

**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  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified (GBPCXXXXT uses GBPC-T package while GBPCXXXXW uses GBPC-W package)**

Parameter	Symbol	Conditions	GBPC3506T/W	GBPC3508T/W	GBPC3510T/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	$I_F$	$T_C \leq 50\text{ }^\circ\text{C}$	35	35	35	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	400	400	400	A
Operating temperature	$T_j$		-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$

**Electrical characteristics, at  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified**

Parameter	Symbol	Conditions	GBPC3506T/W	GBPC3508T/W	GBPC3510T/W	Unit
Diode forward voltage	$V_F$	$I_F = 17.5\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.1	1.1	1.1	V
Reverse current	$I_R$	$V_R = 50\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$ $V_R = 50\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	5	5	5	$\mu\text{A}$

**Thermal characteristics**

Thermal resistance, junction - case	$R_{thJC}$		1.4	1.4	1.4	$^\circ\text{C/W}$
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# America Semiconductor

## GBPC3506TW thru GBPC3510TW

FIG.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

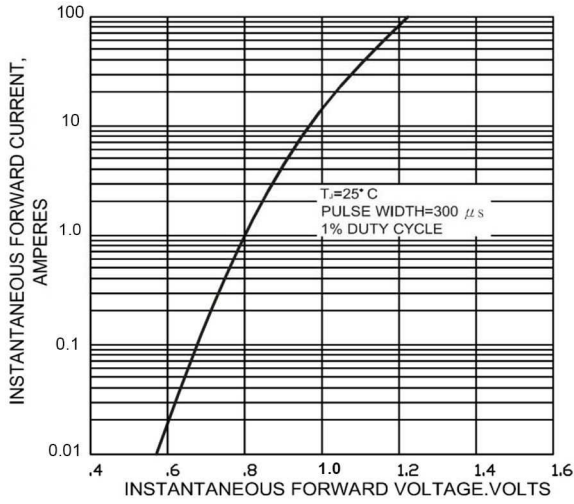


FIG.6-TYPICAL REVERSE CHARACTERISTICS

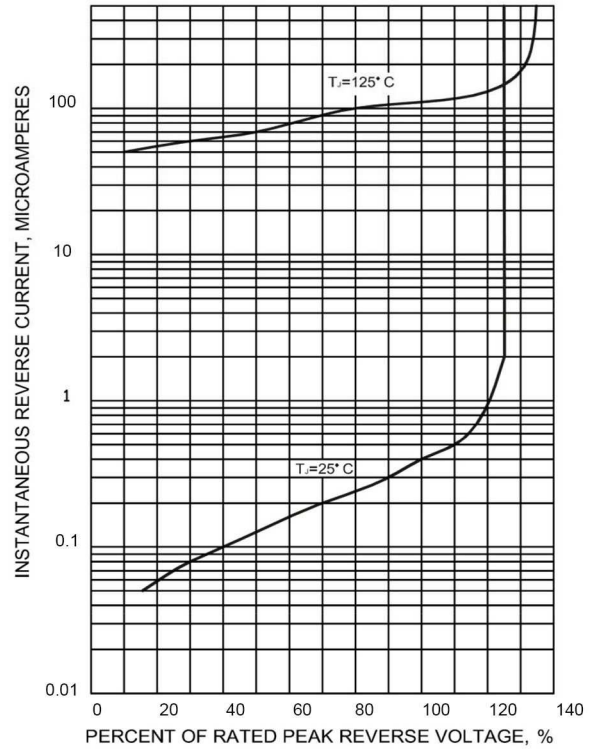


FIG.7-TYPICAL JUNCTION CAPACITANCE PER LEG

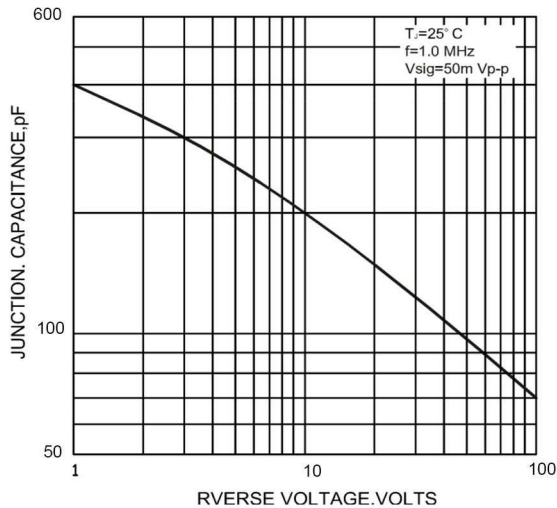


FIG.8-TYPICAL TRANSIENT THERMAL IMPEDANCE

