



America Semiconductor

Silicon Bridge Rectifier

GBPC1506TW thru GBPC1510TW

V_{RRM} = 50 V - 1000 V

I_F = 15 A

Features

- Integrally molded heat sink provides low thermal resistance for maximum heat dissipation
- Types up to 1000 V V_{RRM}
 - 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_j = 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 _{RRM}		600	800	1000	V
RMS reverse voltage	V _{RMS}		420	560	700	V
DC blocking voltage	V _{DC}		600	800	1000	V
Continuous forward current	I _F	T _C ≤ 55 °C	15	15	15	A
Surge non-repetitive forward current, Half Sine Wave	I _{F,SM}	T _C = 25 °C, t _p = 8.3 ms	300	300	300	A
Operating temperature	T _j		-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T _{stg}		-55 to 150	-55 to 150	-55 to 150	°C

Electrical characteristics, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	GBPC1506T/W	GBPC1508T/W	GBPC1510T/W	Unit
Diode forward voltage	V _F	I _F = 7.5 A, T _j = 25 °C	1.1	1.1	1.1	V
Reverse current	I _R	V _R = 50 V, T _j = 25 °C V _R = 50 V, T _j = 125 °C	5 500	5 500	5 500	μA

Thermal characteristics

Thermal resistance, junction - case	R _{thJC}		1.9	1.9	1.9	°C/W
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FIG.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

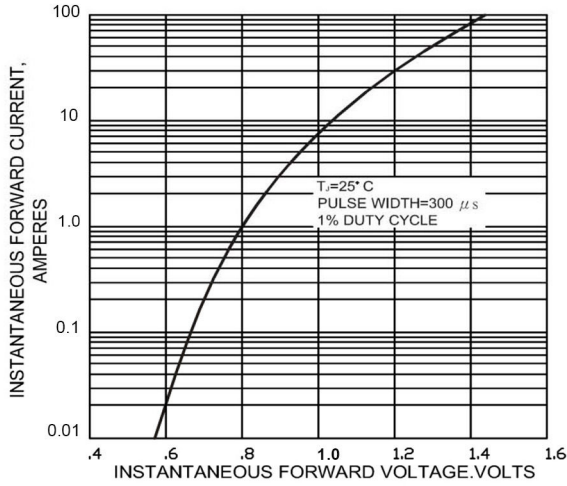


FIG.6-TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

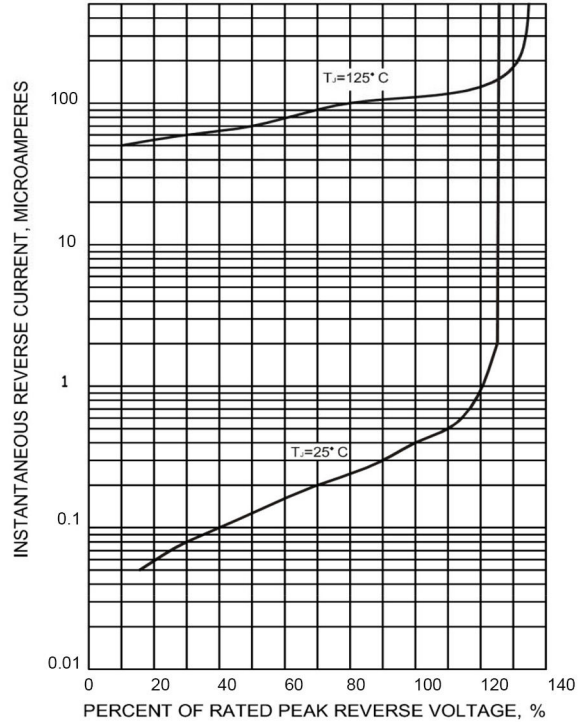


FIG.7-TYPICAL JUNCTION CAPACITANCE PER LEG

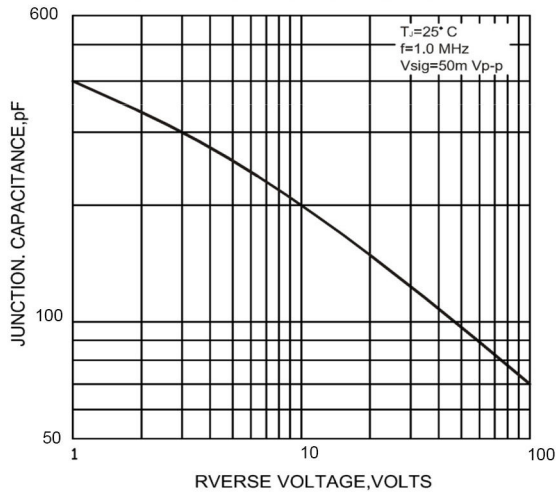


FIG.8-TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

