

Solder Column Interface Soldering Techniques

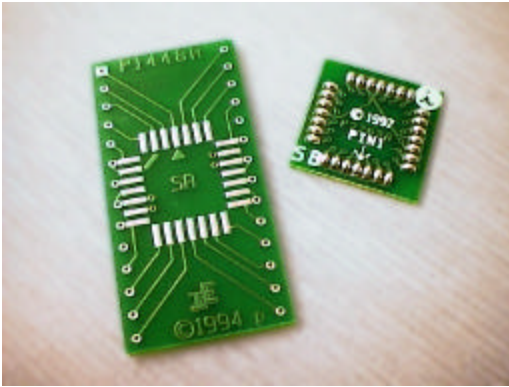


Figure 1: Target PCB/Solder Column Foot

The recommended method is explained below with visual aids showing the step-by-step process. This method has produced very good results. Figure 1 shows the surface mount solder column part (on the right) and a clean target printed circuit board. The bottom side of the surface mount foot has the solder column. The steps involved in the soldering process are as follows:

- (1) Using a flux dispenser, place a small amount of Tac flux (water soluble or no clean) on the four inside corners of the target PCB lands as shown in Figure 2.
- (2) Note the target board land pattern orientation and the adapter Pin 1 location. Place the adapter onto the flux and land pattern as shown in Figure 3. Handling the adapter with a vacuum pen, align on the land pattern of target PCB.

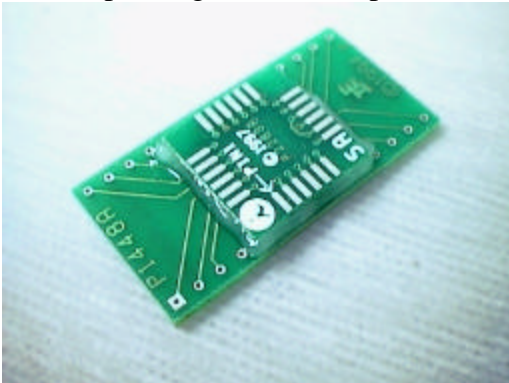


Figure 3: Applying Flux

Target PCBs, which are intended to accept the Ironwood Electronics adapter with solder column can vary greatly in size, mass, and thickness. There are also several manufacturing processes that can be used to attach adapters with solder columns to target PCBs. Because of these wide ranges in customer target PCB specifications and process scenarios, Ironwood Electronics can offer only general soldering instructions.

Ironwood's solder column part closely emulates BGA package technology and can use similar processes to attach to a target board. The

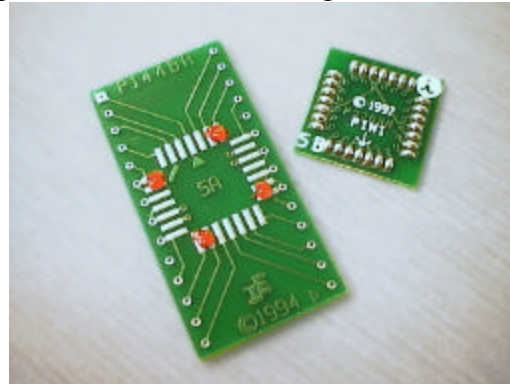
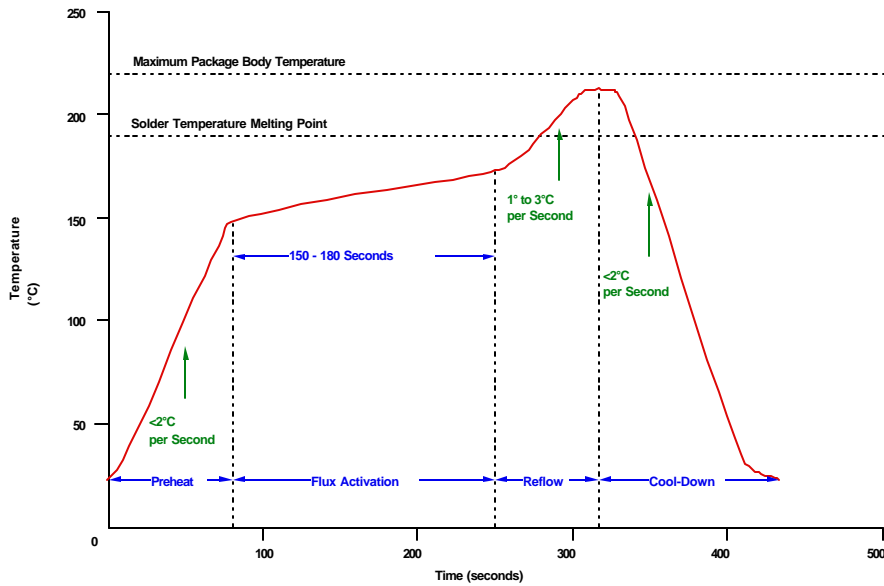


Figure 2: Placing Tac Flux

- (3) Apply a generous amount of flux along each side of the part as shown in Figure 3.
- (4) Surface tension between the adapter's solder columns and the target PCB's pads should self-align the part during the reflow process.
- (5) Reflow:
 - Use caution when profiling to insure minimal temperature difference ($<15^{\circ}\text{C}$ and preferably $<10^{\circ}\text{C}$) between components.

Solder Column Interface Soldering Techniques (continued)



Example 63/37 Reflow Profile

- See manufacturer’s recommendation for your specific application.

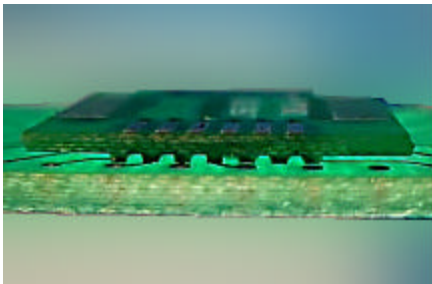


Figure 4: Magnified View of Solder Connections

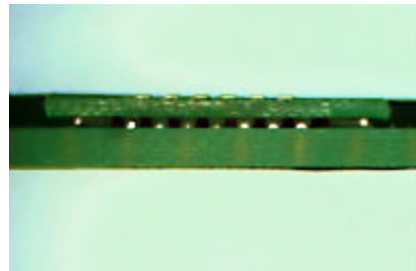


Figure 5: Solder Connections

(6) Clean PCB with the flux manufacturers recommended process. The picture of the solder connection is shown in Figures 4 and 5.