



# GBPC50005T/W thru GBPC5004T/W

## Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 1000\text{ V}$   
 $I_F = 50\text{ A}$

### 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: 19 grams or 0.67 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	GBPC50005T/W	GBPC5001T/W	GBPC5002T/W	GBPC5004T/W	Unit
Repetitive peak reverse voltage	$V_{RRM}$		50	100	200	400	V
RMS reverse voltage	$V_{RMS}$		35	70	140	280	V
DC blocking voltage	$V_{DC}$		50	100	200	400	V
Continuous forward current	$I_F$	$T_C \leq 50\text{ }^\circ\text{C}$	50	50	50	50	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	400	A
Operating temperature	$T_j$		-55 to 150	-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	-55 to 150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	GBPC50005T/W	GBPC5001T/W	GBPC5002T/W	GBPC5004T/W	Unit
Diode forward voltage	$V_F$	$I_F = 25\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.2	1.2	1.2	1.2	V
Reverse current	$I_R$	$V_R = 50\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	5	5	5	5	$\mu\text{A}$
		$V_R = 50\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	500	500	500	500	

### Thermal characteristics

Parameter	Symbol	Conditions	GBPC50005T/W	GBPC5001T/W	GBPC5002T/W	GBPC5004T/W	Unit
Thermal resistance, junction - case	$R_{thJC}$		1.2	1.2	1.2	1.2	$^\circ\text{C/W}$

FIG.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

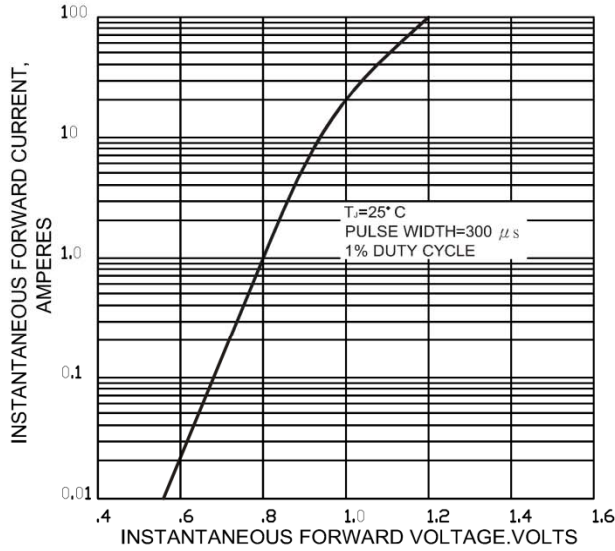


FIG.6-TYPICAL REVERSE CHARACTERISTICS

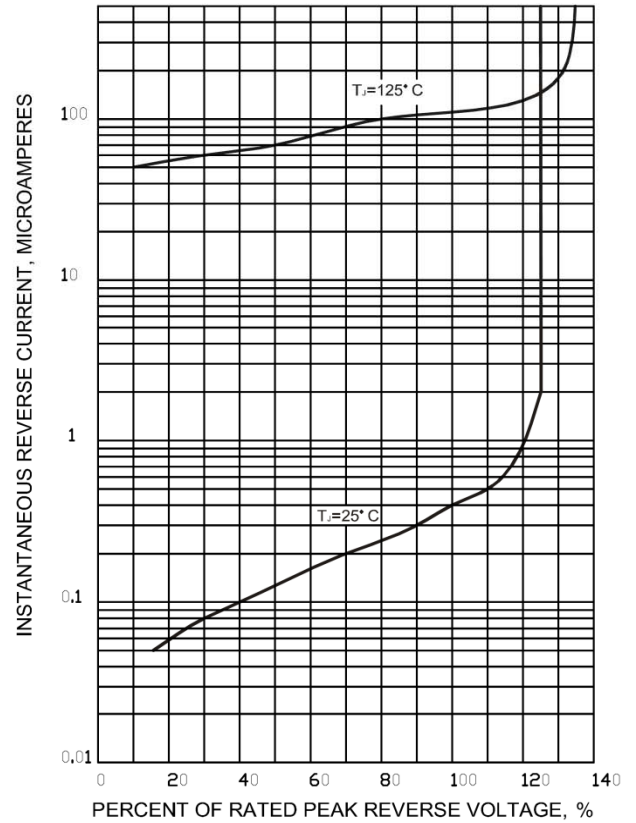


FIG.7-TYPICAL JUNCTION CAPACITANCE PER LEG

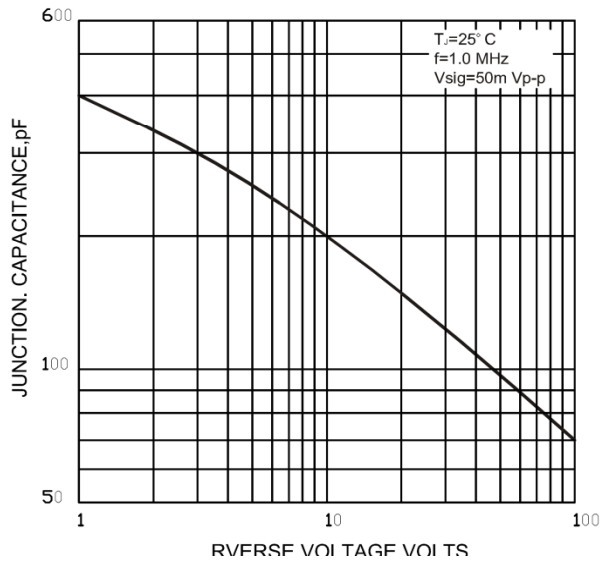


FIG.8-TYPICAL TRANSIENT THERMAL IMPEDANCE

