PowSemi 湖北力芯半导体有限公司

RHBS80DG - RHBS80MG

Glass Passivated Single-Phase 8.0Amp 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 8.0A;
- High surge current capability;
- High heat dissipation capability;
- Low profile package;
- Low forward voltage drop;
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;

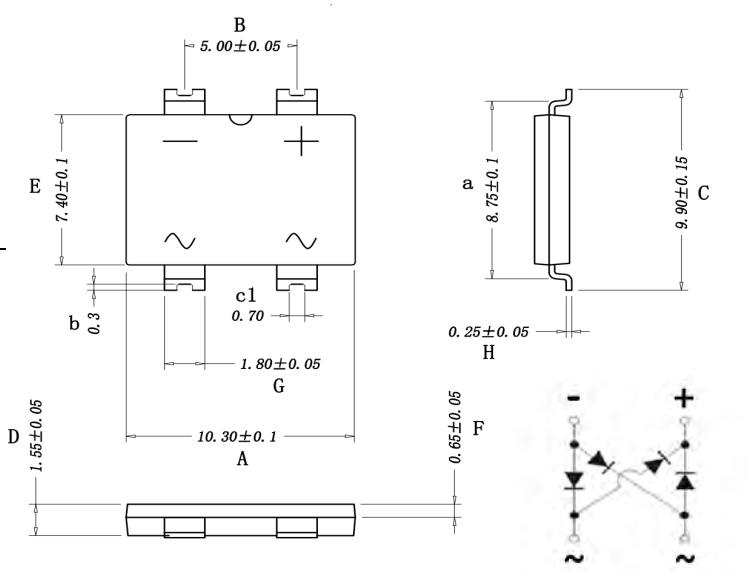
Mechanical Data

- 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.

Case：HBS



Dimensions in inches and

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	Symbol	RHBS80DG	RHBS80GG	RHBS80JG	RHBS80KG	RHBS80MG	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℃	$I_{F(AV)}$	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<8.3ms)	I^2t	166					A^2sec
Instantaneous forward voltage drop per diode @IF=1.0A @IF=4.0A @IF=8.0A	V_F	0.95 max. 1.1 max. 1.3max.					Volt
Reverse Current at Rated DC Blocking Voltage T_A=25℃ T_A=125℃	I_R	0.20 Typ. 5.0 max 50 Typ. 100 max.					μA
Maxumum reverse recovery time (IF=0.5A,IR=1.0A,Irr=0.25A)	Trr	150		250	500		nS
Typical thermal resistance	$R_{\Theta J-A}$ $R_{\Theta J-C}$ $R_{\Theta J-L}$	70.0 15.0 22.0					℃/W
Operating junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150					℃

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

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Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

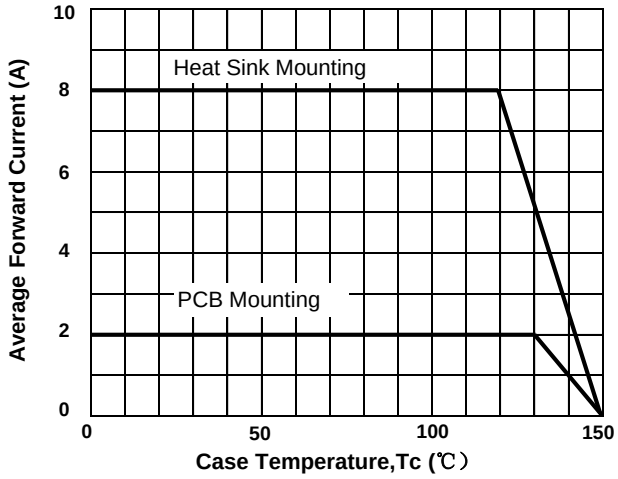


FIG.2 Typical Forward Characteristics per Diode

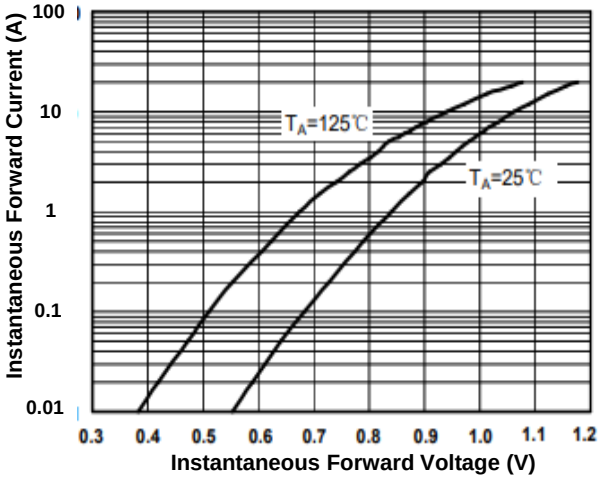


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

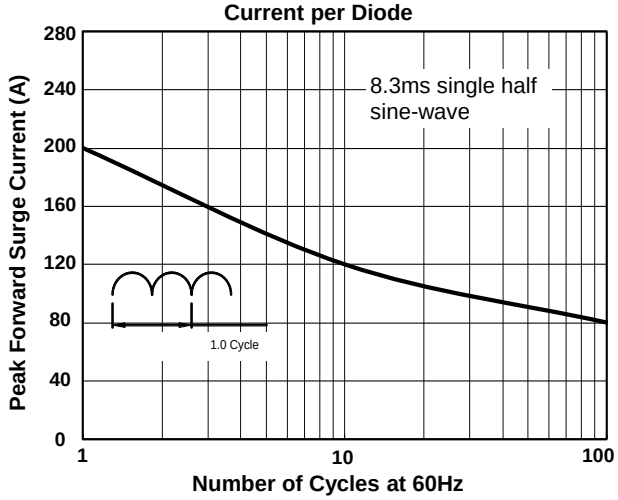


FIG.4 Typical Reverse Characteristics per Diode

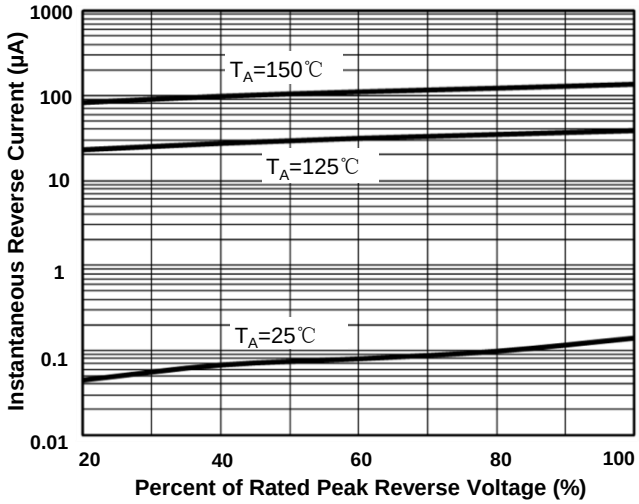
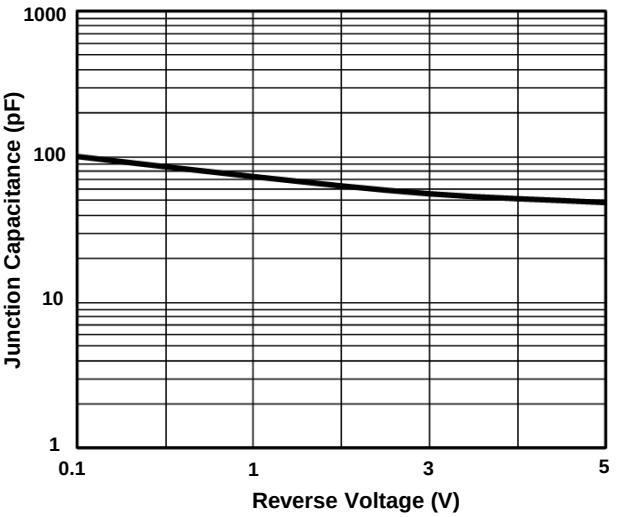


FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout