

SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

Features

- ◆ Surface mount bridge, small package;
- ◆ Ideal for printed circuit boards;
- ◆ Glass passivated chip junction;
- ◆ High forward current capability up to 4.0A;
- ◆ 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

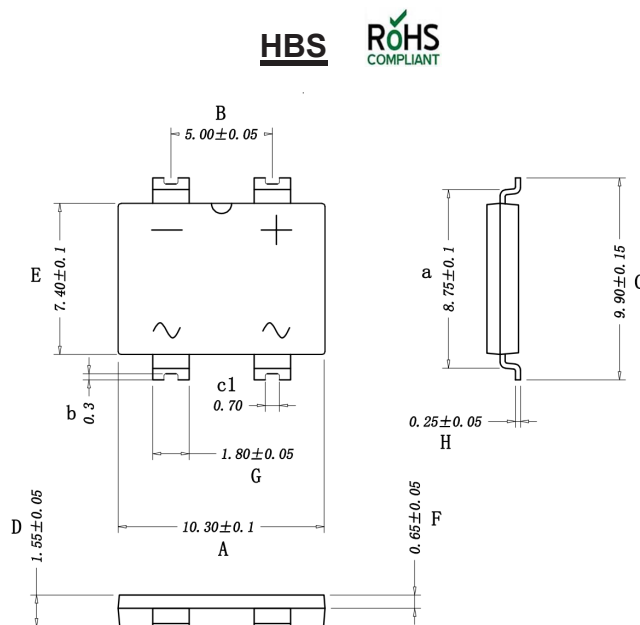
Case : JEDEC HBS Molded plastic body

Mounting Position : Any

High temperature soldering guaranteed: Solder Reflow

260 °C, 10seconds

Polarity: As marked on body



Dimensions in inches and (millimeters)

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 current derate by 20%.

Parameter	SYMBOLS	MDD RHBS402	MDD RHBS404	MDD RHBS406	MDD RHBS408	MDD RHBS410	UNITS
Marking Code							
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
Maximum average forward rectified current at $T_A=25^{\circ}C$	$I_{F(AV)}$	4.0					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	120					A
Maximum instantaneous forward voltage drop per diode at 4A	V_F	1.3					V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	I_R	5 100					μA
Maximum reverse recovery time ⁽¹⁾	T_{rr}	150		250		500	ns
Typical thermal resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	40 14 20					$^{\circ}C/W$
Operating junction and Storage Temperature Range	T_j, T_{STG}	-55 to +150					$^{\circ}C$
Rating for fusing ($t < 8.3ms$)	I^2t	59.76					A ² sec

Note1: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

Ratings And Characteristic Curves

(TA = 25°C unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

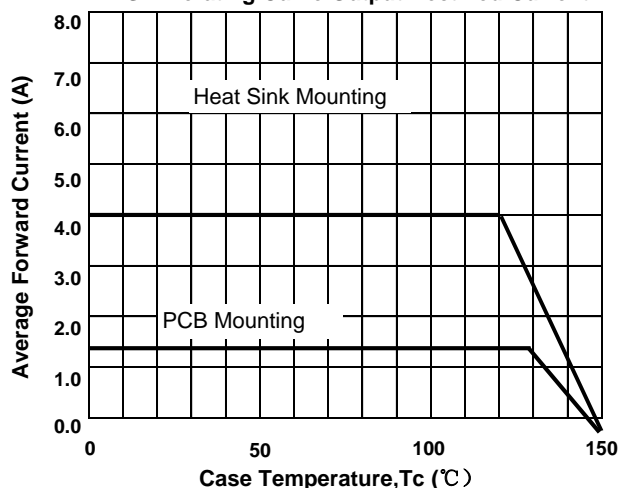


FIG.2 Typical Forward Characteristics per Diode

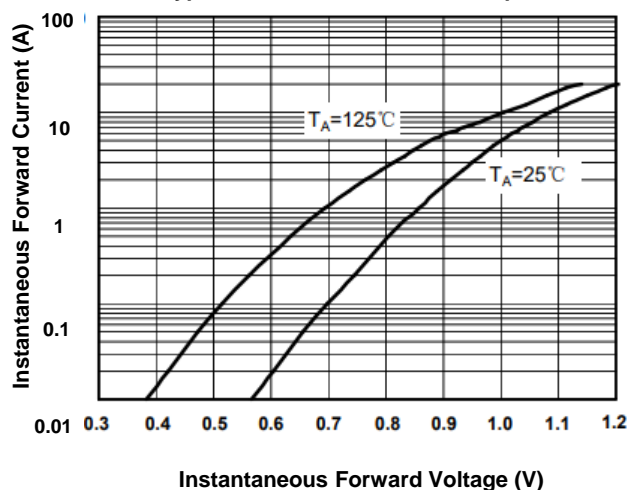


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

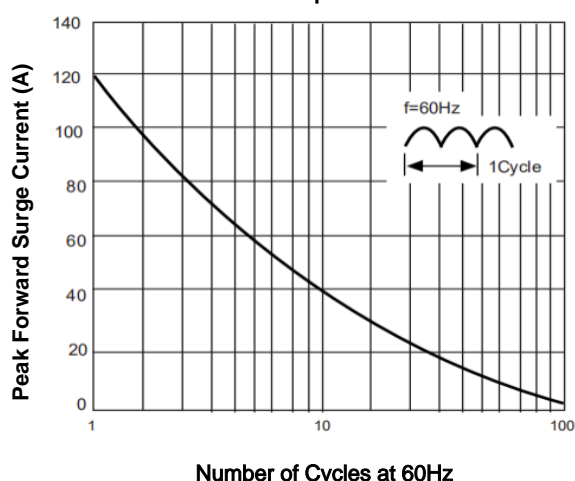


FIG.4 Typical Reverse Characteristics per Diode

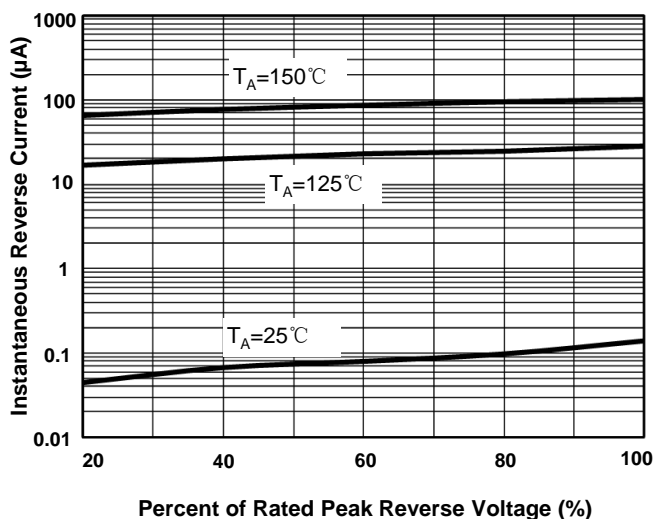
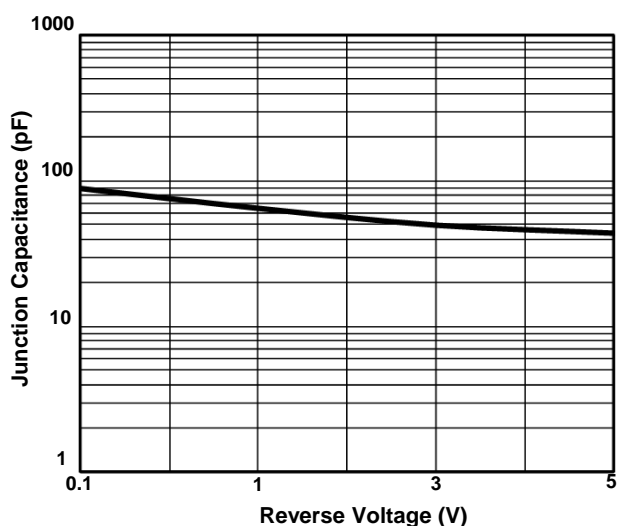
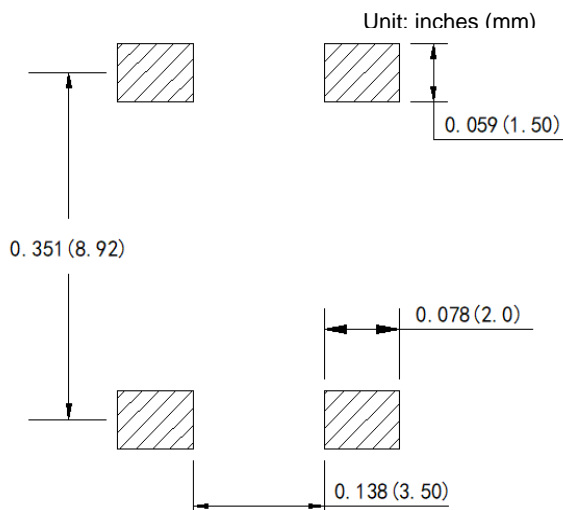


FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout





Important Notice and Disclaimer

Microdiode Electronics (Shenzhen) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Microdiode Electronics (Shenzhen) makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Microdiode Electronics (Shenzhen) assume any liability for application assistance or customer product design. Microdiode Electronics (Shenzhen) does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Microdiode Electronics (Shenzhen).

Microdiode Electronics (Shenzhen) products are not authorized for use as critical components in life support devices or systems without express written approval of Microdiode Electronics (Shenzhen).