

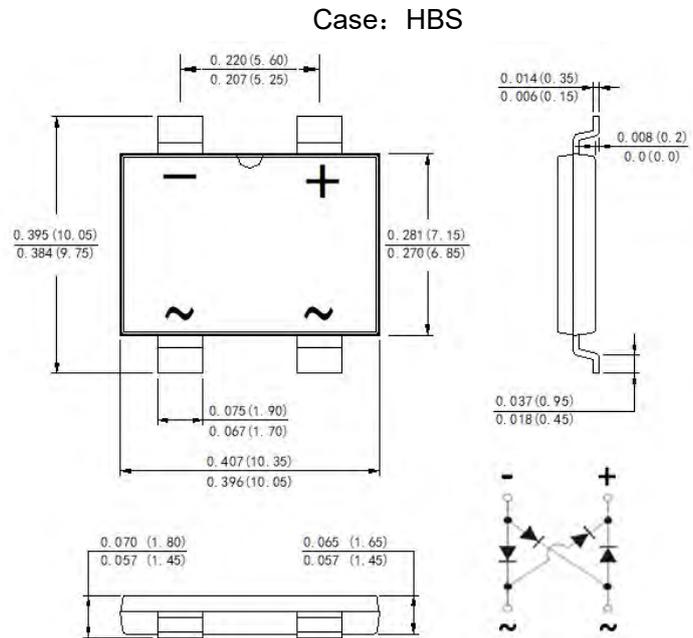


Features

- Surface mount bridge, small package;
- Ideal for printed circuit boards;
- Glass passivated chip junction;
- High forward current capability up to 8.0A;
- High forward surge current capability;
- Fast recovery, low switching loss;
- Low profile package;
- Low forward voltage drop, low power losses;
- Plastic package has Underwrites 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;



Dimensions in inches and (millimeters)

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.

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	RHBS802	RHBS804	RHBS806	RHBS808	RHBS810	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	V
Maximum average forward rectified output current at $T_A=25^\circ\text{C}$	$I_{F(AV)}$	8.0					Amps
Non-Repetitive Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200					Amps
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	166					A ² sec
Instantaneous forward voltage drop per diode	V_F	@ $I_F=1.0\text{A}$	0.85 Typ.		0.90 max.		Volt
		@ $I_F=4.0\text{A}$	0.96 Typ.		1.01 max.		
		@ $I_F=8.0\text{A}$	1.05 Typ.		1.10 max.		
Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$	0.20 Typ.		5.0 max.		μA
		$T_A=125^\circ\text{C}$	50.0 Typ.		100 max.		
Maximum reverse recovery time ($I_F=0.5\text{A}, I_R=1.0\text{A}, I_{tr}=0.25\text{A}$)	T_{rr}	150	250	500			ns
Typical capacitance (note1)	C_j	45					pF
Typical thermal resistance	$R_{\theta J-A}$	70.0					$^\circ\text{C/W}$
	$R_{\theta J-C}$	15.0					
	$R_{\theta J-L}$	22.0					
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150					$^\circ\text{C}$

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



Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

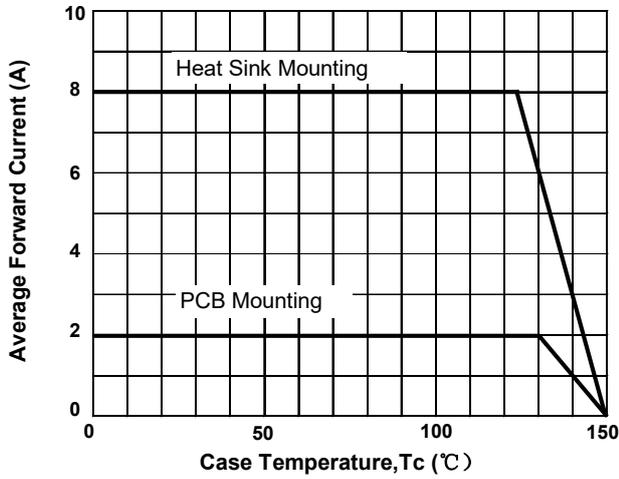


FIG.2 Typical Forward Characteristics per Diode

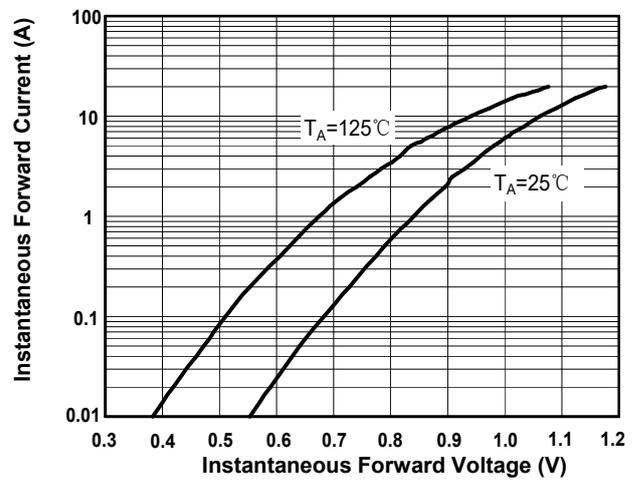


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

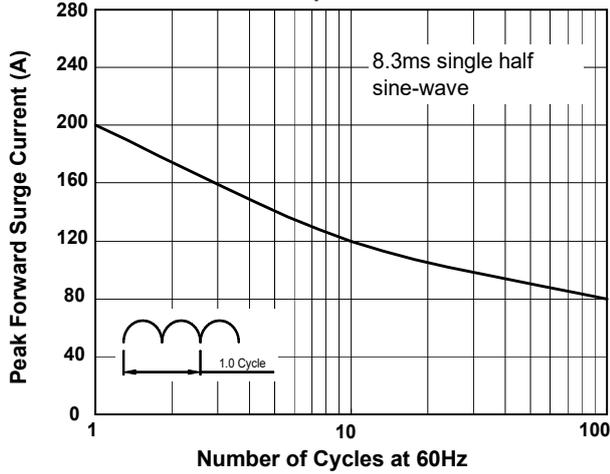


FIG.4 Typical Reverse Characteristics per Diode

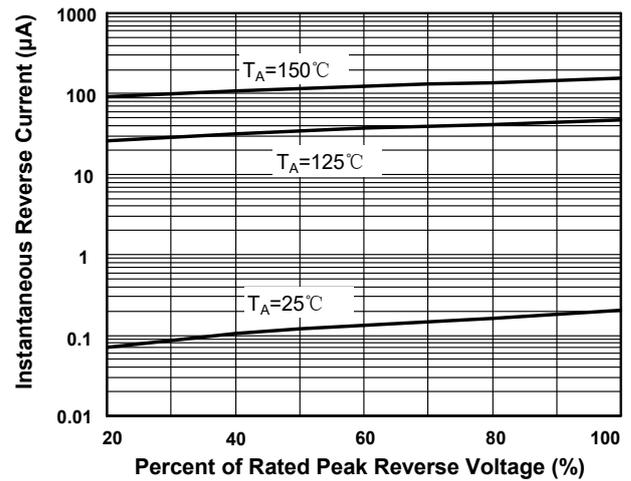
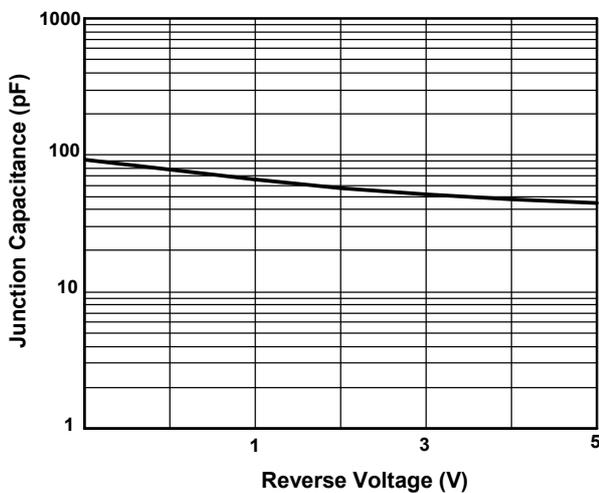


FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout

Unit: inches (mm)

