BGA Handling Instructions

Humidity Control

Follow the instructions on the packaging bag to keep devices dry prior to board assembly.
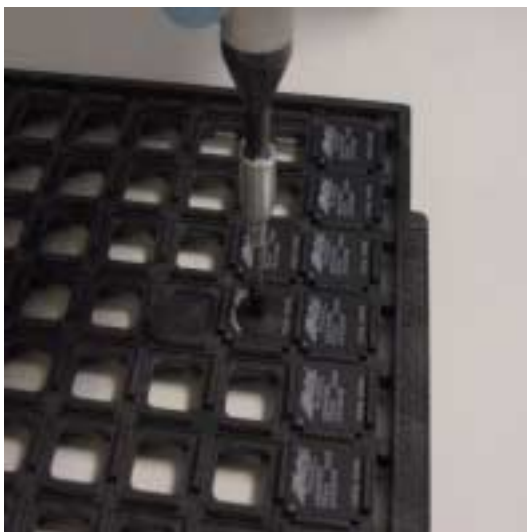
Handling Trays

The tray stack should be kept fastened with straps during transportation to prevent devices from coming out of their sockets. If a single loaded tray is to be moved, an empty tray should be placed over it as a cover and both trays should be taped to secure the devices in position Socket.

Device Programming

Always use the vacuum wand provided to transfer devices. Users need to wear ESD straps when handling the devices.

Removing Devices from Tray

1. Position the vacuum needle at the proper angle so that your index finger can rest on the vacuum switch (Figure 1).

2. Slightly depress the vacuum switch and then place the vacuum cup on the surface of the device.

3. Release the vacuum switch while holding the cup down to generate the vacuum that causes the cup to adhere to the device body.

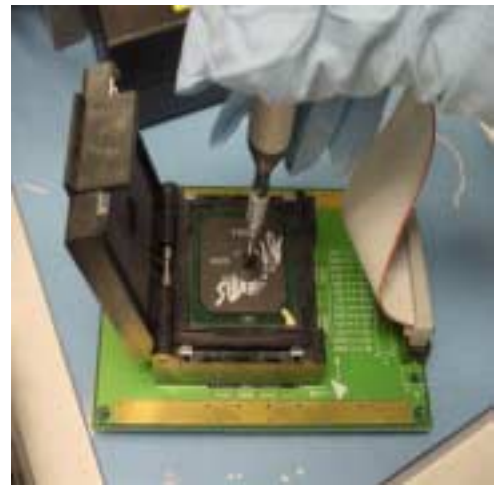4. Make certain to transfer a device within 5 to 8 seconds.

Figure 1 • *Vacuum Wand*

Loading the Device into the Programming Socket

1. Carefully align the device with the socket and gently lower the device into the socket (Figure 2). Position the corner pin of the device to the pin 1 orientation mark on the socket module.

2. Do not force the device into the socket.

3. Release the vacuum by depressing the vacuum switch. The device will be self-aligned to the socket.

Note: To completely release the vacuum, the switch should be pressed down further than when pressed to generate the vacuum. Otherwise, a partial vacuum will pull the device back.

4. Close the lid. The device is ready for programming.

Figure 2 • *Inserting the Device in the Socket*

Removing the Device from the Programming Socket

When the programming of the device is complete, use the vacuum wand to remove the device from the socket and to place it in a tray labeled "programmed devices". For soldering, please refer to the reflow temperature profile online: http://www.actel.com/docs/sockets/temp_graph.pdf.

Cleaning the Vacuum Wand

The suction cup of the vacuum wand should be cleaned periodically using IPA to minimize possible leakage in vacuum.

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