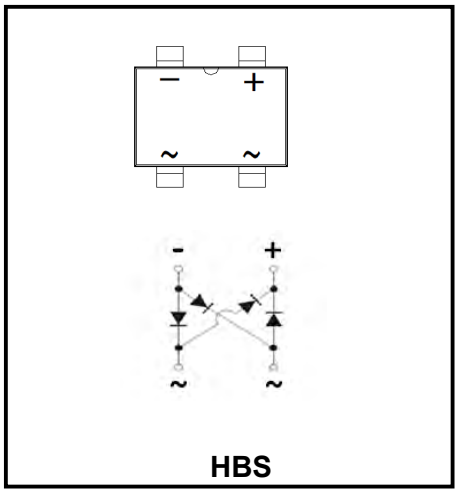
Glass Passivated Single-Phase 8.0Amp Fast Recovery Surface Mount Bridge Rectifier

Reverse Voltage - 200 to 1000 V

Forward Current - 8.0 A



FEATURES

- Surface mount bridge, small package;
- Ideal for printed circuit boards;
- Glass passivated chip junction;
- High forward current capability up to 8.0A;
- High 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℃,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.

Maximum Ratings And Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	RHBS802	RHBS804	RHBS806	RHBS808	RHBS810	Units
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℃	$I_{F(AV)}$	8.0					A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200					A
I^2t Rating for Fusing (t<8.3mS)	I^2t	166					A^2S
Instantaneous forward voltage drop per diode @IF=1.0A @IF=4.0A @IF=8.0A	V_F	0.85 Typ. 0.90 max. 0.96 Typ. 1.01 max. 1.05Typ. 1.10 max.					V
Reverse Current at Rated DC Blocking Voltage T_A=25℃ T_A=125℃	I_R	0.20 Typ. 5.0 max. 50.0 Typ. 100 max.					uA
Maxumum reverse recovery time (IF=0.5A,IR=1.0A,Irr=0.25A)	Trr	150		250	500		ns
Typical capacitance （note1)	C_j	49					pF
Typical thermal resistance	$R_{\theta J-A}$ $R_{\theta J-C}$ $R_{\theta J-L}$	70.0 15.0 22.0					°C/W
Operating and Storage Temperature Range	Tj, Tstg	-55 to +150					°C

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

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

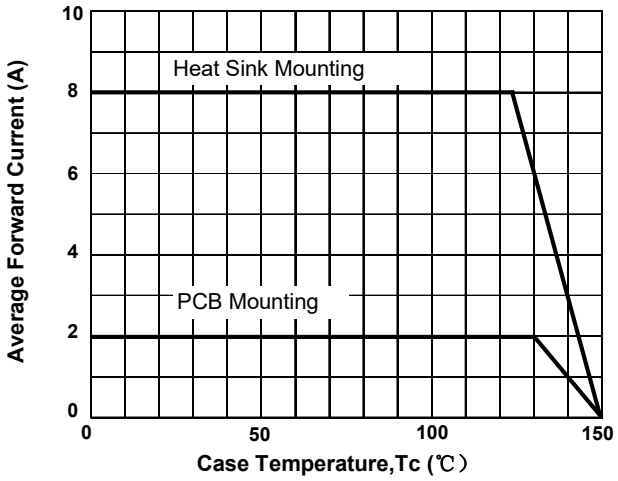


FIG.2 Typical Forward Characteristics per Diode

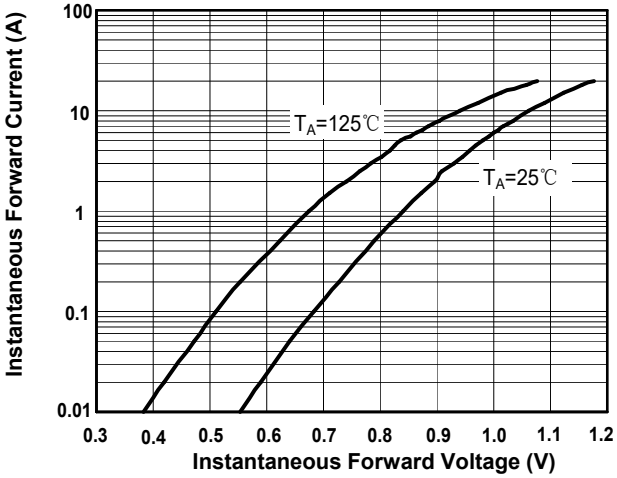


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

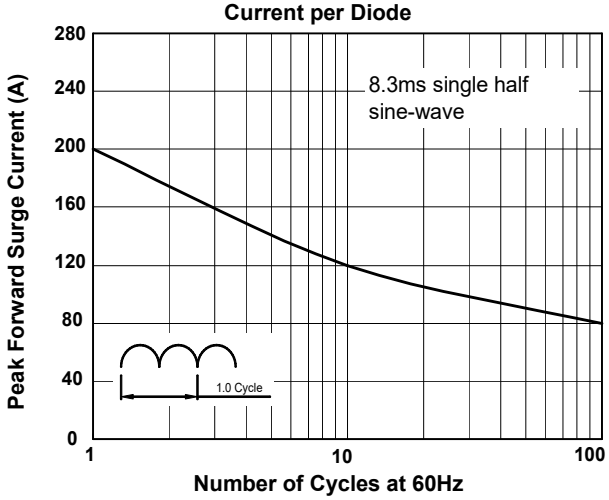


FIG.4 Typical Reverse Characteristics per Diode

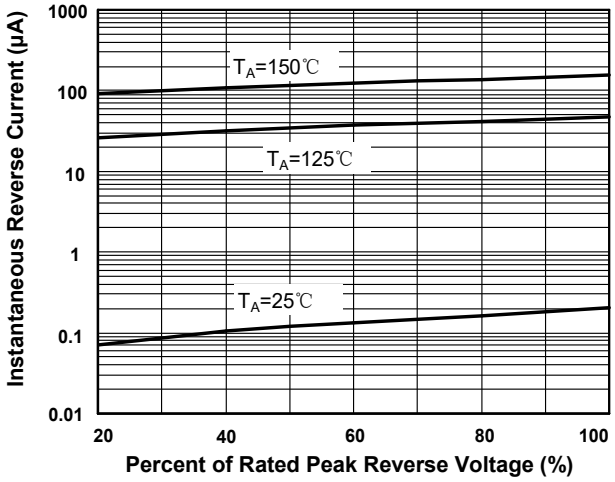
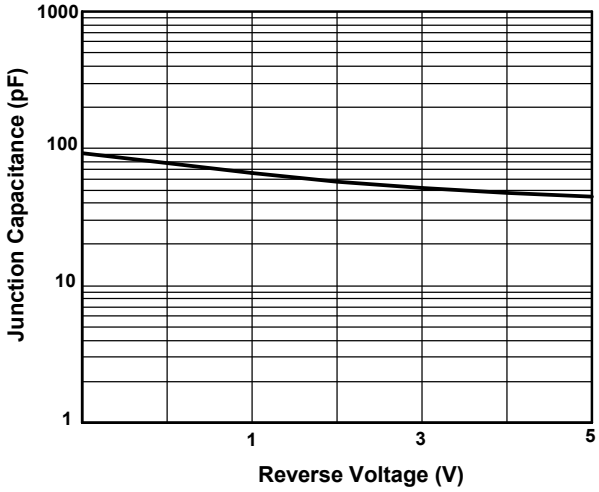
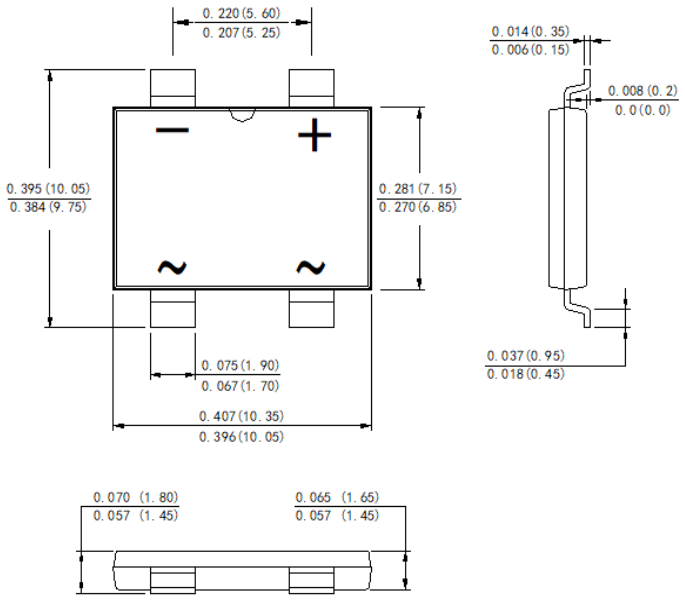


FIG.5 Typical Junction Capacitance per Diode

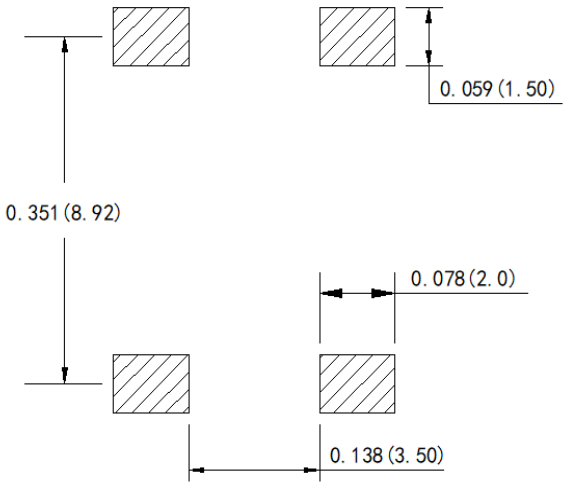


Package Outline HBS



Suggested PCB printfoot layout

Unit: inches (mm)



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
HBS	Tape/Reel,13”reel	2500	EIA-481-1