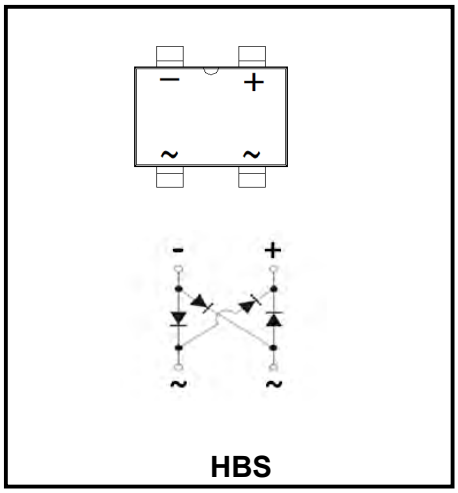
Glass Passivated Single-Phase 8.0Amp Surface Mount Bridge Rectifier

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;
- 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.

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	HBS802	HBS804	HBS806	HBS808	HBS810	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	0.82 Typ. 0.87 max. 0.89 Typ. 0.94 max. 0.94 Typ. 1.0 max.					V
Reverse Current at Rated DC Blocking Voltage T_A=25℃ T_A=125℃	I_R	0.15 Typ. 5.0 max. 20.0 Typ. 100 max.					uA
Typical capacitance （note1）	C_j	49					pF
Typical thermal resistance	$R_{\theta J-A}$ $R_{\theta J-C}$ $R_{\theta J-L}$	70.0 11.0 14.0					°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

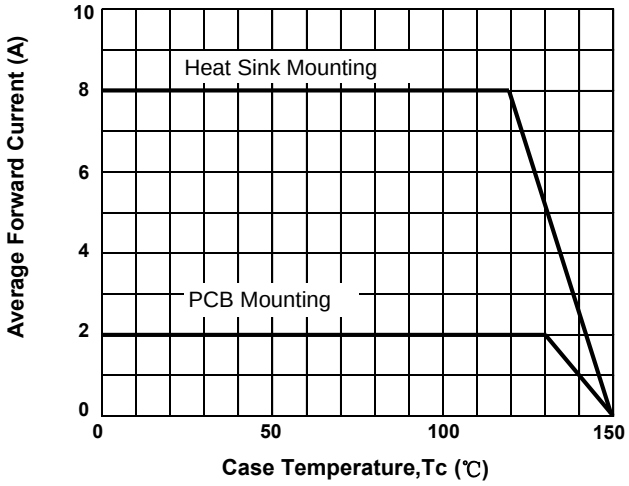


FIG.2 Typical Forward Characteristics per Diode

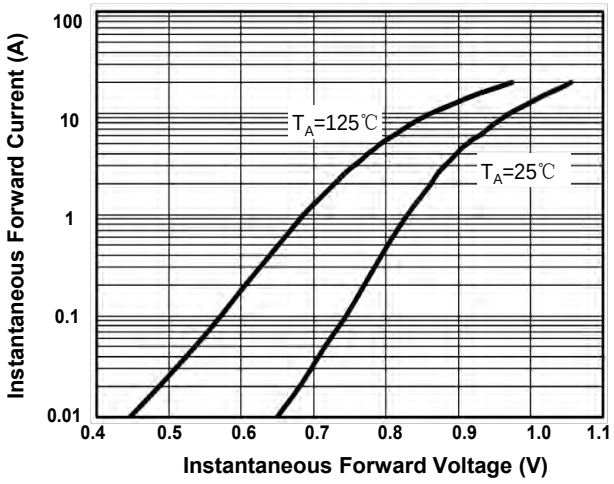


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

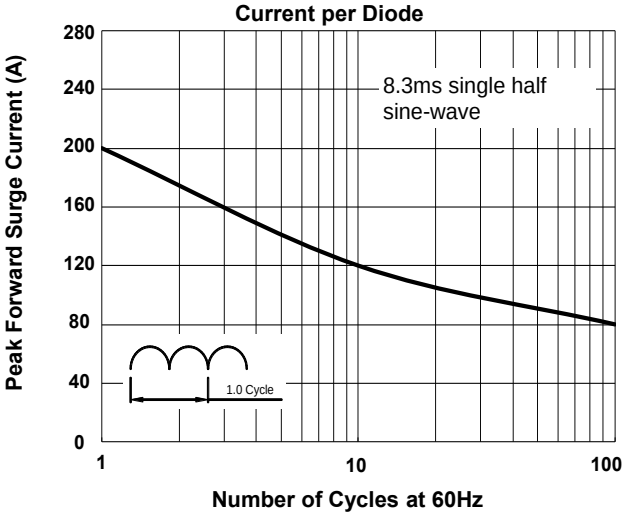


FIG.4 Typical Reverse Characteristics per Diode

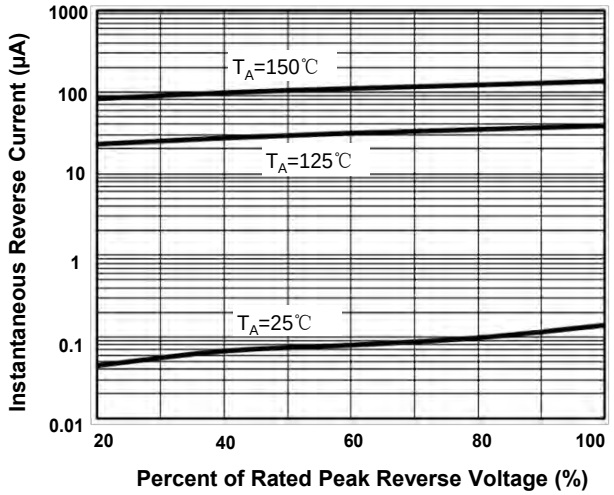
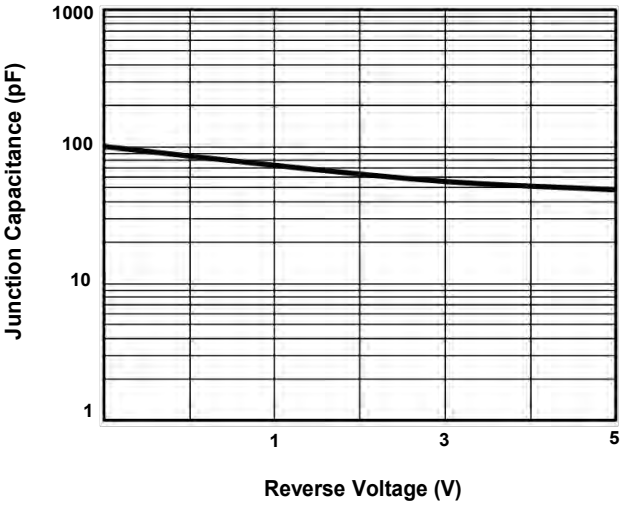
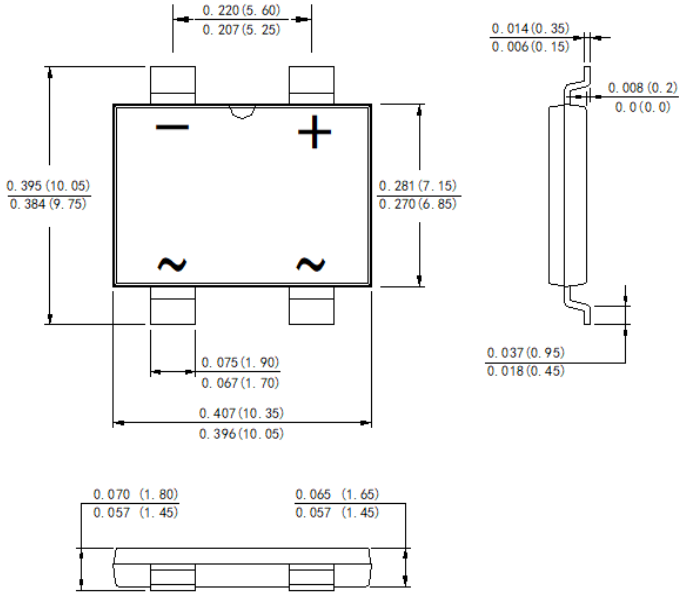


FIG.5 Typical Junction Capacitance per Diode



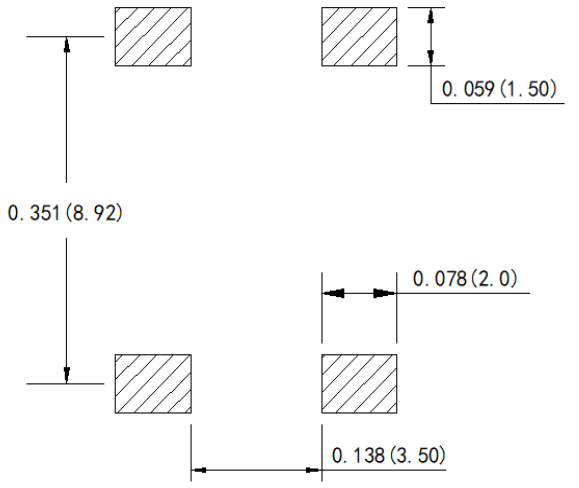
Suggested PCB printfoot layout

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