

### 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: 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;

### 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.

### Maximum Ratings and Electrical Characteristics

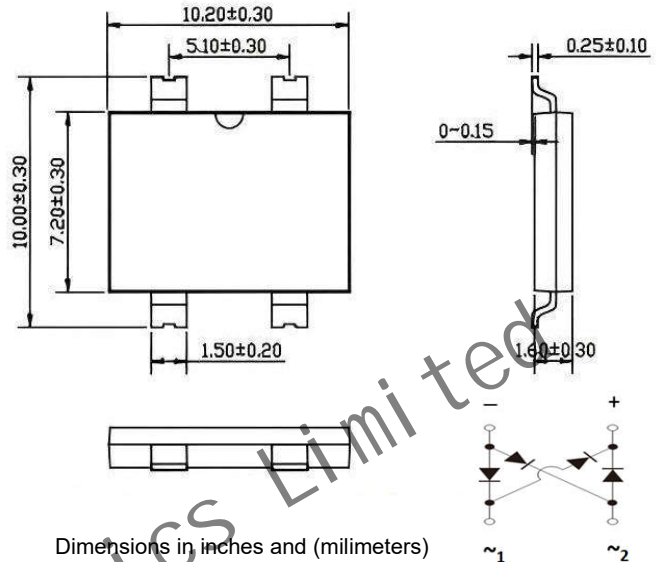
Ratings at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Parameter   | Symbol           | ARDRHBS410UX0      | 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 at $T_A=25^\circ\text{C}$                                  | $I_{F(AV)}$      | 4.0                | Amps                   |
| Non-Repetitive Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$        | 120                | Amps                   |
| Rating for fusing ( $t < 8.3\text{ms}$ )  | $I^2t$           | 59.76              | $\text{A}^2\text{sec}$ |
| Instantaneous forward voltage drop per diode @ $I_F=4.0\text{A}$  | $V_F$            | 1.3 max.           | Volt                   |
| Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$<br>$T_A=125^\circ\text{C}$              | $I_R$            | 5.0 max<br>100 max | $\mu\text{A}$          |
| Maximum reverse recovery time ( $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ )                   | $T_{rr}$         | 350                | nS                     |
| Typical thermal resistance  | $R_{\theta J-A}$ | 40.0               | $^\circ\text{C/W}$     |
|   | $R_{\theta J-C}$ | 14.0               |                        |
|   | $R_{\theta J-L}$ | 20.0               |                        |
| Operating junction and Storage Temperature Range  | $T_J, T_{STG}$   | -55 to +150        | $^\circ\text{C}$       |

Note1: Measured at 1.0MHz and applied reverse voltage of 5.0V DC;



Case: HBS



Dimensions in inches and (millimeters)

## Ratings and Characteristics Curves

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

180

FIG.1 Derating Curve Output Rectified Current

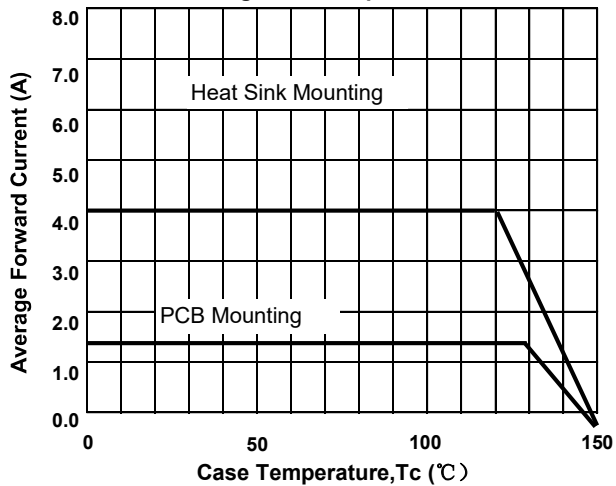


FIG.2 Typical Forward Characteristics per Diode

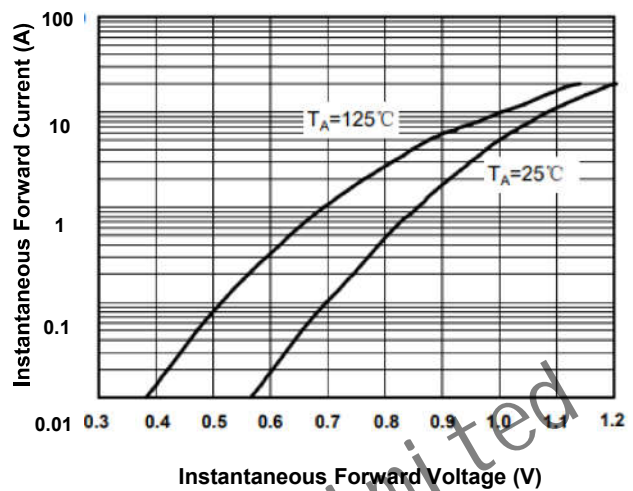


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

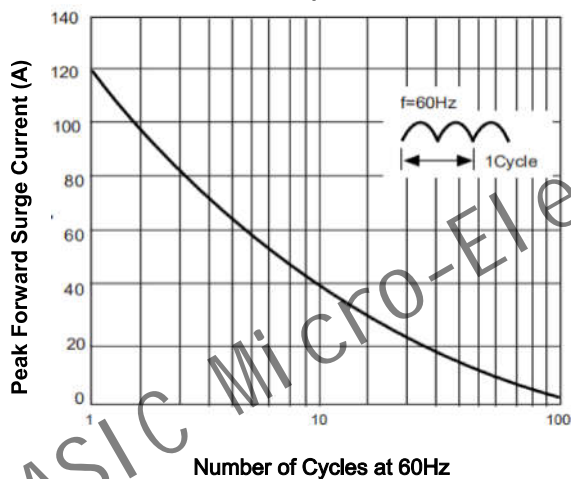


FIG.4 Typical Reverse Characteristics per Diode

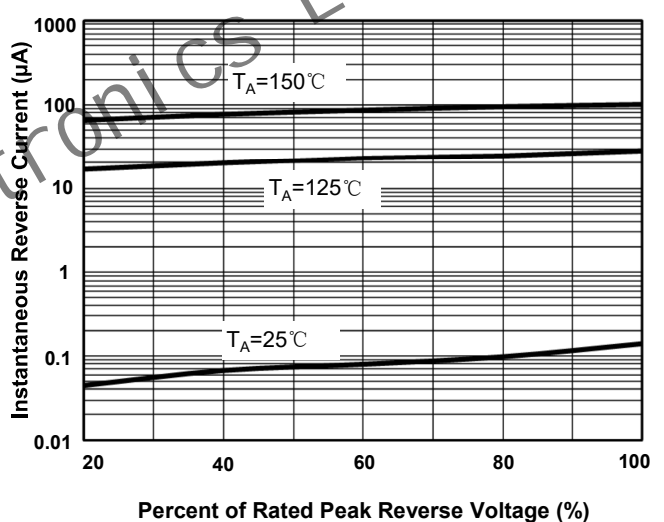
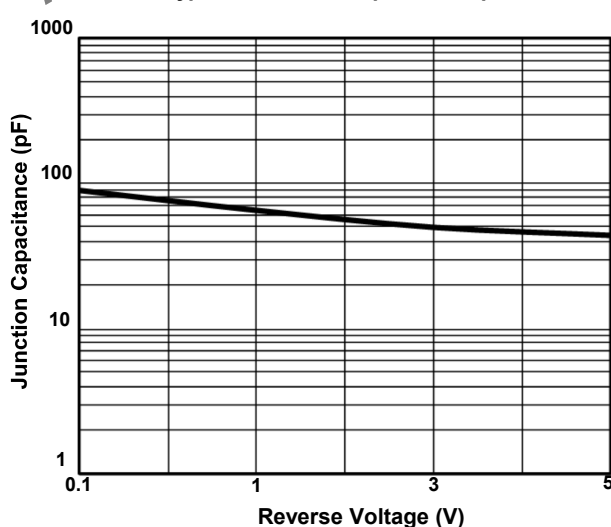


FIG.5 Typical Junction Capacitance per Diode



## Suggested PCB printfoot layout

