

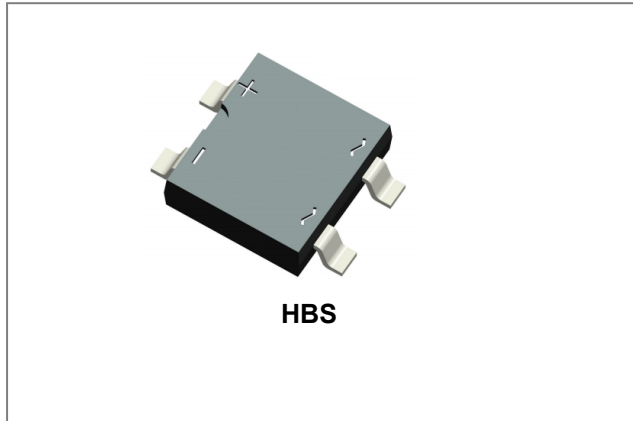


THE DATASHEET OF HBS810



HBS802 THRU HBS810

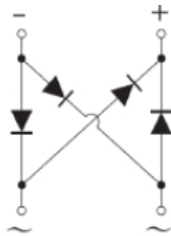
Glass Passivated Single-Phase 8.0Amp Surface Mount Bridge Rectifier



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
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



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;

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase half wave 60Hz, resistive or inductive load. For capacitive load current derate by 20%.

Type Number	Symbol	HBS802	HBS804	HBS806	HBS808	HBS810	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _{DC}	200	400	600	800	1000	V
RMS Reverse Voltage	V _{RMS}	140	280	420	560	700	V
Maximum average forward rectified output current at @T _A =25°C	I _(AV)	8					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	200					A
Rating for fusing (t<8.3ms)	I ² t	166					A ² sec

Electrical Characteristics@ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Type Number	Symbol	HBS802	HBS804	HBS806	HBS808	HBS810	Units
Maximum Forward Voltage (per element) @ $I_F=1\text{A}$ @ $I_F=4\text{A}$ @ $I_F=8\text{A}$	V_F			0.82 Typ. 0.87 Max. 0.89 Typ. 0.94 Max. 0.94 Typ. 1.00 Max.			V
Maximum Peak Reverse Current @ $T_A=25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A=125^{\circ}\text{C}$	I_R			0.15 Typ. 5.0 Max. 20.0 Typ. 100 Max.			μA
Typical capacitance(Note 1)	C_j			49			pF

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications@ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Type Number	Symbol	HBS802	HBS804	HBS806	HBS808	HBS810	Units
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$			70.0 11.0 14.0			$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}			-55 to +150			$^{\circ}\text{C}$

Note: 1. Mounted at 1.0 MHz and applied reverse voltage of 5.0V DC;

Ratings and Characteristics Curves

FIG.1 Derating Curve Output Rectified Current

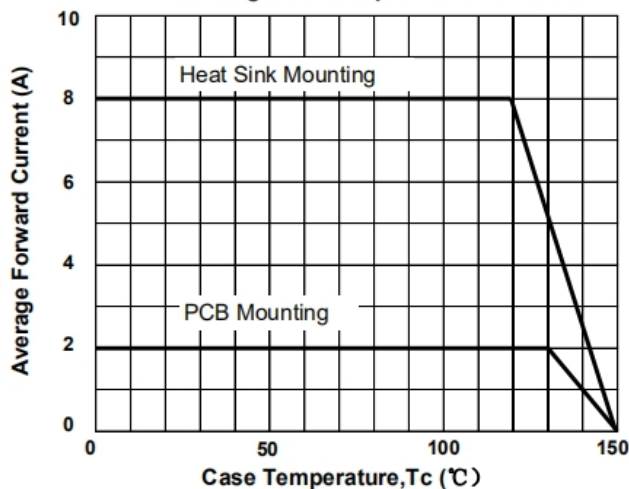


FIG.2 Typical Forward Characteristics per Diode

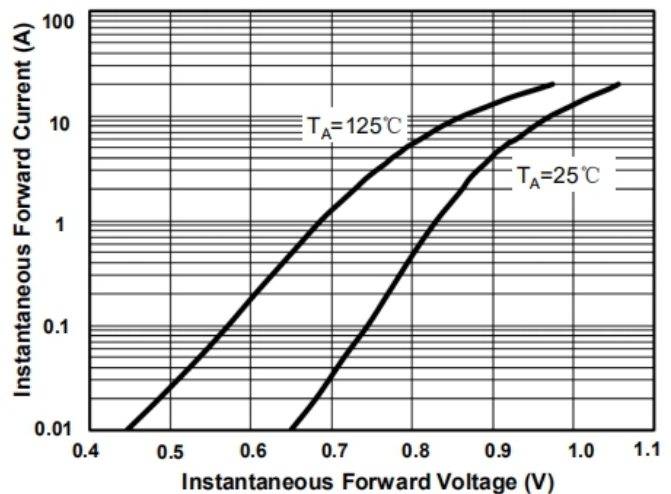


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

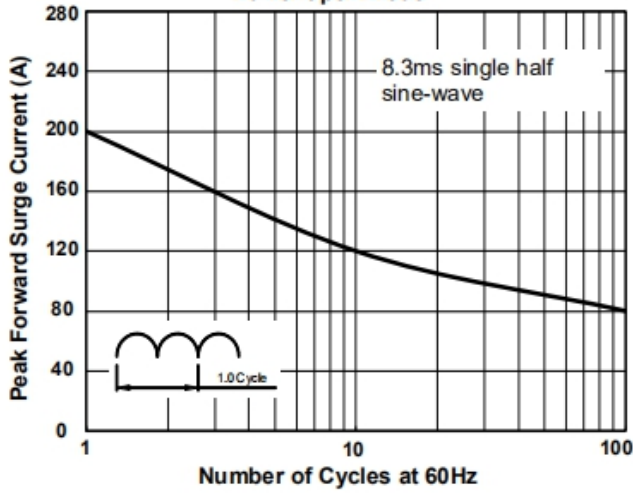


FIG.4 Typical Reverse Characteristics per Diode

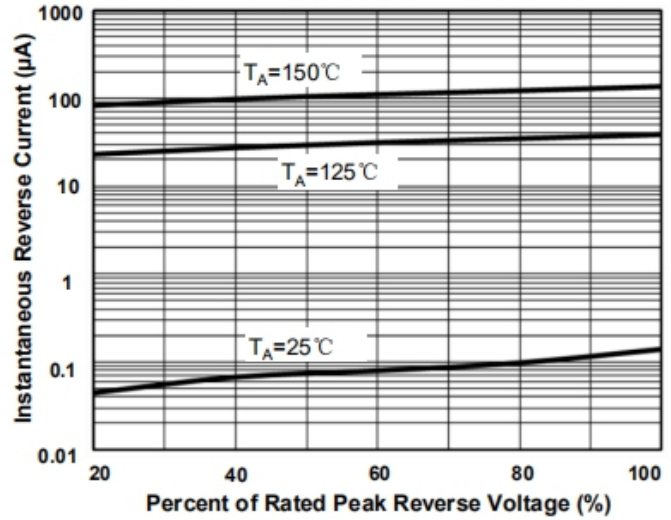
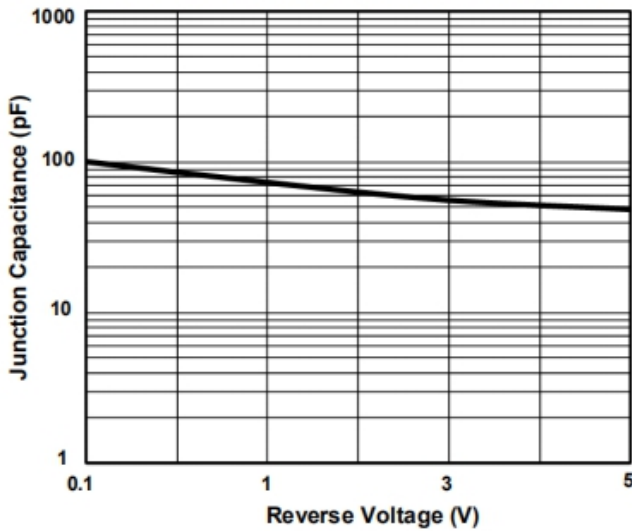
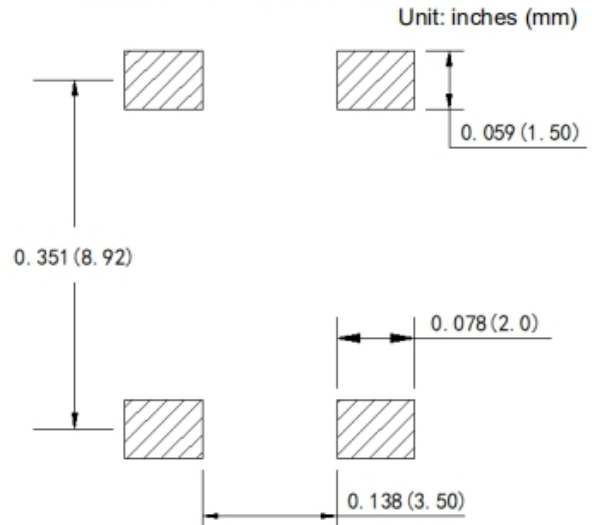


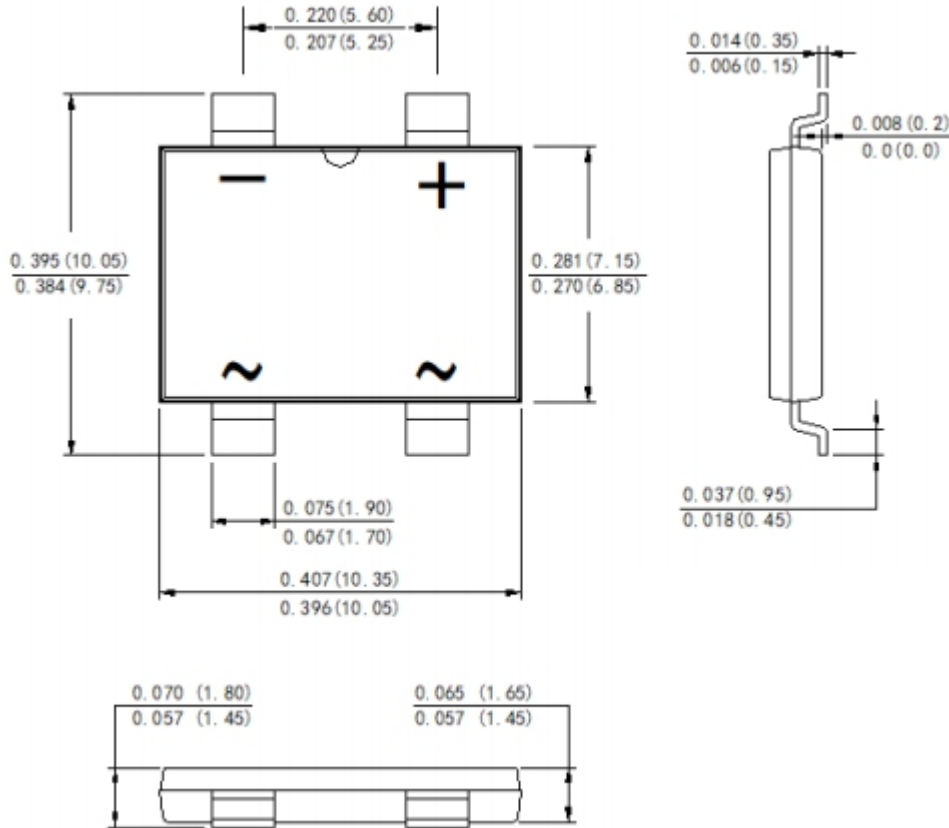
FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout



Mechanical Dimensions HBS(Inches/Millimeters)



Ordering Information

Device	Package	Plating	Shipping
HBS802 THRU HBS810	HBS (Pb-Free)	Pure Sn	2500pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Where XXXXX is YYWWL

HBS802 = Type Number
YY = Year
WW = Week
L = Lot Number



Cautions: Molding resin
Epoxy resin UL:94V-0

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