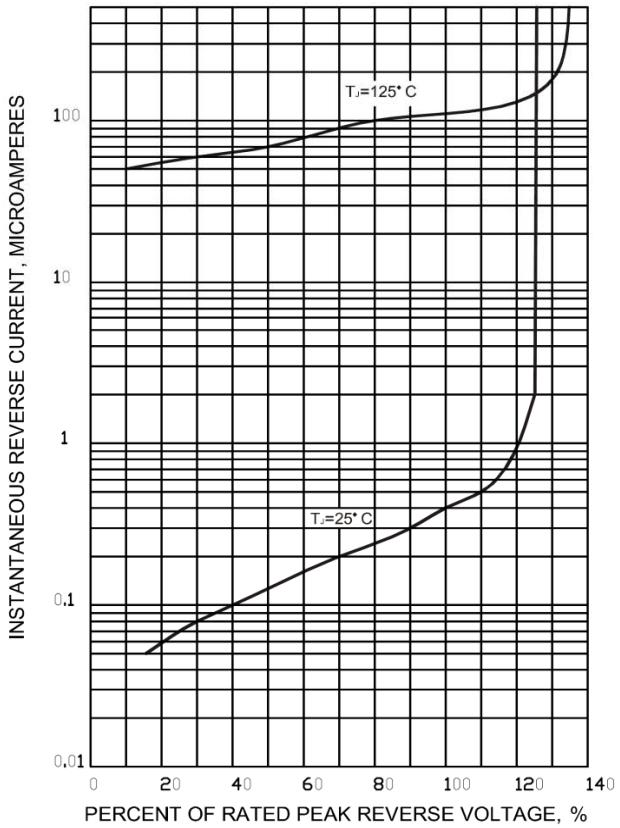
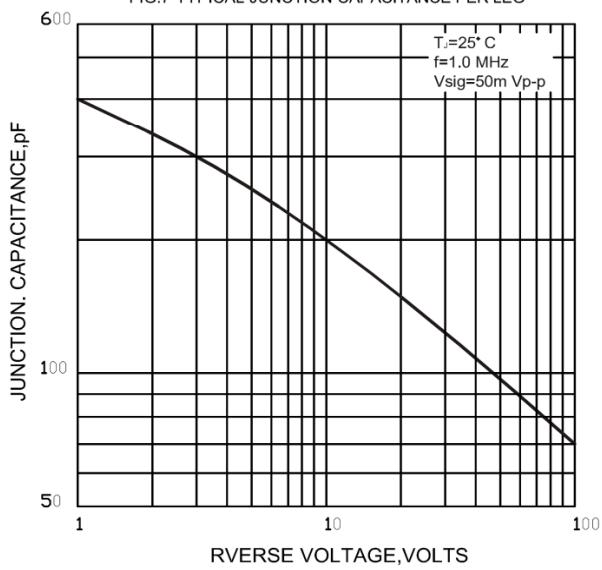
Parameter	Symbol	Conditions	GBPC1506T/W	GBPC1508T/W	GBPC1510T/W	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>		600	800	1000	V
RMS reverse voltage	V <sub>RMS</sub>		420	560	700	V
DC blocking voltage	V <sub>DC</sub>		600	800	1000	V
Continuous forward current	I <sub>F</sub>	T <sub>C</sub> ≤ 55 °C	15	15	15	A
Surge non-repetitive forward current, Half Sine Wave	I <sub>F,SM</sub>	T <sub>C</sub> = 25 °C, t <sub>p</sub> = 8.3 ms	300	300	300	A
Operating temperature	T <sub>j</sub>		-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T <sub>stg</sub>		-55 to 150	-55 to 150	-55 to 150	°C

**Electrical characteristics, at T<sub>j</sub> = 25 °C, unless otherwise specified**

Parameter	Symbol	Conditions	GBPC1506T/W	GBPC1508T/W	GBPC1510T/W	Unit
Diode forward voltage	V <sub>F</sub>	I <sub>F</sub> = 7.5 A, T <sub>j</sub> = 25 °C	1.1	1.1	1.1	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 50 V, T <sub>j</sub> = 25 °C	5	5	5	µA

### Thermal characteristics

Thermal resistance, junction - case	R <sub>thJC</sub>		1.9	1.9	1.9	°C/W
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**FIG.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG**

**FIG.6-TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG**

**FIG.7-TYPICAL JUNCTION CAPACITANCE PER LEG**

**FIG.8-TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG**
