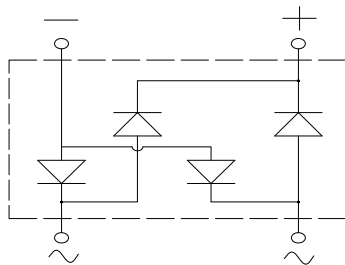
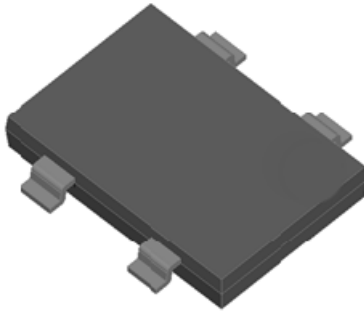


HBS



Features

- Improve EMI conduction characteristics;
- Ideal for printed circuit boards;
- Glass passivated chip junction;
- High surge current capability;
- High heat dissipation capability;
- Low profile package;
- Surface mount bridge, small package;
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;

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.

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

Ratings at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbol	FHBS610		Unit
Maximum repetitive peak reverse voltage	V _{RRM}	1000		V
Maximum RMS voltage	V _{RMS}	700		V
Maximum DC blocking voltage	V _{DC}	1000		V
Maximum average forward rectified output current	I _{F(AV)}	6.0		Amps
Non-Repetitive Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150		Amps
Rating for fusing (t<8.3ms)	I ² t	93		A ² sec
Instantaneous forward voltage drop per diode	V _F	@IF=1.0A	0.93 Typ. 0.98 Max.	Volt
		@IF=3.0A	1.00 Typ. 1.30 Max.	
Reverse Current at Rated DC Blocking Voltage	I _R	T _A =25℃	0.40 Typ. 5.0 Max.	μA
		T _A =125℃	50.0 Typ. 200 Max.	
Maximum Recerse Recovery Time (Note1)	T _{rr}	500		ns
Typical capacitance (Note2)	C _j	56		pF
Typical thermal resistance (Note3)	R _{θJ-A}	55.0		℃/W
	R _{θJ-C}	8.0		
	R _{θJ-L}	14.0		
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150		℃

Note:1. Measured with $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$;

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.;

3. Mounted on glass epoxy PC board with 4 x 1.5" x 1.5" (3.81x3.81 cm) copper pad.

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Average Rectified Output Current Derating Curve

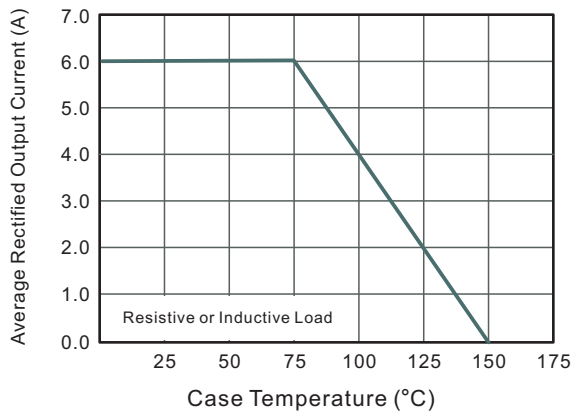


Fig.2 Typical Reverse Characteristics

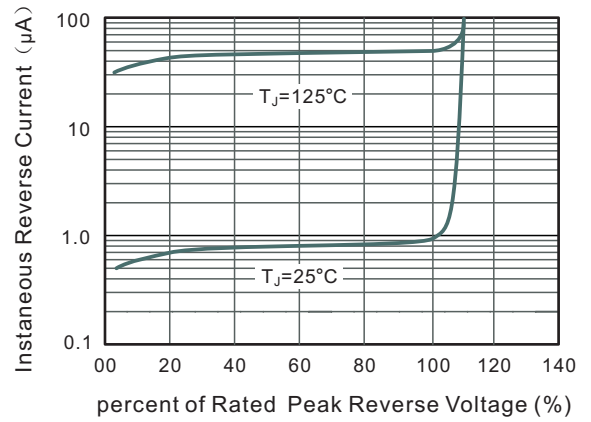


Fig.3 Typical Instantaneous Forward Characteristics

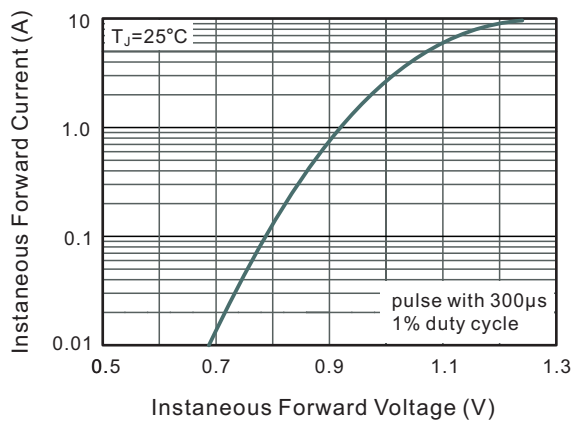


Fig.4 Typical Junction Capacitance

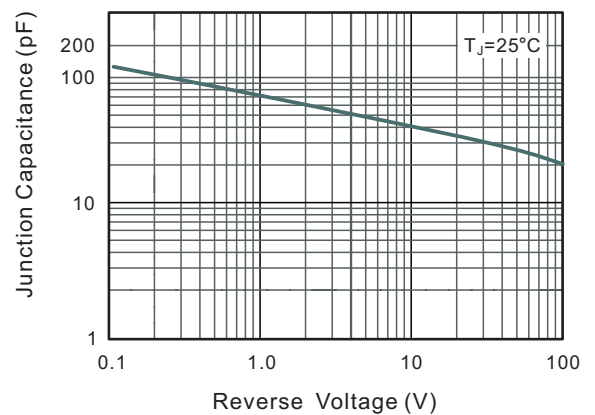


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

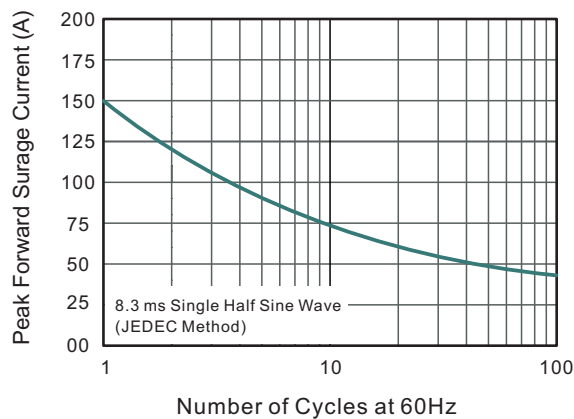
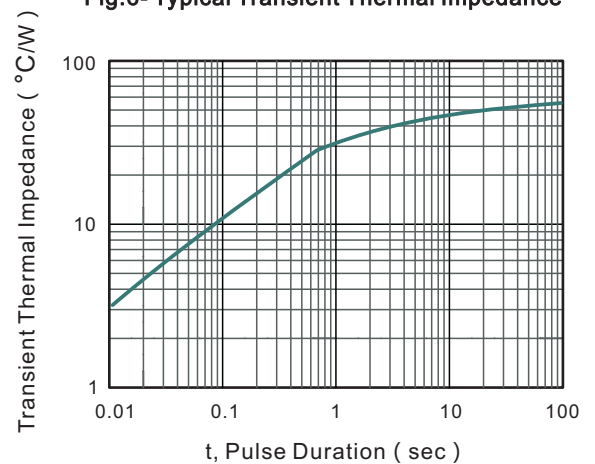
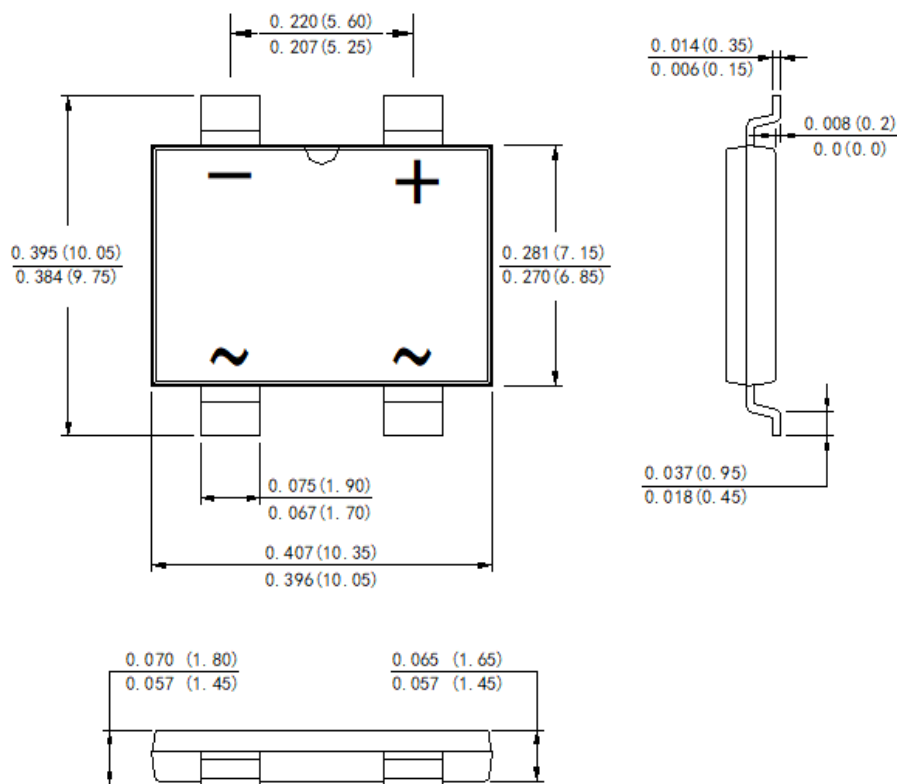


Fig.6- Typical Transient Thermal Impedance



Outline Dimensions

Case: HBS Unit: inches (mm)



Suggested PCB printfoot layout

Unit: inches (mm)

