

LEVER-ACTUATED ZERO INSERTION FORCE (ZIF)
MICRO PIN GRID ARRAY (PGA)
SOCKETS 940, 939, AM2 & AM3

1. INTRODUCTION

Lever-actuated ZIF Micro PGA Sockets are designed to prevent damage to a PGA device during installation or replacement of the device.

The sockets are used with corresponding devices and are actuated by an integral lever.

Read these instructions thoroughly before installing the device or removing the device from the socket.

2. DESCRIPTION

Sockets 940, 939, AM2 & AM3 are similar connectors with the same envelope. They cater for corresponding devices that are differentiated by number of pin positions and its arrangement.

As such, Sockets 940, 939, AM2 & AM3 differ in number of contacts/solderballs and their arrangement, to which corresponding covers with appropriate markings and pin grid pattern are attached.

In this document, Socket 940 is chosen as the exemplary model; please see Figure 1. Illustrations of Socket 939, Socket AM2 and Socket AM3 are shown in Figure 2.

Basically, the socket consists of a housing and a cover. The housing features surface - mount solder balls, an integral lever, and contact cavities that accept the device pin contacts. The cover features a locking latch that holds the lever in closed position, a molded triangle for Pin 1 identification, and finger reliefs. The finger reliefs allow proper handling of the device when removing it from the socket.

The device is secured to the socket when the lever is closed.

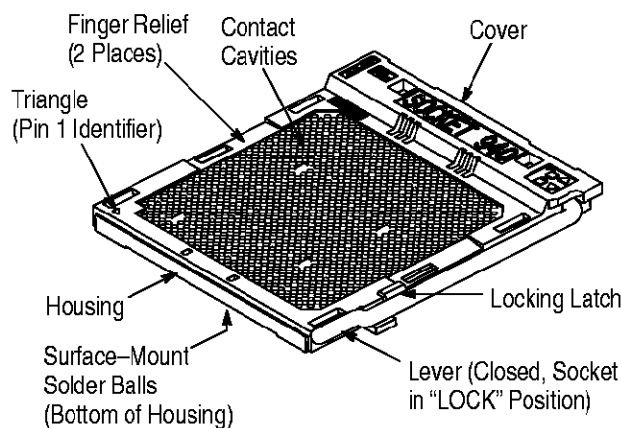


Figure 1

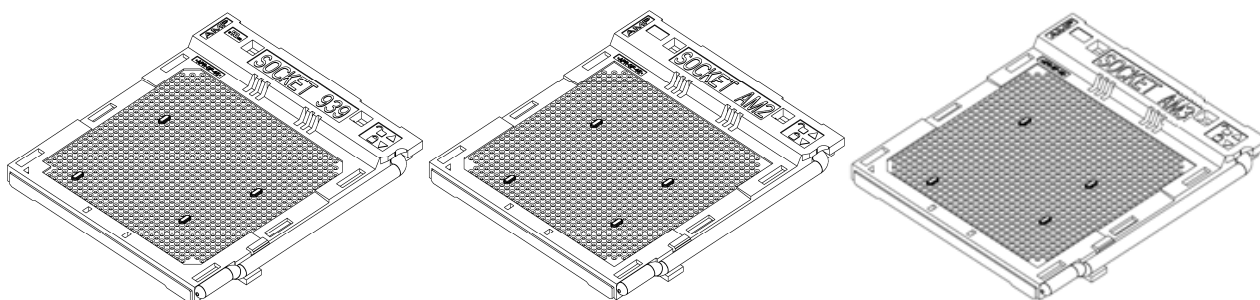


Figure 2

3. INSTALLATION PROCEDURE

Install the socket onto the printed circuit (PC) board according to acceptable soldering guidelines.

NOTE Socket must be soldered to PC board BEFORE installing the device. For application requirements, refer to 114-13092.

BEFORE CONTINUING, remove the tape (if present) from the top of the socket. Then to install the device onto the socket, proceed as follows:

- A. Grasp the end of the lever, and lift the lever (disengaging it from the locking latch). Rotate the lever until it stops (approximately at a 90° angle). The socket is in the “OPEN” position. See Figure 3, Detail A.

CAUTION The socket must be in the “OPEN” position BEFORE installing the device. DO NOT attempt to install the device when the lever is not FULLY opened; otherwise, permanent damage to the socket will result.

- B. Match the Pin 1 identifier (chamfered corner or filled triangle) of the device with the Pin 1 identifier (molded triangle) on the socket, and align the pin pattern of the device with the contact cavity pattern of the socket. Carefully lower the device onto the socket so that the pins enter the contact cavities. See Figure 3, Detail B.

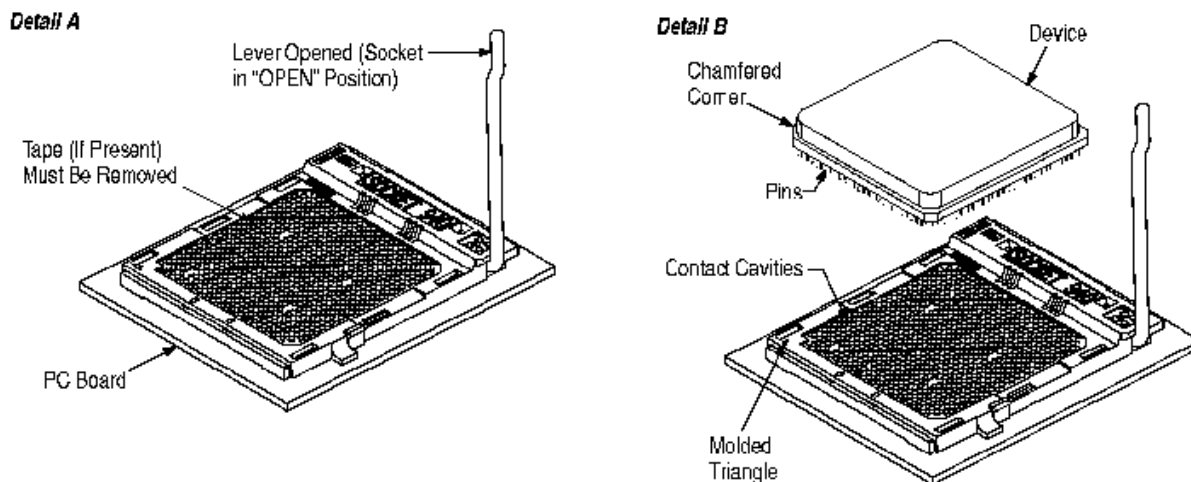


Figure 3

CAUTION To avoid damage to the socket or device, DO NOT force installation. If the device does not install freely remove the device, and inspect the pins for straightness, and verify that the pin pattern and contact cavity pattern match.

- C. Make sure that the device is flush to the socket. If necessary, apply a slight downward pressure to the device until it is level with the surface of the socket. See Figure 4.

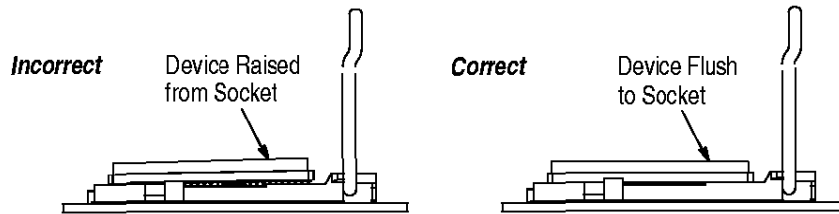


Figure 4

- D. While maintaining slight downward pressure to the top of the device, rotate the lever until the lever engages the locking latch. There will be an audible “click” when the lever is closed and the device is secure. The socket is in the “LOCK” position. See Figure 5.

CAUTION DO NOT force the lever to rotate. Damage to the socket will result if lever is forced.

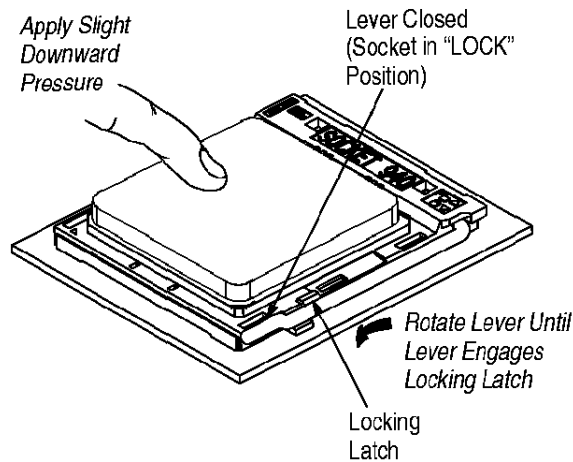


Figure 5

CAUTION NEVER try to force the device into place when the socket is in the “LOCK” position. Damage to the device and socket will result.

- E. Inspect assembly to ensure that the device has remained flush to the socket. If not, remove the device from the socket as described in Section 4, then repeat Steps 2 through 5 of Section 3.

4. DISASSEMBLY

To remove the device from the socket, refer to Figure 6, and proceed as follows:

- A. Grasp the end of the lever, and lift the lever (disengaging it from the locking latch). Rotate the lever until it stops (approximately at a 90° angle). The socket is in the “OPEN” position. There will be an audible “click” when the device has been released.
- B. Grasp the device at the finger reliefs in the socket, and lift the device straight from the socket, taking care not to bend any of the pins.

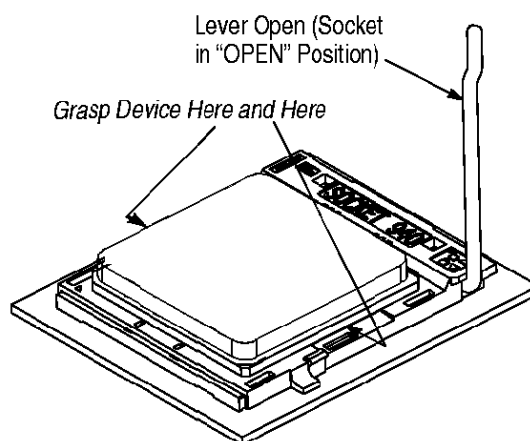


Figure 6

CAUTION It is important to grasp the device at the socket finger reliefs to help prevent the device from tilting and bending the pins.

5. REPLACEMENT AND REPAIR

The sockets are not repairable. DO NOT use a defective or damaged socket. DO NOT re-use the socket after removing it from the PC board.