



# RHBS610

Glass Passivated Single-Phase 6.0Amp Surface Mount Bridge Rectifier

## Features

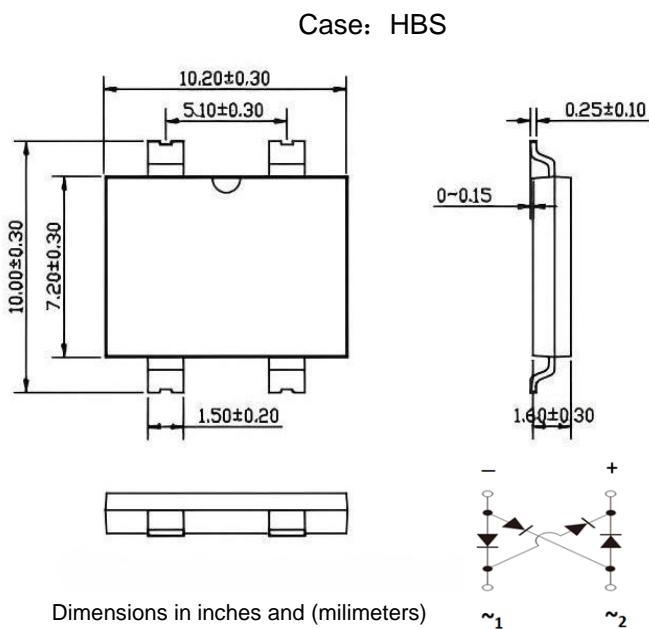
- Surface mount bridge, small package;
- Ideal for printed circuit boards;
- Glass passivated chip junction;
- High forward current capability up to 6.0A;
- High surge current capability;
- High heat dissipation capability;
- Low profile package;
- Low forward voltage drop;
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0;

## Mechanical Data

- Case: HBS;  
Epoxy meets UL-94V-0 Flammability rating;
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102;
- High temperature soldering guaranteed:  
Solder Reflow 260°C, 10seconds;
- Polarity: As marked on body;
- Marking: Type number;

## Typical Applications

General purpose use in AC-to-DC bridge full wave rectification for Fast Charging, Switching Power Supply, USB PD, Adapter and 3-in-1 Power Board, etc.



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbol	RHBS610		Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000		V
Maximum RMS voltage	$V_{RMS}$	700		V
Maximum DC blocking voltage	$V_{DC}$	1000		V
Maximum average forward rectified output current at $T_A=25^\circ C$	$I_{F(AV)}$	6.0		Amps
Non-Repetitive Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	170		Amps
Rating for fusing ( $t<8.3ms$ )	$I^2t$	120		$A^2sec$
Instantaneous forward voltage drop per diode	$V_F$	$0.95\text{ max.}$ $@IF=1.0A$ $1.1\text{ max.}$ $@IF=3.0A$ $1.3V\text{ max.}$ $@IF=6.0A$		Volt
Reverse Current at Rated DC Blocking Voltage	$I_R$	$0.16\text{ Typ.}$ $T_A=25^\circ C$ $43.0\text{ Typ.}$ $T_A=125^\circ C$	$5.0\text{ max}$ $100\text{ max}$	$\mu A$
Maximum reverse recovery time ( $IF=0.5A, IR=1.0A, Irr=0.25A$ )	$Tr_{rr}$	350		nS
Typical thermal resistance	$R_{eJ-A}$ $R_{eJ-C}$ $R_{eJ-L}$	72.0 14.0 12.0		$^\circ C/W$
Operating junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150		$^\circ C$

Note1: Measured at 1.0MHz and applied reverse voltage of 5.0V DC;

Ratings and Characteristics Curves (TA = 25°C unless otherwise noted)

## RHBS610

FIG.1 Derating Curve Output Rectified Current

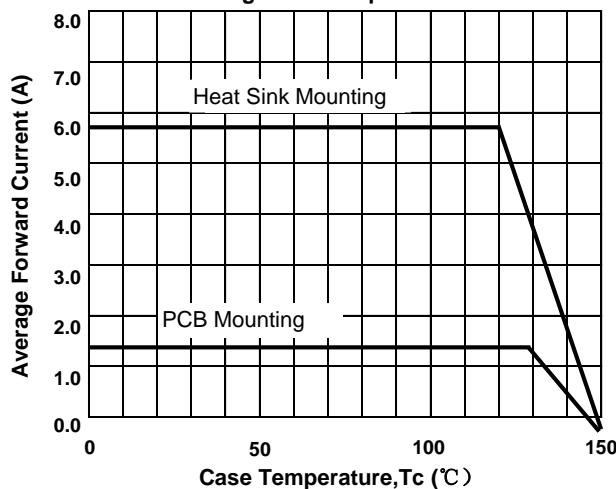


FIG.2 Typical Forward Characteristics per Diode

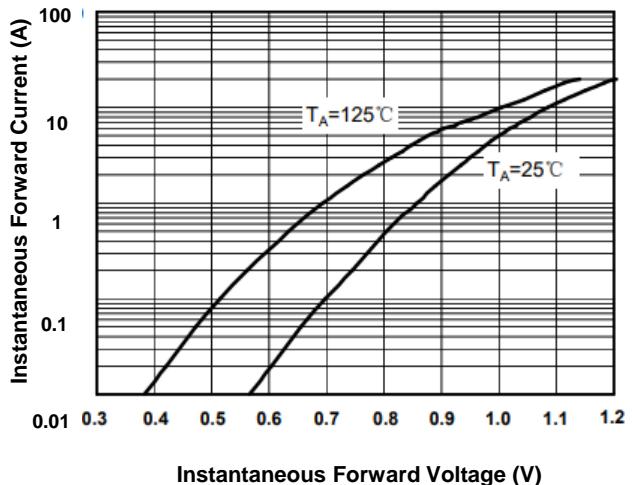


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

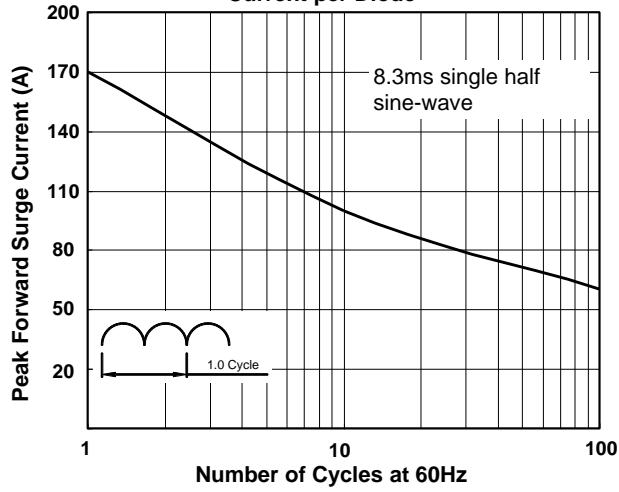


FIG.4 Typical Reverse Characteristics per Diode

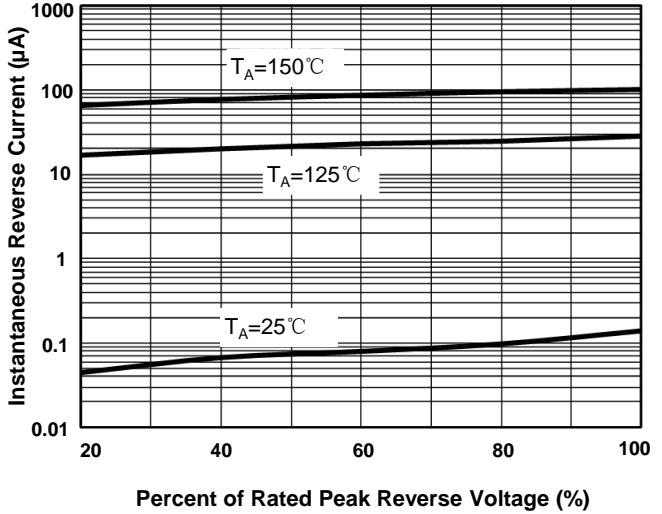
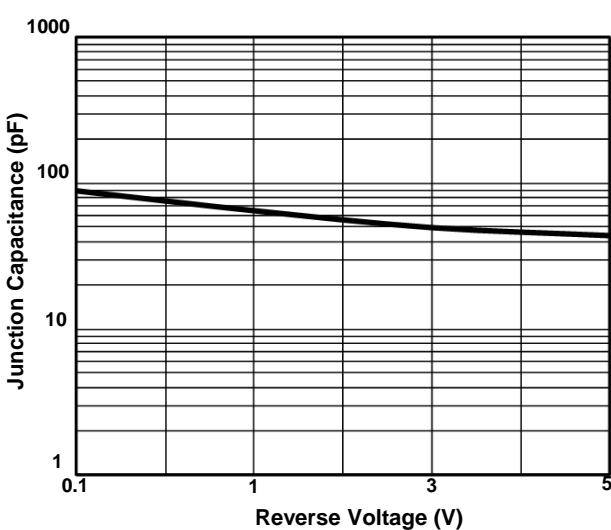


FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout

