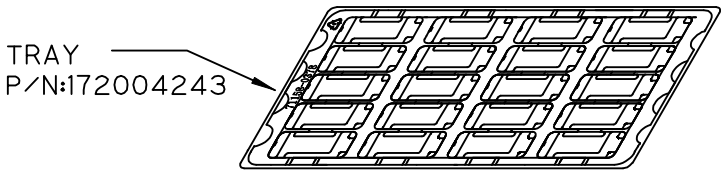
Molex 74736-0221 PDF

深圳创唯电子有限公司 http://www.molex-connect.com



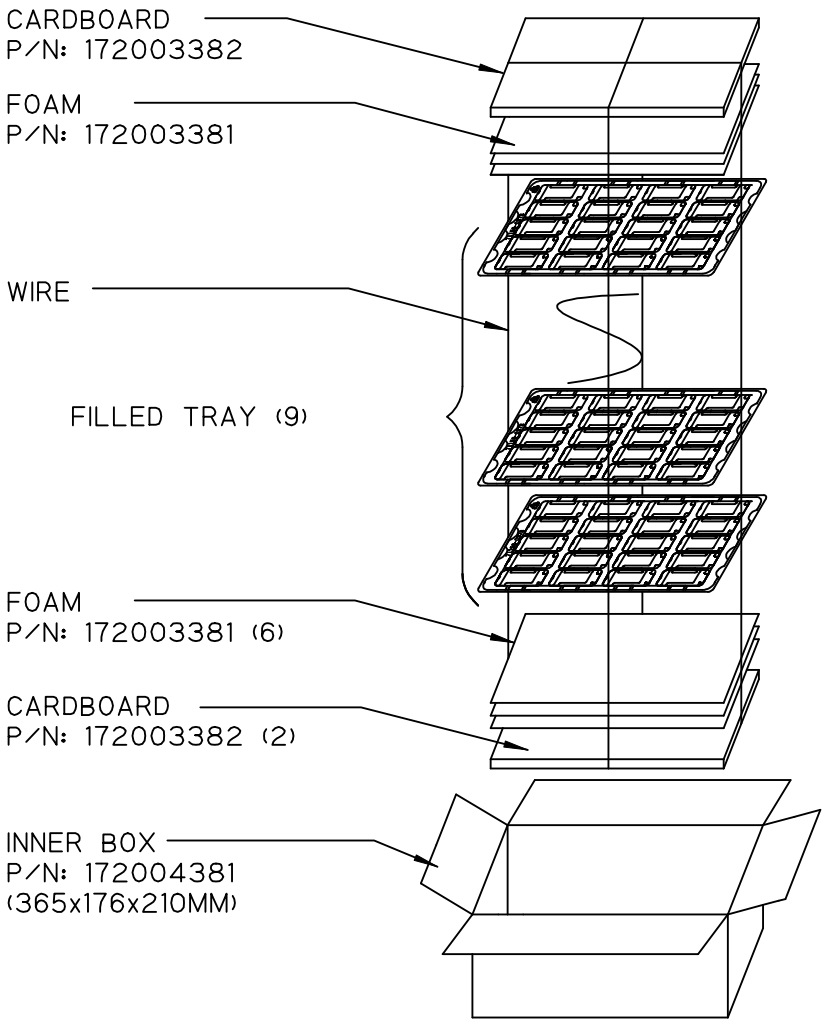
将产品装入tray **中**

NOTE: 1. 1 pc tray per level. total 9 levels.
and total 180 pcs per inner box.
每层1**个托盘.共**9**层**
每个内箱装180**个成品**

2. The next tray need rotate 180 degree and put it on previous tray.
相邻两个托盘间应水平方向成180**度摆放.**

3. There is no any fingerprint on the goods.
产品上不可有指纹印.

4. Use the wire bundle the goods.
用绳子将产品打包成捆.



ENTER DESCRIPTION
EC NO: CPG2014-1493 2013/11/23
DRWN:XJGU001 2013/11/23
CH'KD:SHIRLY 2013/11/25
APPR:CLAN01
DESCRIPTION
B
REV

QUALITY SYMBOLS
FA=0
FC=0
FD=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
0 PLACE	± ---	± ---

ANGULAR ±---°
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE:
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: XJGU001 DATE: 2013/11/23
CHECKED BY: SHIRLY DATE: 2013/11/23
APPROVED BY: CLAN01 DATE: 2013/11/25

TITLE: XFP CAGE ASY W/PCI PIN FIN HEAT SINK

molex

MATERIAL NO.: 747360221
DOCUMENT NO.: PK-74736-009
SHEET NO.: 1 OF 1
SIZE: A4

APPLICATION SPECIFICATION

TABLE OF CONTENTS

1.0 SCOPE

This specification covers the requirements for the application of the XFP Cage Assemblies to interconnect with XFP fiber optic or copper transceiver modules to printed circuit boards. The cage assemblies are available with or without heat sinks.

All Cage Assemblies provide electromagnetic interference (EMI) suppression (inner spring fingers, belly spring fingers and lower / rear gasket). The connector cage assemblies have a latching mechanism located on both sides of the cage that hold the module in place. The connector assembly is designed to be inserted behind a bezel after being seated onto the pc board. The XFP cage assemblies press fit pin configuration accommodates single sided or belly-to-belly applications.

Basic terms and features of these products are provided in Figure 1.

XFP Cage Assembly

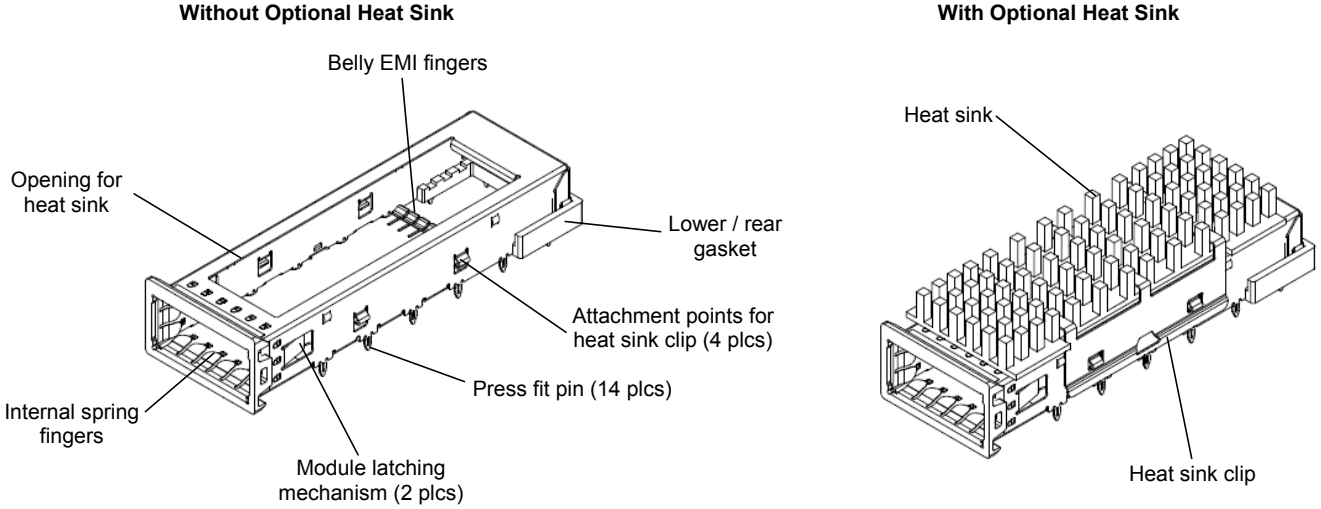


Figure 1 – XFP Cage Assemblies

2.0 REFERENCE DOCUMENTS

Refer to the appropriate customer sales drawing for product part numbers.
Refer to INF-8077i (10 Gigabit Small Form Factor Pluggable Module Rev 4.5)

3.0 PROCEDURE

3.1 GENERAL REQUIREMENTS

3.1.1 Limitations The cage assemblies are designed to operate in a temperature range of –40° to 85°C [-40° to 185° F]. The bezel configuration shown in this document can be used in peripheral component interconnect (PCI) applications as well as standard applications.

3.1.2 Material The heat sinks are made from aluminum with black anodization. The heat sink clip is made from stainless steel. The cage assembly is made from a nickel silver alloy, nickel plated zinc die casting and beryllium copper.

3.1.3 Shelf Life The cage assembly, heat sink and heat sink clip should remain in the original Molex packaging until ready for use to prevent damage. The cage assemblies should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

3.1.4 Chemical Exposure Do not store cage assemblies near any chemicals listed below as they may cause stress corrosion cracking in the terminal contacts or mounting posts.

Alkalies	Ammonia	Citrates	Phosphates Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites	Tartrates

4.0 PCB REQUIREMENTS

4.1 MATERIAL THICKNESS

The PCB material shall be glass epoxy (FR-4). The minimum PCB thickness shall be 1.57mm (0.62”) for single sided applications and 3.00 mm (0.118”) for belly-to-belly applications.

4.2 TOLERANCE

Maximum allowable bow of the PCB shall be 0.08 mm over the length of the cage assembly.

4.3 HOLE DIMENSIONS

The holes for the cage assembly must be drilled and plated through to the dimensions specified in Figure 2.

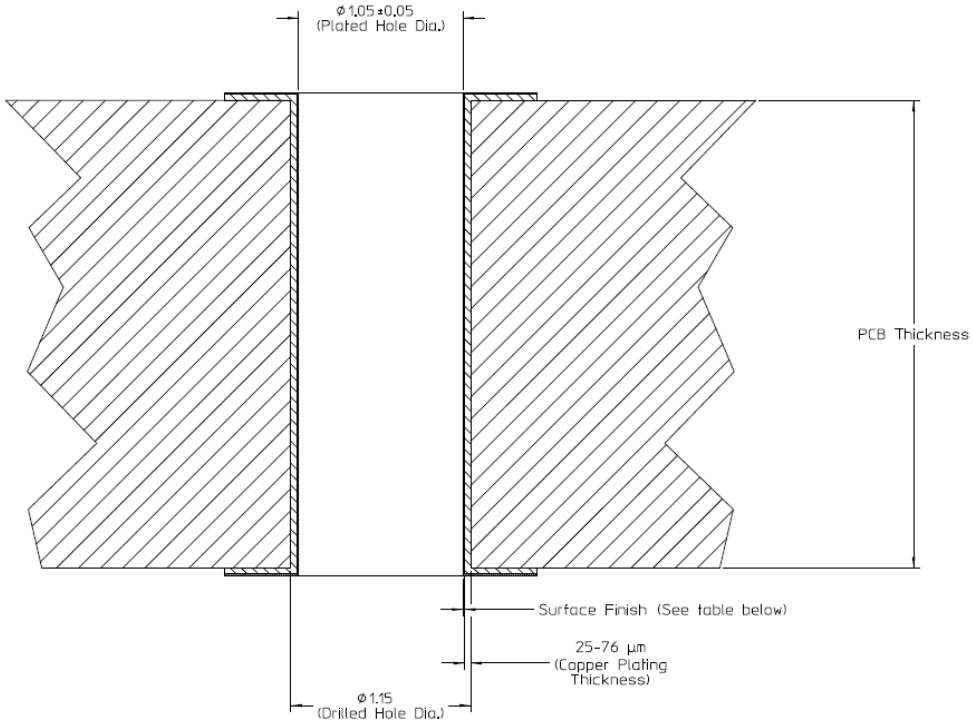


Figure 2 – Recommended Hole Dimensions

Surface Finish	Drilled Hole Diameter	Finished Hole Diameter	Surface Finish Thickness
Immersion Gold / Nickel	1.15 ± 0.02	1.05 ± 0.05	2 µm Min. (Nickel) 0.1 – 0.5 µm (Gold)
Immersion Tin			0.5 µm Min.
Immersion Silver			0.15 µm Min.
Hard Gold / Nickel			2 µm Min. (Nickel) 0.6 µm Min. (Gold)
OSP			0.2 – 0.5 µm

NOTE Depending upon the plating finish and plating process, a larger drill diameter may be used to achieve the finished hole specification.

4.4 LAYOUT

The holes for the cage assembly must be precisely located to ensure proper placement and optimum performance of the cage assembly. An example of a PCB layout is shown in Figure 3.

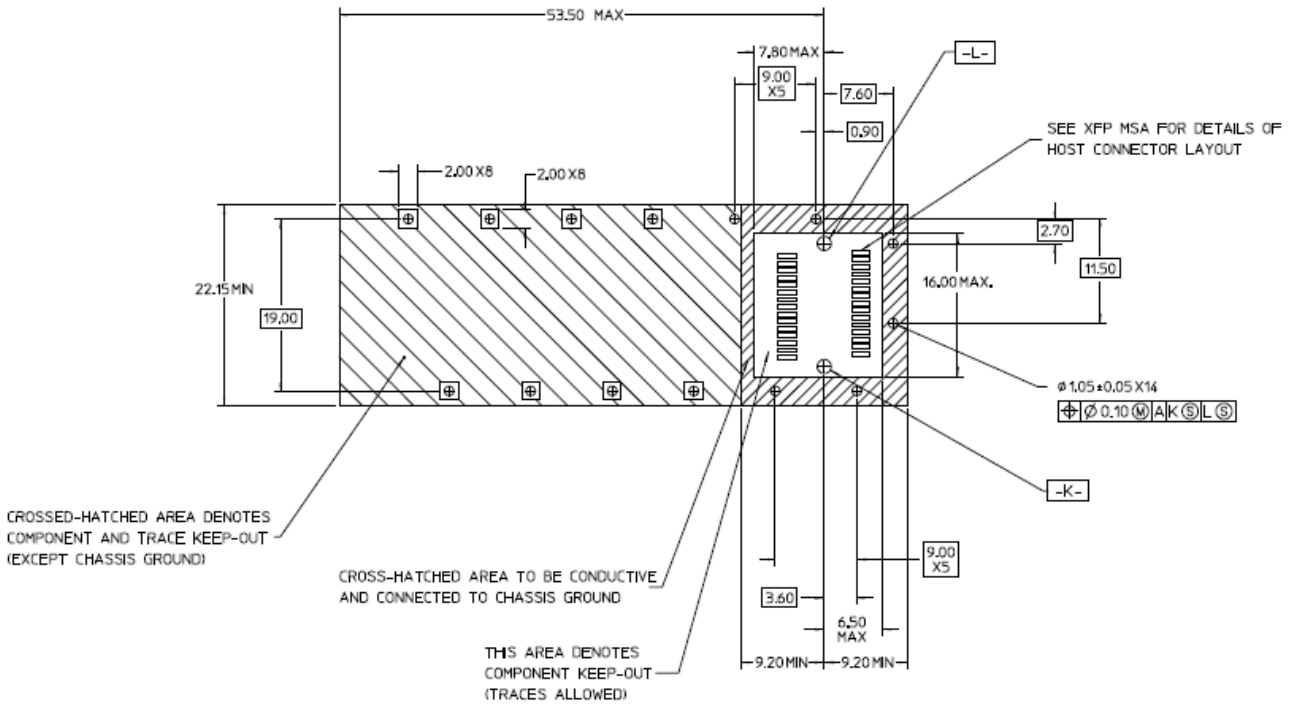


Figure 4 – Example XFP PCB Layout

NOTE For a specific PCB layout, refer to the Customer Sales Drawing.

5.0 BEZEL REQUIREMENTS

5.1 THICKNESS

The bezel needs to be thick enough to provide sufficient mechanical strength during gasket compression.

5.2 CUTOUT

The bezel must provide a cutout that allows proper mounting of the cage assembly. The bezel cutout must also provide appropriate clearances to allow insertion and extraction of an XFP module. The minimum allowable distance between cage assemblies must be considered to avoid interference between two modules. Dimensions for the bezel cutout and minimum allowable distance between cutouts are shown below in Figure 4.

5.2 GASKET DESIGN

There are many options for a bezel EMI gasket that functions as a seal between the bezel and the front of the cage. The design of the bezel EMI gasket and the materials used for the gasket are application specific. The preferred method is to fasten the gasket to the back of the bezel with a conductive pressure sensitive adhesive. Assembly of the host board to the bezel will compress the gasket to the recommended range specified by the bezel EMI gasket manufacturer. Molex does not supply this gasket.

5.2 LOCATION

The bezel and PCB must be positioned in relation to each other to avoid interference with the function of the cage assembly module locking latches and to ensure proper function of the bezel EMI gasket. This relationship must conform to the dimensions stated in Figure 5.

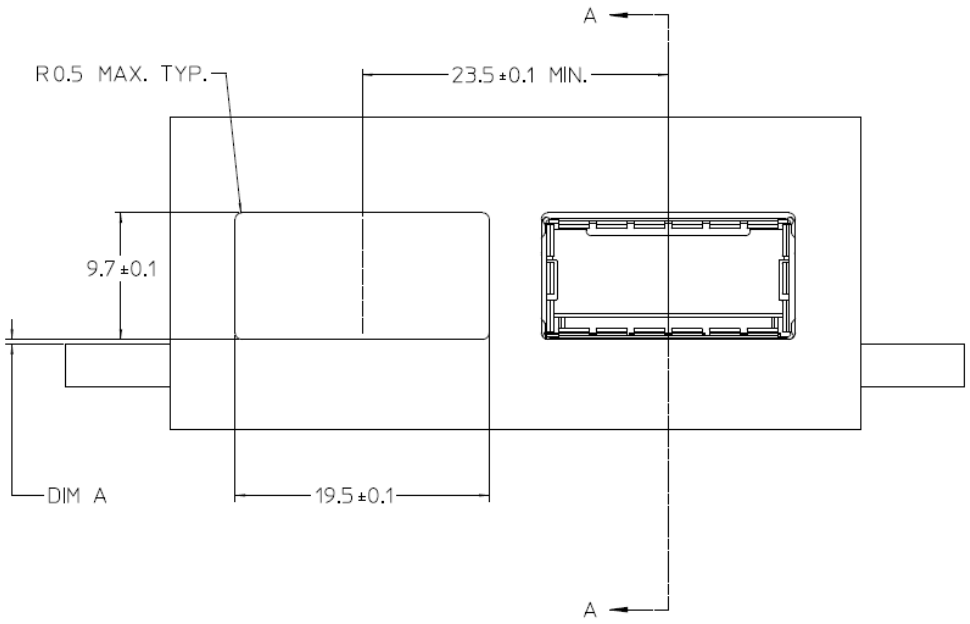


Figure 4 – Recommended Bezel Cutout

NOTE Dimension A is the distance of the bezel opening above the host PCB.

Application	Dimension "A"
Non-PCI	0.3 ± 0.2 mm
PCI	0.4 ± 0.1 mm

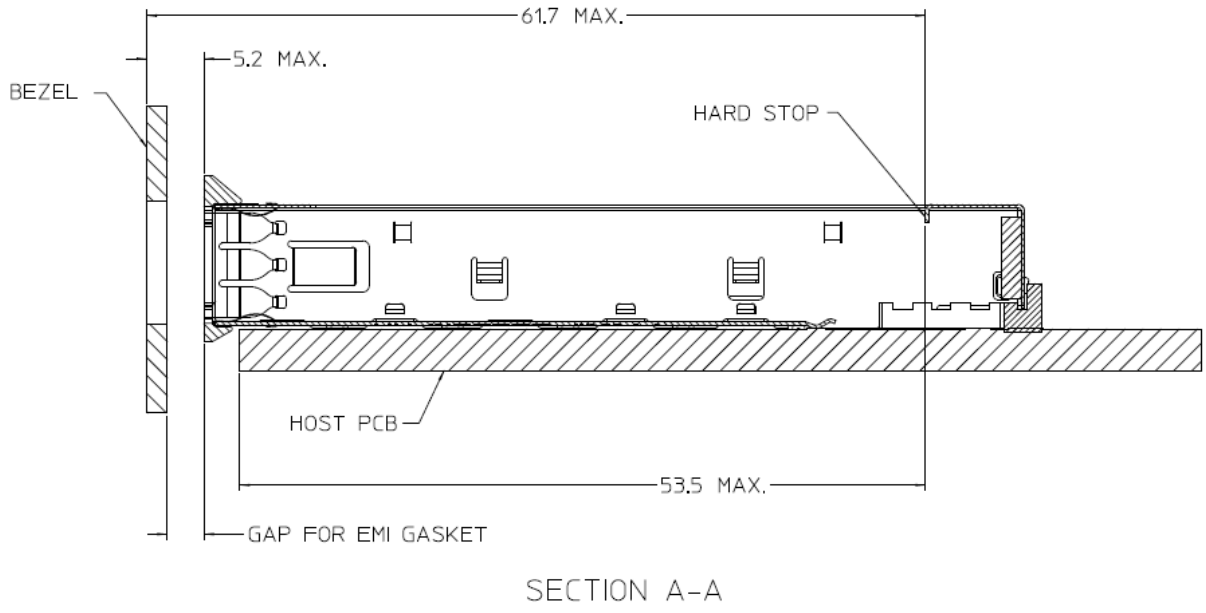


Figure 5 – Recommended PCB and Bezel Position

6.0 ASSEMBLY PLACEMENT INSTRUCTIONS

The following requirements also apply to the cage assemblies used for rework purposes.

6.1 Registration

The cage compliant pins must be aligned with matching holes in the PCB simultaneously to prevent any twisting or bending of the pins.

6.2 Seating

Using proper seating force and seating height is essential to interconnection performance. The force used to seat the cage assembly must be applied evenly at an insertion rate of 50 mm/min to prevent deformation or other damage to the cage compliant pins. The amount of force required to insert a cage assembly into a PCB varies depending upon the hole size and hole plating. Insertion forces can range between 250 – 900 N. It is ***extremely important*** that the host PCB be fully supported underneath the cage assembly during insertion so that no bowing / flexing of the host PCB can occur. Depending on the host PCB thickness, cage assembly compliant pins may protrude through the opposite side of the PCB requiring clearance in the support piece.

CAUTION *Over-driving of the cage assembly can cause deformation which can lead to reduced performance of the cage assembly.*

The *shut height* of the application tool must be specifically set for proper seating of the cage assembly. The shut height can be calculated by:

Seating Height (Cage Assembly Seated) + Height of Seating Tool (loaded onto Cage Assembly) + Combined Thickness of PCB and PCB Support Fixture = Shut Height (Ram Down)

The seating height, measured from the top of the cage assembly (not including the panel ground springs) to the top of the PCB, is given in Figure 5.

The cage assembly must be seated on the PCB not exceeding the dimensions shown in Figure 5.

NOTE *The shut height may need to be adjusted to obtain the 0.10 mm [0.004 in.] maximum gap between the standoffs in the cage assembly and the PCB.*

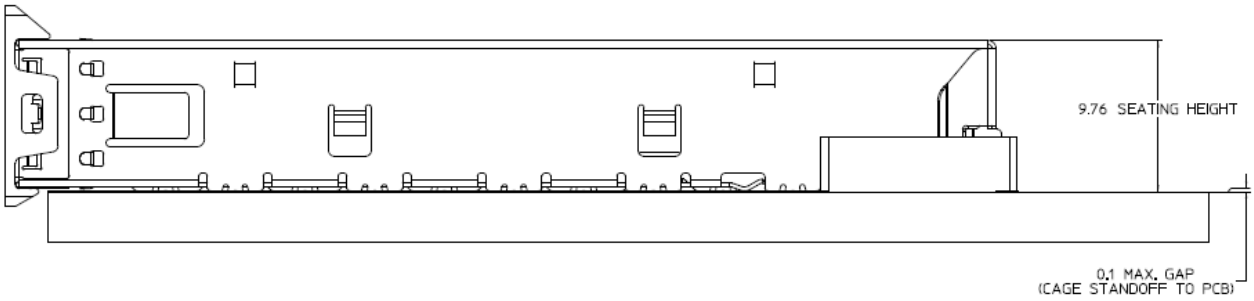


Figure 6 – Recommended PCB and Bezel Position

6.3 Checking Assembly

After assembly, the customer supplied EMI gasket must be compressed between the bezel and the front flange of the XFP cage assembly. The bezel must not interfere with the function of the delatching mechanism located on the sides of an XFP module.

6.4 Repair and Rework

Damaged or defective cage assemblies must be removed and replaced. After the cage is removed, it must be replaced.

7.0 INSERTION TOOLING

It is recommended that the insertion tool shown below in Figure 7 be used during the insertion of cage assemblies into PCB's. Insertion tools may be purchased from Molex (p/n 74736-0900). It is ***extremely important*** that the host PCB be fully supported underneath the cage assembly during insertion so that no bowing / flexing of the host PCB can occur. Depending on the host PCB thickness, cage assembly compliant pins may protrude through the opposite side of the PCB requiring clearance in the support piece.

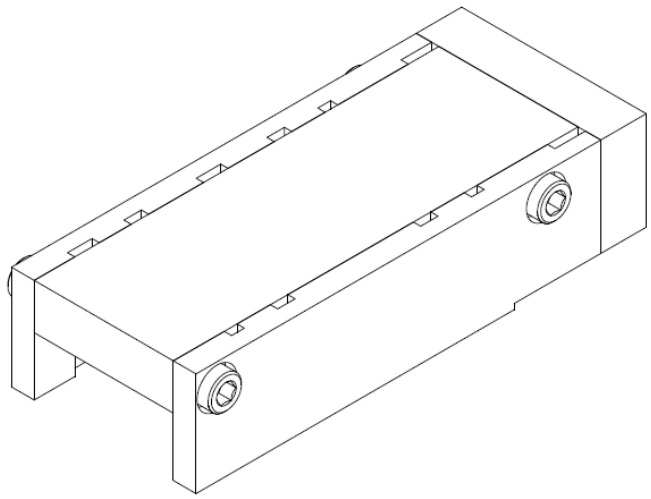


Figure 7 – XFP Cage Assembly Insertion Tool

8.0 VISUAL AIDS

The illustration shown in Figure 8 represents typical applications of the XFP cage assemblies. The illustrations should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification.

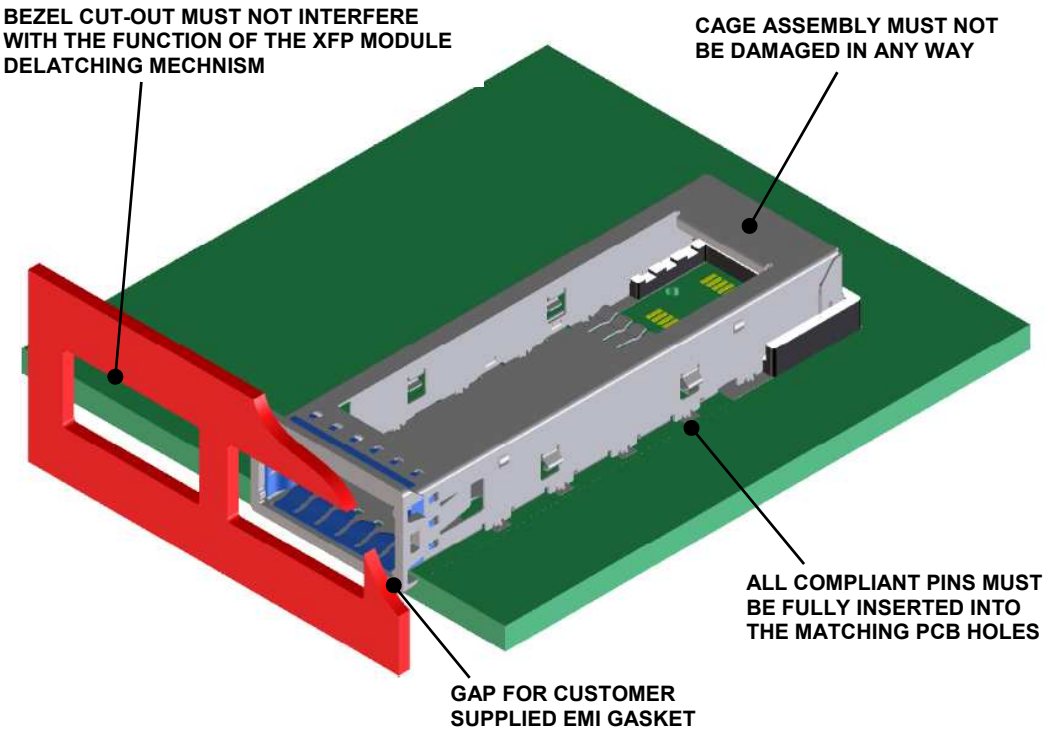


Figure 8 – XFP Cage Assembly w/ PCB and Bezel