

HBS502 THRU HBS510

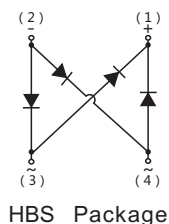
5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Surface mount bridge, small package;
- Ideal for printed circuit boards;
- Glass passivated chip junction;
- High forward current capability up to 5.0A;
- High surge current capability;
- High heat dissipation capability;
- Low profile package;
- Low forward voltage drop;
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;

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;



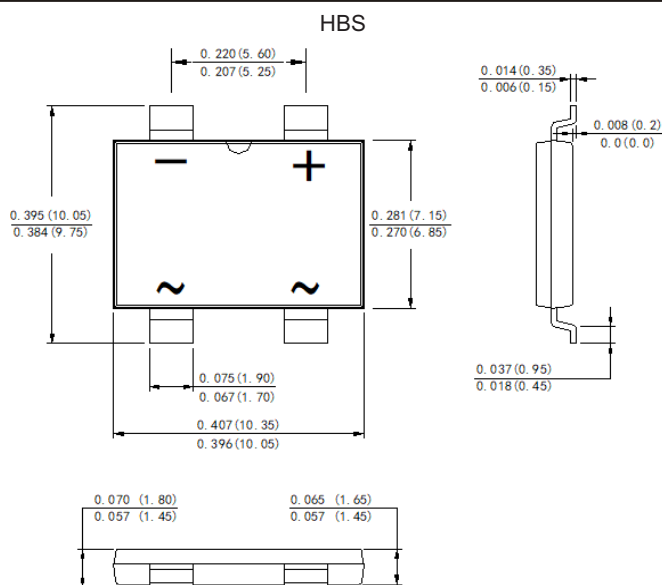
HBS Package

VOLTAGE RANGE

200 to 1000 Volts

CURRENT

5.0 Amperes



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	HBS502	HBS504	HBS506	HBS508	HBS510	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	V
Average Rectified Output Current	I_O	5.0					A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150					A
I^2t Rating for Fusing	I^2t	93					A ² S
Maximum Forward Voltage at 1.0 A	V_F	0.83 (typ.)					V
Maximum Forward Voltage at 5.0 A	V_F	1.0					V
Maximum DC Reverse Current @ $T_A=25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^{\circ}\text{C}$	I_R	5 100					μA
Typical Junction Capacitance (Note1)	C_j	38					pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	69 12 12					$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150					$^{\circ}\text{C}$

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.

RATING AND CHARACTERISTIC CURVES (HBS502 THRU HBS510)

FIG.1 Derating Curve Output Rectified Current

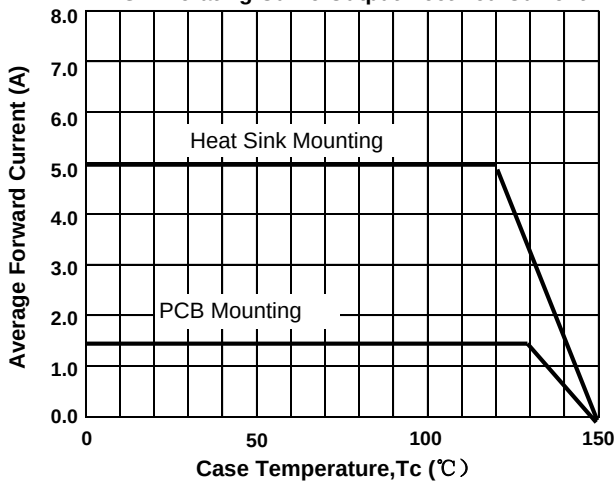


FIG.2 Typical Forward Characteristics per Diode

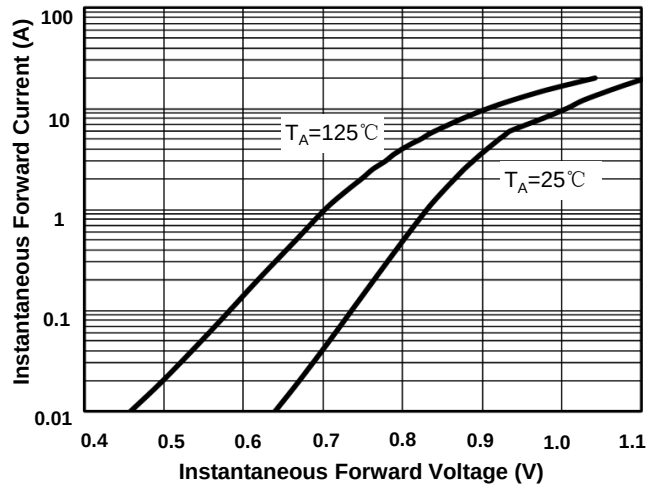


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

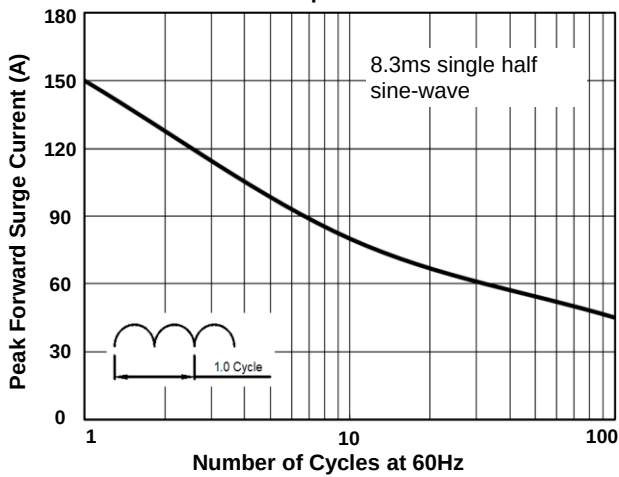


FIG.4 Typical Reverse Characteristics per Diode

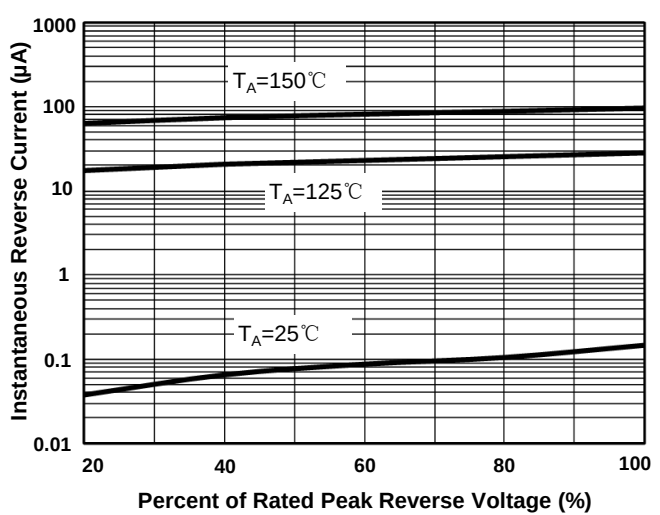
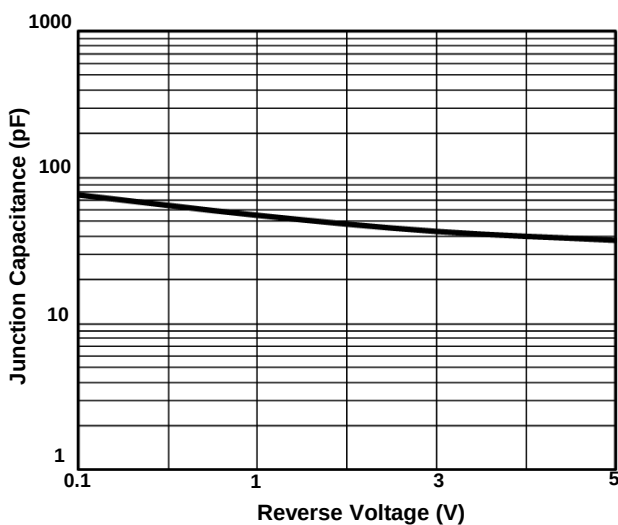


FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout

