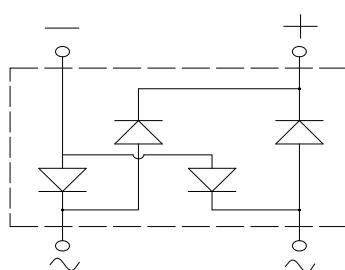
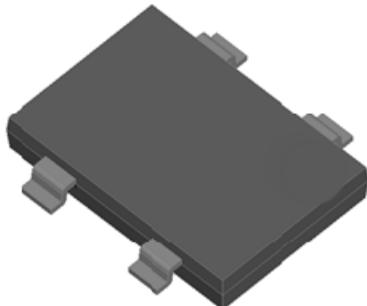


HBS

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 Underwriters 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 ($t < 8.3\text{ms}$)	I^2t	93		A^2sec
Instantaneous forward voltage drop per diode	V_F	0.93 Typ. 1.00 Typ.	0.98 Max. 1.30 Max.	Volt
Reverse Current at Rated DC Blocking Voltage	I_R	0.40 Typ. 50.0 Typ.	5.0 Max. 200 Max.	μA
Maximum Reverse Recovery Time (Note1)	T_{rr}	500		ns
Typical capacitance (Note2)	C_j	56		pF
Typical thermal resistance (Note3)	R_{eJ-A} R_{eJ-C} R_{eJ-L}	55.0 8.0 14.0		°C/W
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150		°C

Note:1.Measured with $IF=0.5\text{A}, IR=1.0\text{A}, IRR=0.25\text{A}$;

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 (TA = 25°C unless otherwise noted)

Fig.1 Average Rectified Output Current Derating Curve

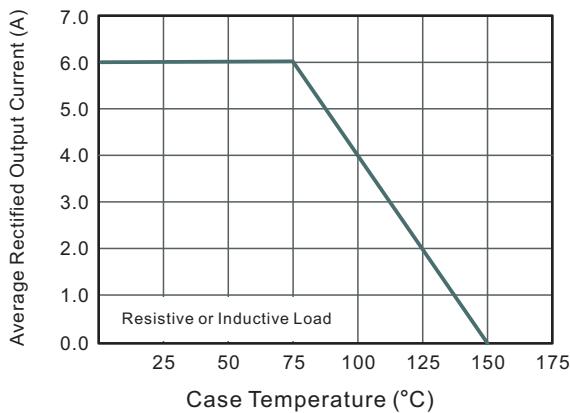


Fig.2 Typical Reverse Characteristics

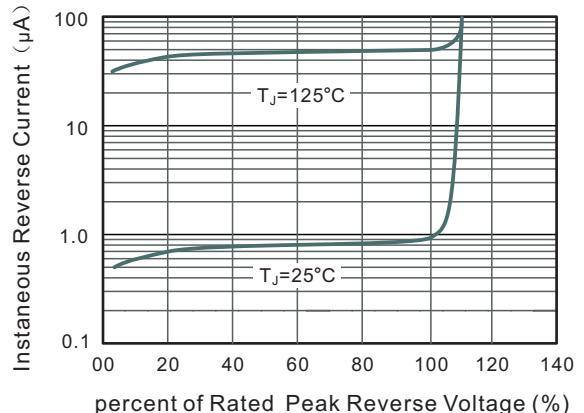


Fig.3 Typical Instantaneous Forward Characteristics

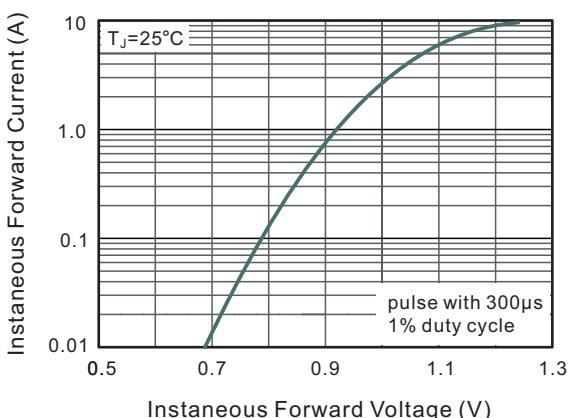


Fig.4 Typical Junction Capacitance

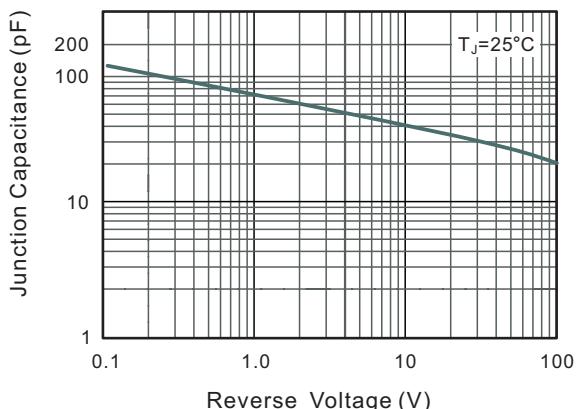


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

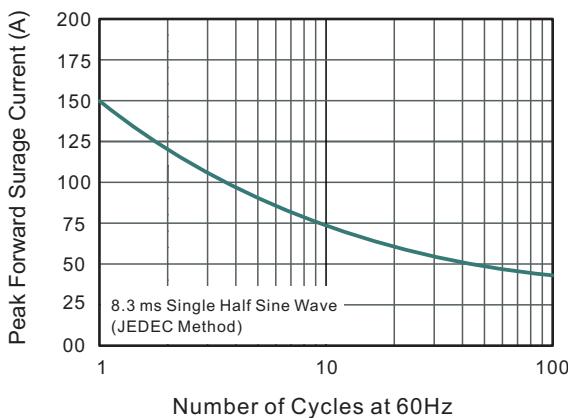
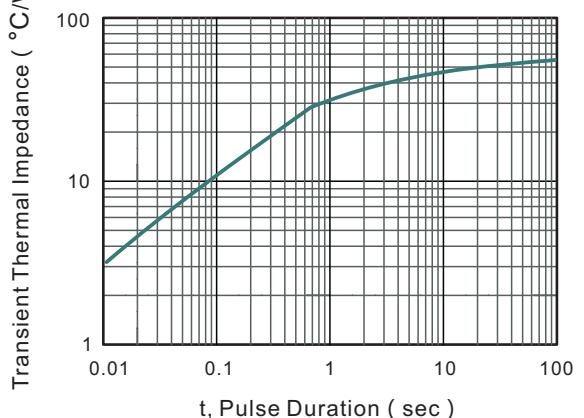
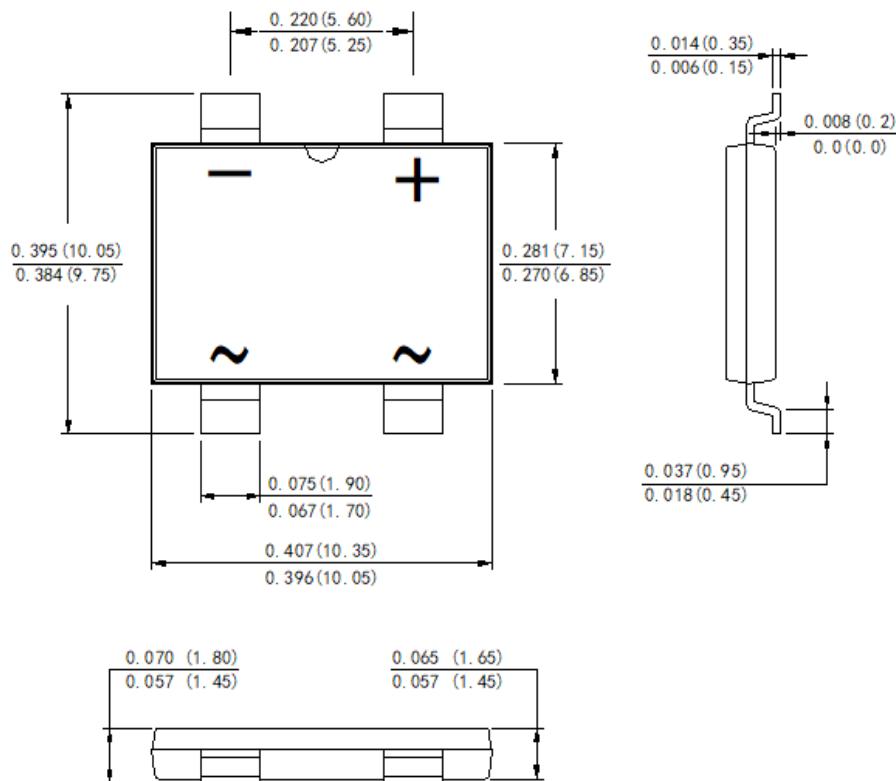


Fig.6- Typical Transient Thermal Impedance



Outline Dimensions

Case: HBS Unit: inches (mm)



Suggested PCB printfoot layout

Unit: inches (mm)

