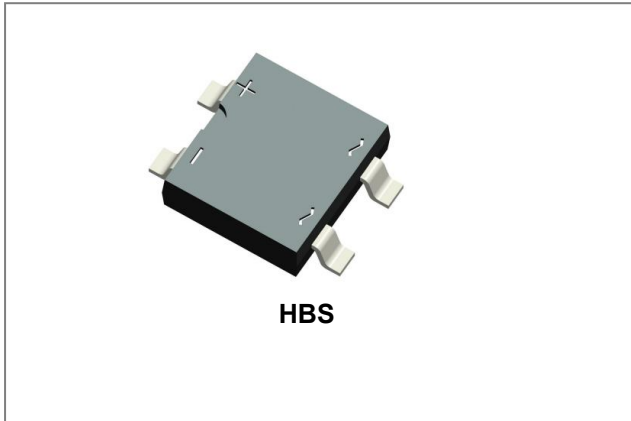


HBN402 THRU HBN410

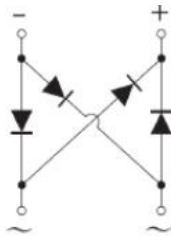
Glass Passivated Single-Phase 4.0Amp Surface Mount Bridge Rectifier



Features

- Surface mount bridge, small package;
- Ideal for printed circuit boards;
- Glass passivated chip junction;
- 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	HBN402	HBN404	HBN406	HBN408	HBN410	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)	4					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	120					A
Rating for fusing (t<8.3ms)	I ² t	60					A ² sec

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

Type Number	Symbol	HBN402	HBN404	HBN406	HBN408	HBN410	Units
Maximum Forward Voltage (per element) @ $I_F=2\text{A}$ @ $I_F=4\text{A}$	V_F			1.0 1.1			V
Maximum Peak Reverse Current @ $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R			5 200			μA
Typical capacitance(Note 1)	C_j			33			pF

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

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

Type Number	Symbol	HBN402	HBN404	HBN406	HBN408	HBN410	Units
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$			67.0 7.0 11.0			$^\circ\text{C/W}$
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

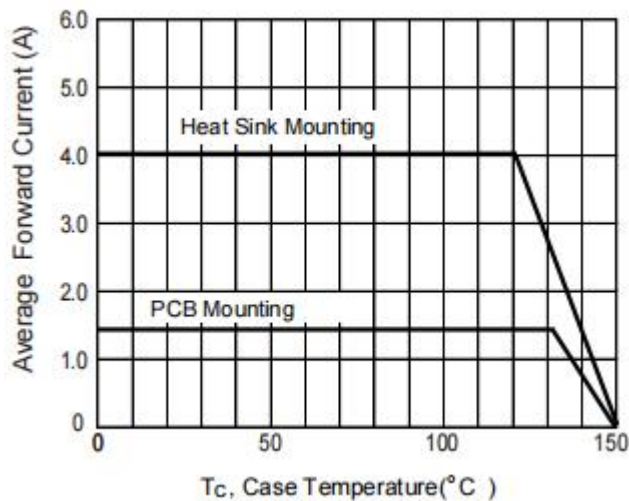


Fig. 1 Forward Current Derating Curve

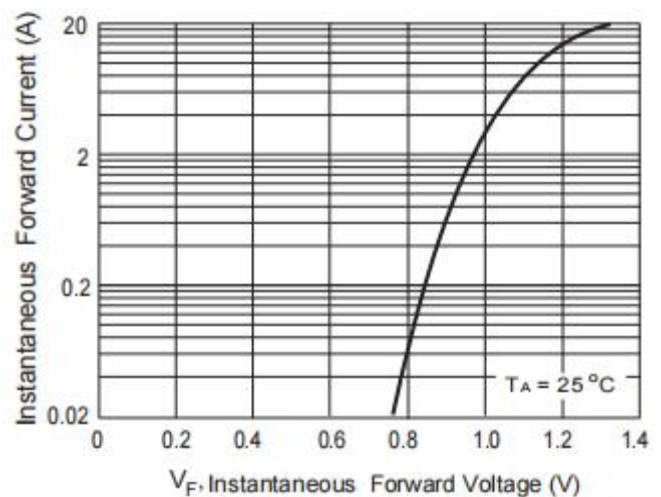


Fig. 2 Typ. Forward Characteristics

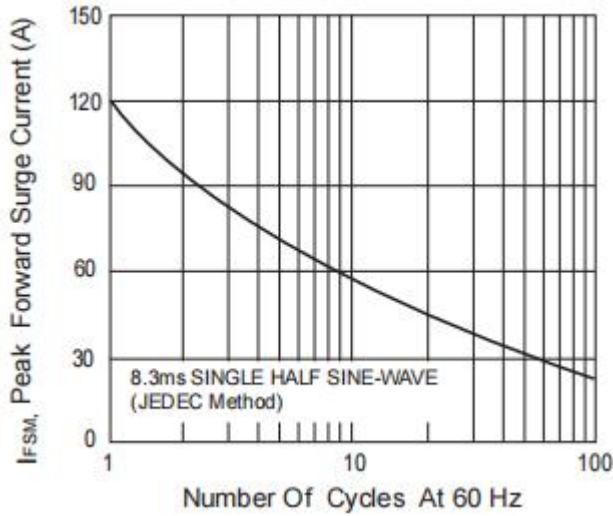


Fig. 3 Max Non-Repetitive Peak Fwd Surge

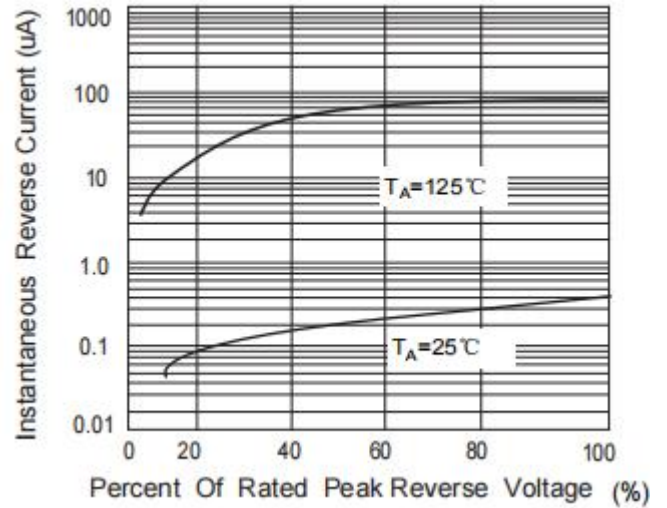
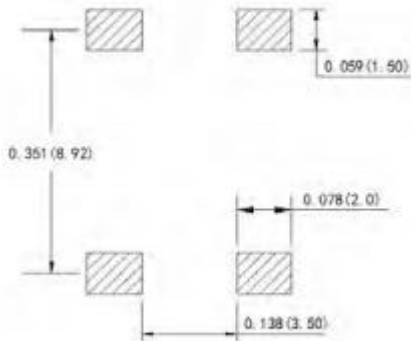


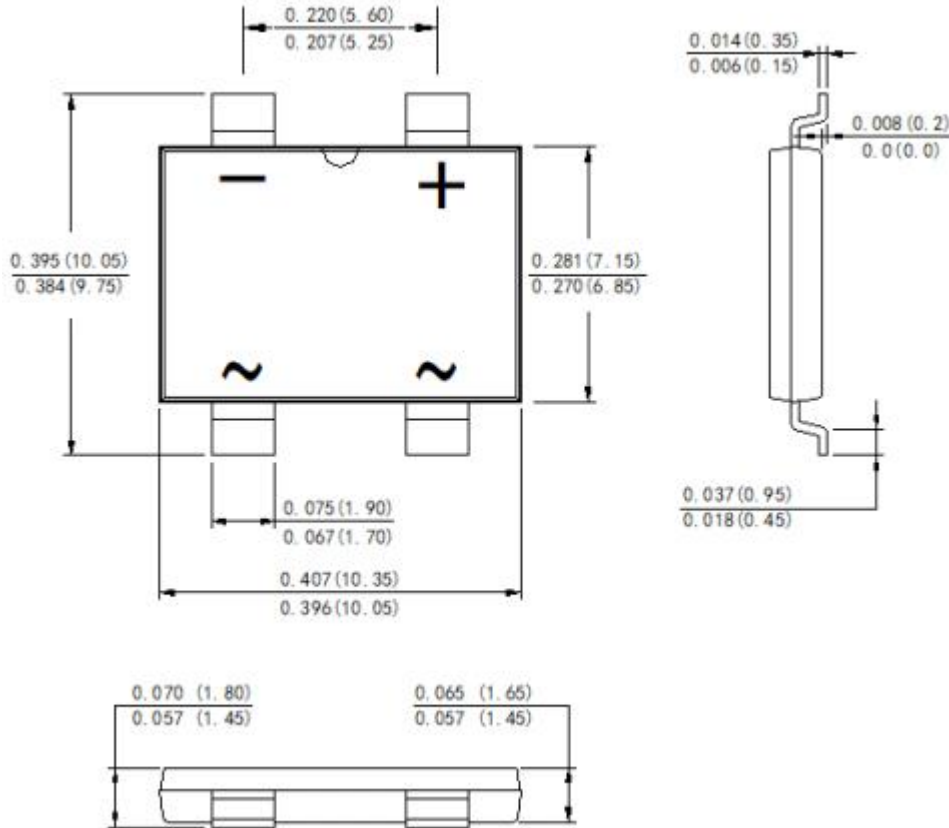
Fig.4 Typical Reverse Characteristics

Suggested PCB pinfoot layout



Unit: inches (mm)

Mechanical Dimensions HBS(Inches/Millimeters)



Ordering Information

Device	Package	Plating	Shipping
HBN402 THRU HBN410	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

HBN402 = Type Number
YY = Year
WW = Week
L = Lot Number

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

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