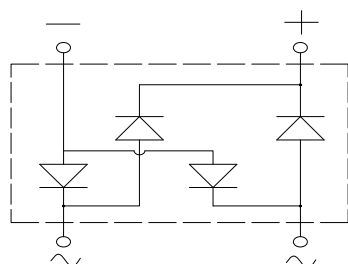
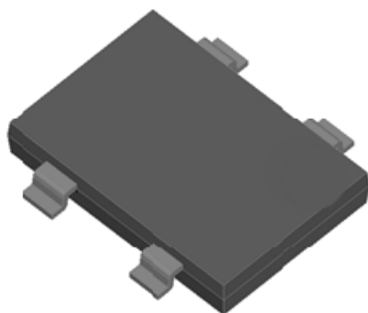


HBS

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;

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%.

For capacitive load, derate current by 20%.				
Parameter	Symbol	HBS610		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}	175		Amps
Rating for fusing (t<8.3ms)	I ² t	127		A ² sec
Instantaneous forward voltage drop per diode	@IF=1.0A @IF=3.0A @IF=6.0A	V _F	0.85 Typ. 0.90 Max.	Volt
			0.88 Typ. 0.93 Max.	
			0.95 Typ. 1.0 Max.	
Reverse Current at Rated DC Blocking Voltage	T _A =25℃ T _A =125℃	I _R	0.20 Typ. 5.0 Max.	μA
			20.0 Typ. 100 Max.	
Typical capacitance (Note1)	C _j	50		pF
Typical thermal resistance (Note2)	R _{θJ-A}	55.0		℃/W
	R _{θJ-C}	6.0		
	R _{θJ-L}	10.0		
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150		℃

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

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

Fig.1 Average Rectified Output Current Derating Curve

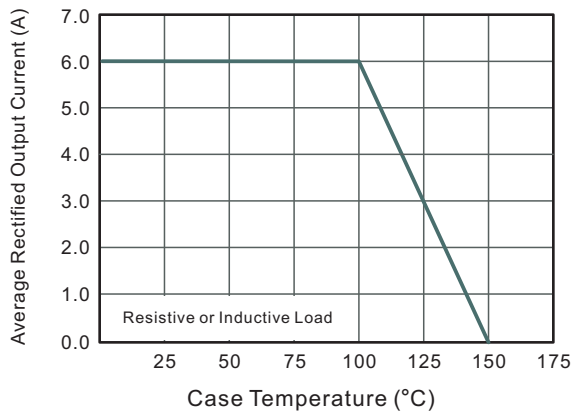


Fig.2 Typical Reverse Characteristics

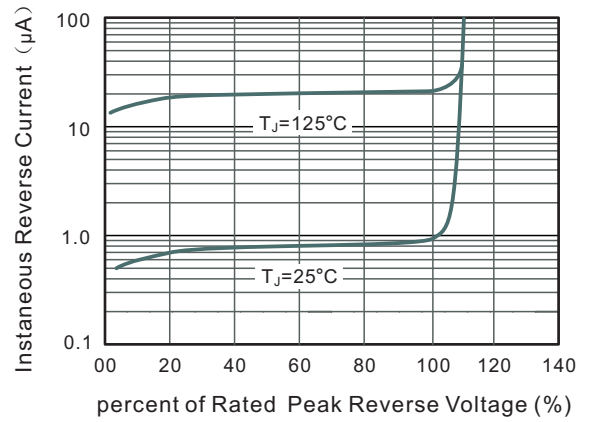


Fig.3 Typical Instantaneous Forward Characteristics

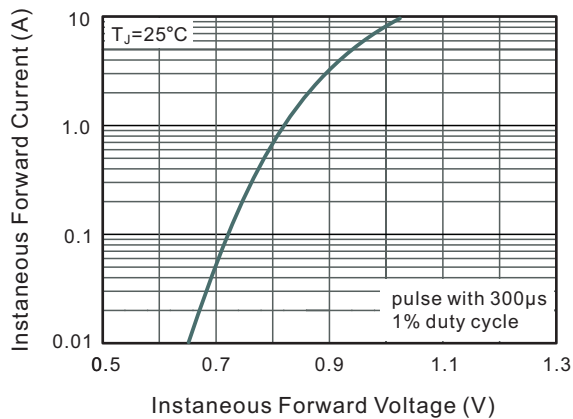


Fig.4 Typical Junction Capacitance

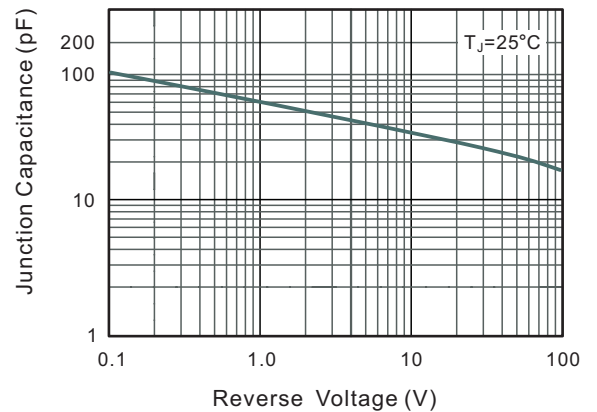


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

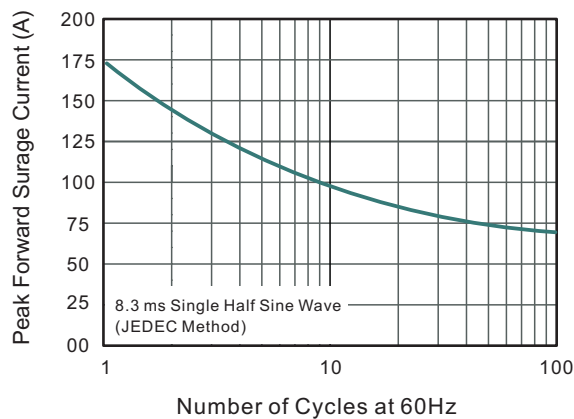
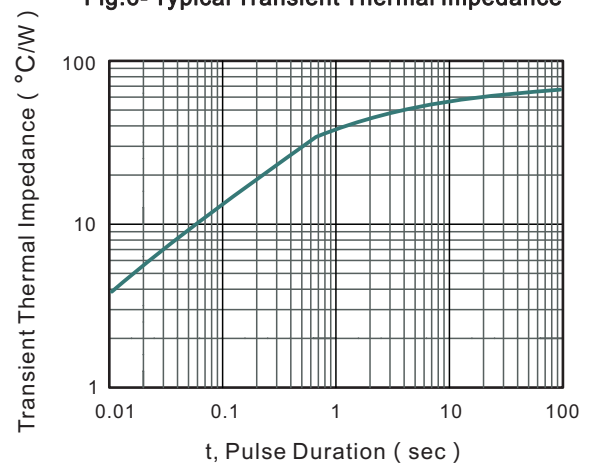
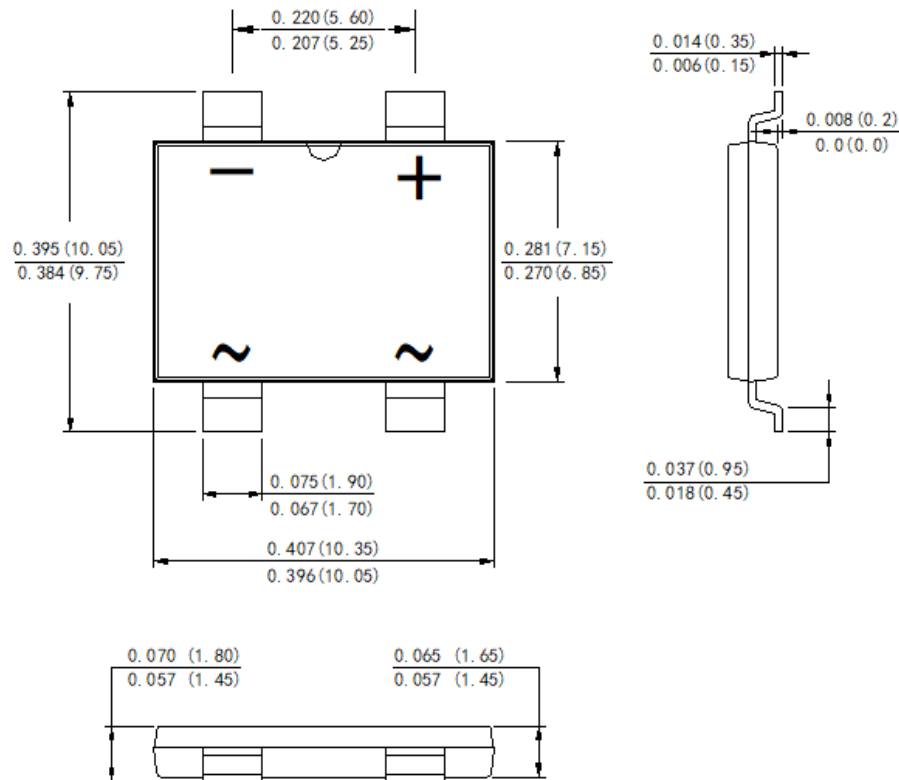


Fig.6- Typical Transient Thermal Impedance



Outline Dimensions

Case: HBS Unit: inches (mm)



Suggested PCB printfoot layout

Unit: inches (mm)

