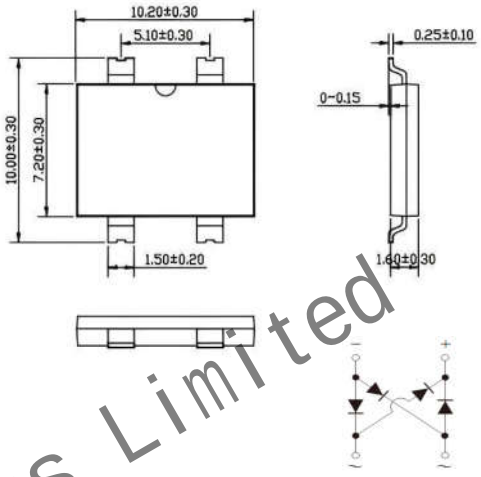
# ARDHBS802~810UX0

**Glass Passivated Single-Phase 8.0Amp Surface Mount Bridge Rectifier**

**HBS**

## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260℃/10 seconds at terminals




Dimensions in inches and (millimeters)

## Mechanical Data

**Case** : Molded plastic body
**Terminals** : Solder plated, solderable per MIL-STD-750,Method 2026
**Polarity** : Polarity symbol marking on body
**Mounting Position** : Any



## Maximum Ratings And Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase half-wave 60Hz,resistive or inductive load, for capacitive load current derate by 20%.

| Parameter | Symbol | ARDHBS 802UX0 | ARDHBS 804UX0 | ARDHBS 806UX0 | ARDHBS 808UX0 | ARDHBS 810UX0 | Unit |
|---|---|---|---|---|---|---|---|
| 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 output current at $T_A$=25℃ | $I_{F(AV)}$ | 8.0 | | | | | Amps |
| Non-Repetitive Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 225 | | | | | Amps |
| Rating for fusing (t<8.3ms) | $I^2t$ | 210 | | | | | $A^2$sec |
| Instantaneous forward voltage drop per diode @IF=1.0A | $V_F$ | 0.82 Typ. | | 0.87 max. | | | Volt |
| Instantaneous forward voltage drop per diode @IF=4.0A | $V_F$ | 0.89 Typ. | | 0.94 max. | | | Volt |
| Instantaneous forward voltage drop per diode @IF=8.0A | $V_F$ | 0.94 Typ. | | 1.0max. | | | Volt |
| Reverse Current at Rated DC Blocking Voltage $T_A$=25℃ | $I_R$ | 0.15 Typ. | | 5.0 max. | | | μA |
| Reverse Current at Rated DC Blocking Voltage $T_A$=125℃ | $I_R$ | 20.0 Typ. | | 100 max. | | | μA |
| Typical capacitance （note1) | $C_j$ | 49 | | | | | pF |
| Typical thermal resistance | $R_{\Theta J-A}$ | 70.0 | | | | | ℃/W |
| Typical thermal resistance | $R_{\Theta J-C}$ | 11.0 | | | | | ℃/W |
| Typical thermal resistance | $R_{\Theta J-L}$ | 14.0 | | | | | ℃/W |
| Operating junction and Storage Temperature Range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | ℃ |

**Note:** 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## Ratings And Characteristic Curves

FIG.1 Derating Curve Output Rectified Current

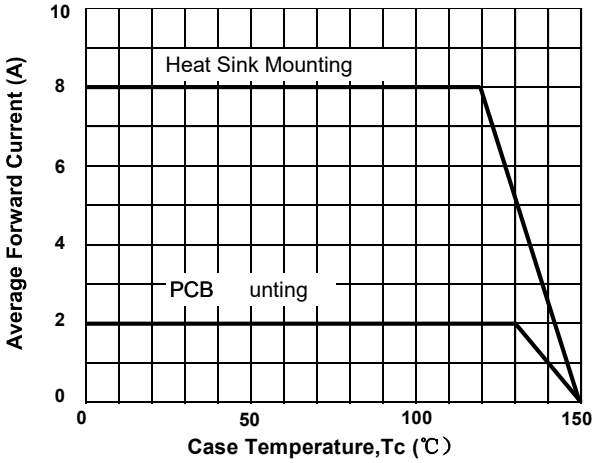



FIG.2 Typical Forward Characteristics per Diode

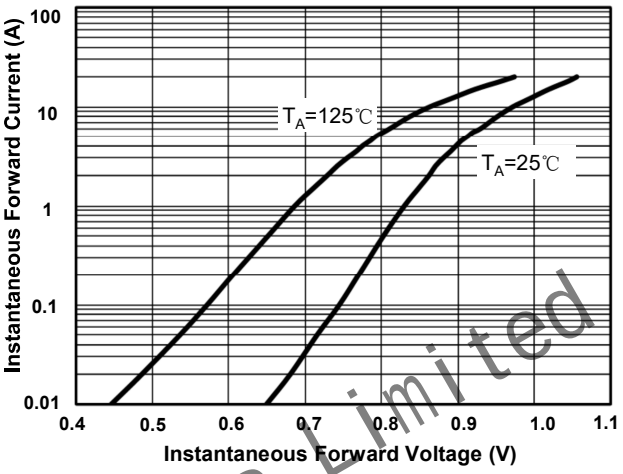



FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

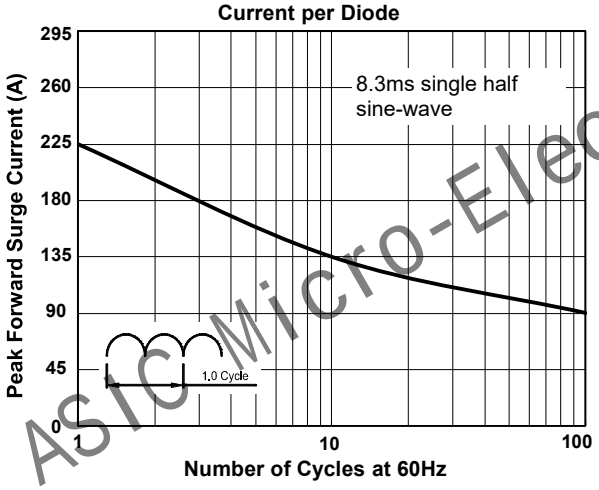



FIG.4 Typical Reverse Characteristics per Diode

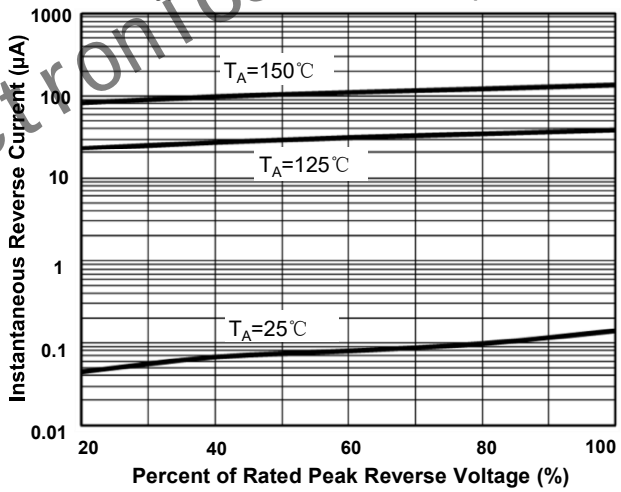
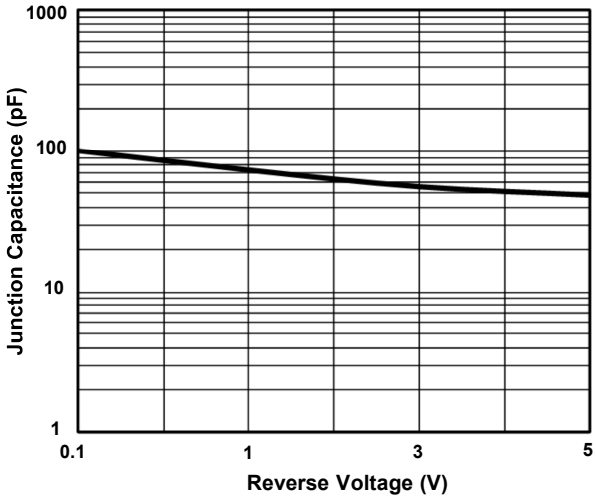
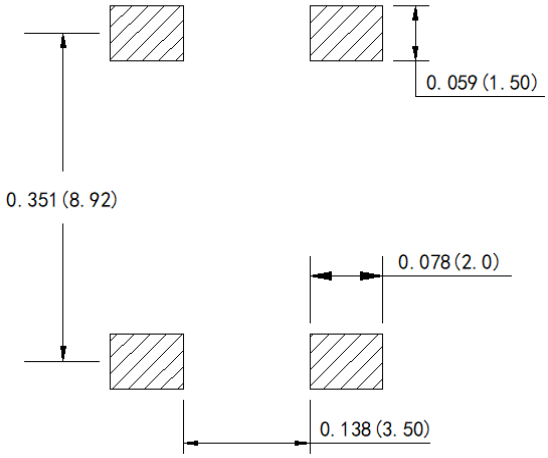


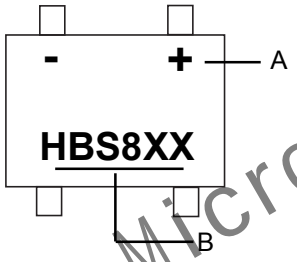

FIG.5 Typical Junction Capacitance per Diode



## Suggested Pad Layout

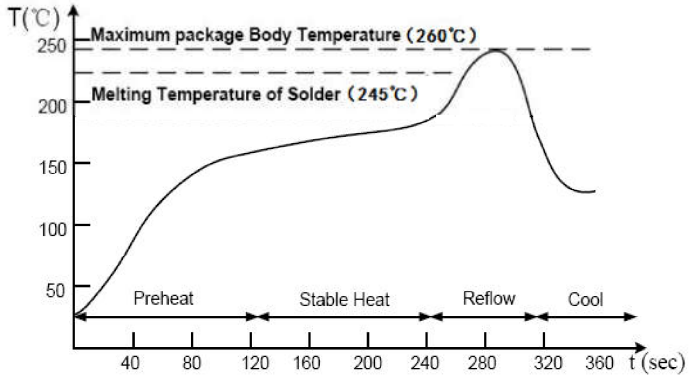



## Marking




| Symbol | Explanation |
|---|---|
| A | Polarity Symbol |
| B | Product Name,XX : 02.04.....10 |
| | |

## Suggested Soldering Temperature Profile




**Note**

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.