



APPLICATION GUIDELINE

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THIS APPLICATION GUIDELINE IS STRICTLY FOR CUSTOMER'S REFERENCE ONLY WHICH MOLEX BELIEVES MAY PROVIDE USEFUL GENERAL PROCESSING GUIDELINES.

REVISION: 1	ECR/ECN INFORMATION: EC No: S2010-1001 DATE: 2010/06/01	TITLE: APPLICATION GUIDELINE DDR3 DIMM 240CKTS VERTICAL P/F MEMORY MODULE CONNECTOR	SHEET No. 1 of 8
DOCUMENT NUMBER: AS-78294-001	CREATED / REVISED BY: VMANICKAM 2010/06/01	CHECKED BY: CGTAN 2010/06/15	APPROVED BY: SHLENI 2010/06/15



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1.0 SCOPE

This specification covers the processing guidelines and the requirements for the application of DDR3 Dual In-Line Memory Module (DIMM) 240 circuits connector with Press Fit solder tail design. All dimensional values shown are in metric units. Any figures and illustrations found in this document are for graphical representation only and are not drawn to scale.

The connectors are available in 240 pins types with contact spacing on 1.00 mm pitch centerline. These connectors are designed to connect memory module cards of 1.27 mm thickness (Daughter Card) as per JEDEC MO-269 to Printed Circuit Boards (PCB).

When corresponding with Molex Personnel, kindly use the terminology provided in this document to facilitate your request for more information. Basic terms and features of this product are illustrated in Figure 1.

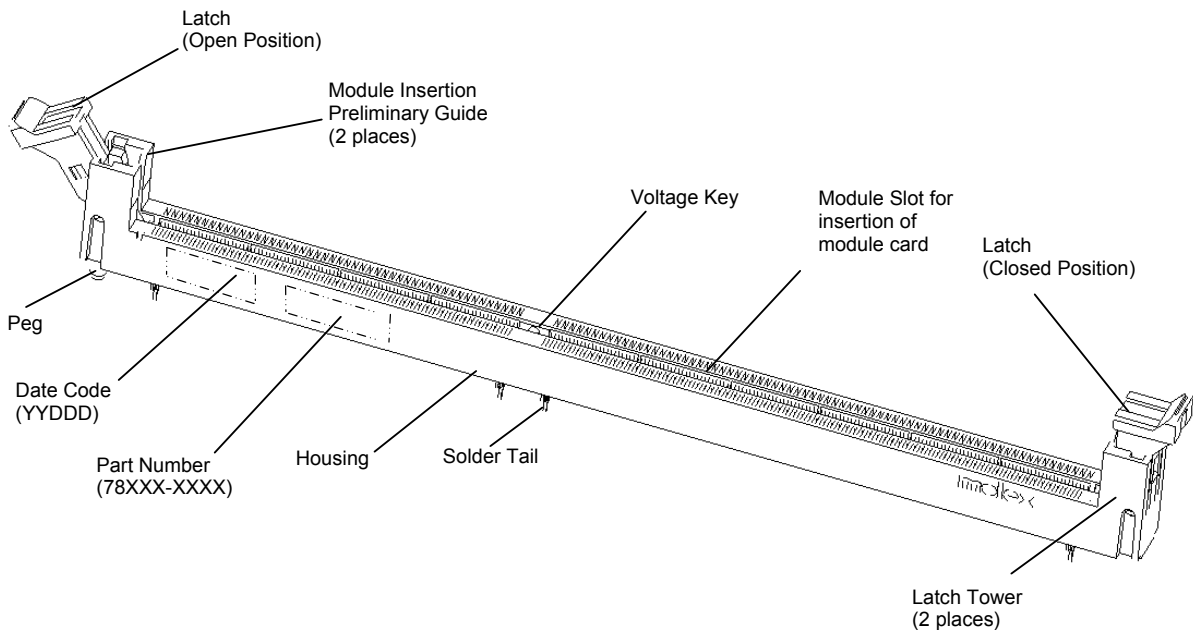


Figure 1: DDR3 DIMM 240ckts Vertical Press Fit

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2.0 PRODUCT DESCRIPTIONS

2.1 PRODUCT DESCRIPTIONS AND PART NUMBERS

SERIES NUMBER	DESCRIPTIONS
78294	1.00mm Pitch DDR3 DIMM 240ckts Vertical P/F
78443	1.00mm Pitch DDR3 DIMM 240ckts Vertical P/F Low LLCR

The above series numbers are shown for reference only. This application specification shall apply to all products with part numbers that fall under the family of 78294 and 78443.

This document is not intended to be the final process definition nor is it intended to constrain design.

3.0 REFERENCE DOCUMENTS

3.1 DRAWINGS

Sales Drawings are available from the Molex service network. See the appropriate Sales Drawings for information on dimensions, materials, plating and markings, recommended module outlines and footprint specifications.

In the event of any discrepancies between the information contained in the Sales Drawings and this specification or with any other technical documentation supplied, Sales Drawings take precedence.

3.2 SPECIFICATIONS

Product Specifications provide detailed information on the product performance requirements and testing methodology. It has the information on the requirements of the PTH and all related specifications. All test data collected will be used to compile test reports for evaluation purposes. Copies of these specifications are available upon request from a local Molex representative.

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4.0 PROCEDURE

4.1 GENERAL REQUIREMENTS

4.1.1 PACKAGING FOR INCOMING CONNECTOR

As the DDR3 DIMM 240ckts Vertical P/F connectors contain certain moisture sensitive components, they will be sealed in 0.1mm thick plastic bags made from HDPE with desiccant material enclosed. A label indicated "moisture sensitive" will be affixed to the immediate package near the Product Package Label to indicate the presence of moisture.

4.1.2 CONNECTOR MATERIAL

The housing is made from Polyamide. The contacts are made from copper alloy with gold over nickel plating on its contact area and tin over nickel or tin-lead over nickel on its tails. Fork locks are made from copper alloy and the latches are made from high temperature Nylon.

4.1.3 CONNECTOR PLACEMENT

The connector will be supplied in plastic trays. The connector should be only handled by the housing to prevent any unintentional damage to the solder tails below the housing. Carefully insert the connector pins into the PCB hole pattern. A locating peg is given in one of the end of the connector to facilitate easy assembly. Visually inspect the product to verify that all of the compliant pin tips have entered the appropriate PCB vias.

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4.2 ASSEMBLY INSTRUCTIONS

4.2.1 CONNECTOR PRESS IN

The fixture design for press in should cover the entire top surface of the housing to have a stable and uniform force distributed throughout the connector when the pressing equipment applies forces on the fixture. Recommended fixture length to cover the entire connector is 127.0mm.

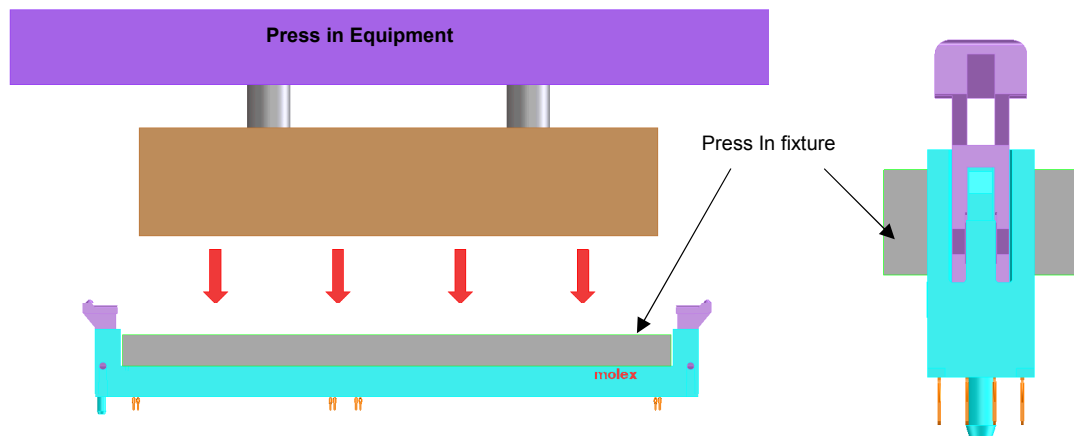


Figure 2: Press in Fixture

Every pin requires up to 4.5kgf (10 lbs) of force to press into the PCB with OSP, Tin and Tin/Lead finish. Therefore a PCB support pallet is recommended directly beneath the PCB hole pattern in order to prevent excessive PCB flexure and damage to the PCB. Please ensure either PCB is thicker than solder tail length so that the tails will not protrude from the PCB or allow clearance in the bottom support for connector pins that protrude from PCB. Molex does not offer any PCB support pallet due to its dependency on customer nature of application.

The press in speed recommended is 25 mm/min. and customers can adjust this speed depending upon the performance of the pressing. In the circumstances where more than one connector needs to be pressed in with single press, the press in tool has to be accordingly made with the number of slots. Press the connector using the press in tool in

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an appropriate press until the bottom of the plastic housing rests on the PCB or within a maximum gap of 0.25mm.

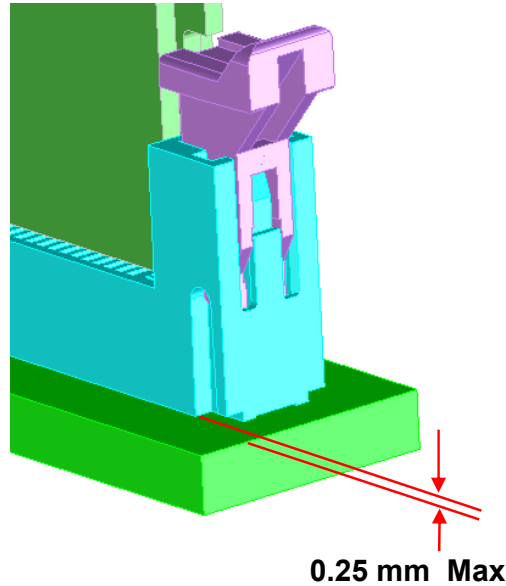


Figure 3: Maximum Clearance between PCB and Memory Connector after Press In

4.2.2 POST APPLICATION INSPECTION

The connector may be examined visually for damage and cleanliness.

The deformation of Eye of Needle (EON) can be inspected by using X-ray equipment.

The final testing would probably be using electrical test equipment for both in-circuit and application testing. However, care should be taken such that the design of this equipment and handling do not cause damage to the housing or the terminals.

4.3 REWORK TOOLING

The rework tooling (62202-3800) is available to extract the connector from the PCB. Refer to ATS-622023800 for Application Tooling Specification.

4.4 MODULE CARD MATING AND UNMATING INSTRUCTIONS

4.4.1 MODULE CARD MATING

The module card should be mated to the connector according to the following sequence:

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- A. The latches of the connector must be fully opened.
- B. The keying feature of the module card must be aligned with the voltage key of the connector.
- C. The sides of the module card must slide along the module insertion preliminary guides and into the module slot. The latches are designed in such a way that upon correct insertion of the module card, they will rotate inwards to snap into the grooves located on the module card to secure it in place.
- D. Ensure that the module card is perpendicularly aligned to the connectors before insertion as any misalignment may cause potential damage to the housing or contacts.
- E. The module card must be fully seated and the latches should be in closed positions.

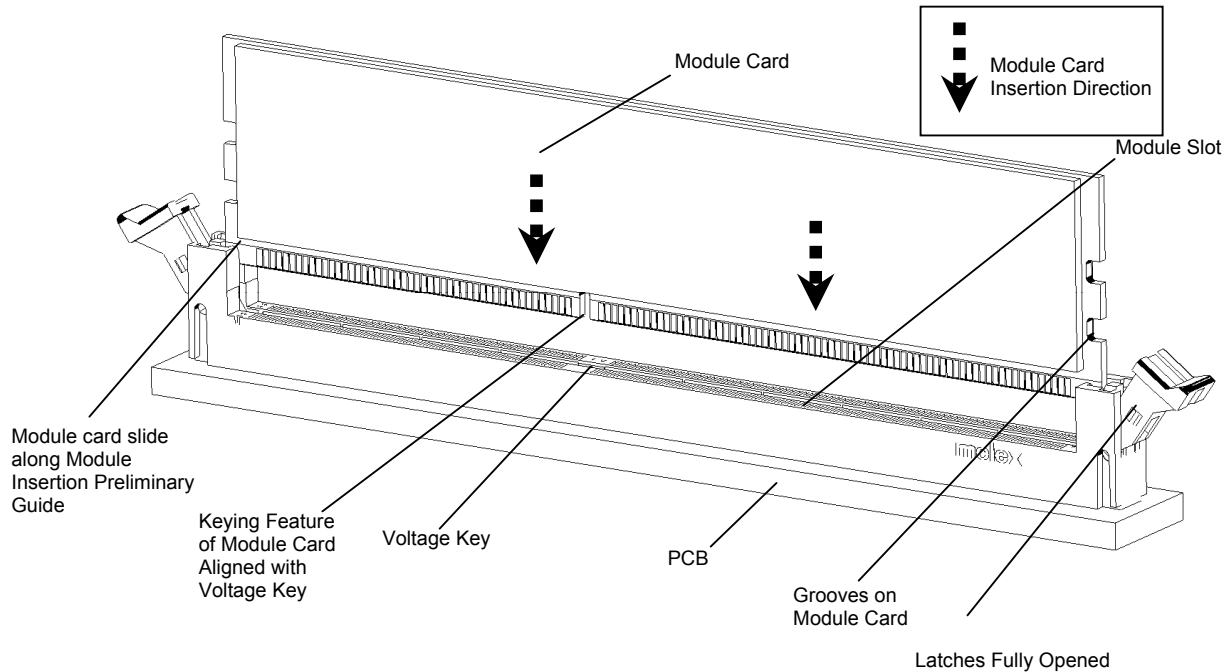


Figure 4: Graphical Representation of Proper Mating Layout

4.4.2 MODULE CARD UNMATING

The module card should be unmated from the connector according to the following sequence:

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- A. Both latches of the connector must be rotated away from the module card simultaneously. As the latches rotate, the module card will be ejected out from its seated slot. Upon opening the latches to its maximum position, the module card should be fully disengaged from the connector.
- B. The module card will be guided by the module insertion preliminary guides and slide out of the latch tower.

5.0 VISUAL INSPECTION

The following figure illustrates the correct application of a DDR3 DIMM VLP LSP 240ckts Press Fit Low LLCR connector with the PCB and module card. Several key points shown below in the picture as a guide to ensure correct application of this connector.

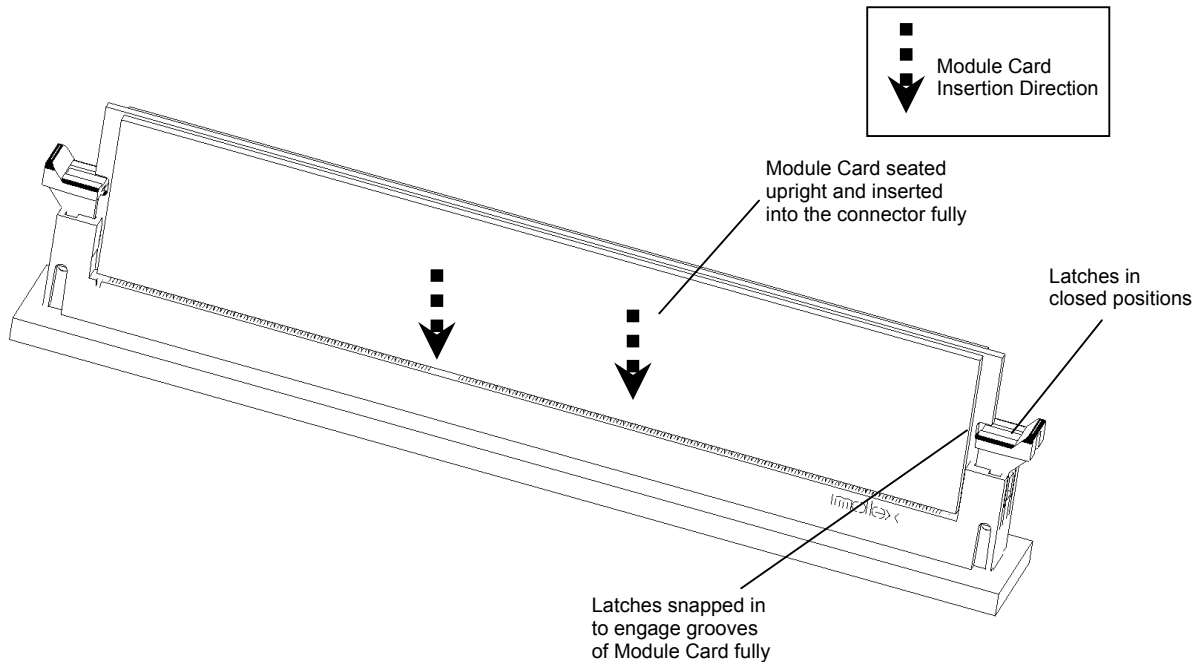


Figure 5: Correct Application of the DDR3 DIMM 240ckts Vertical Press Fit Connector, PCB and Module Card Assembly

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