1 INTRODUCTION

This specification covers the requirements for mount of 0.5 mm Pitch Board-to-Board Connector Free Height Type.

When corresponding with Personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

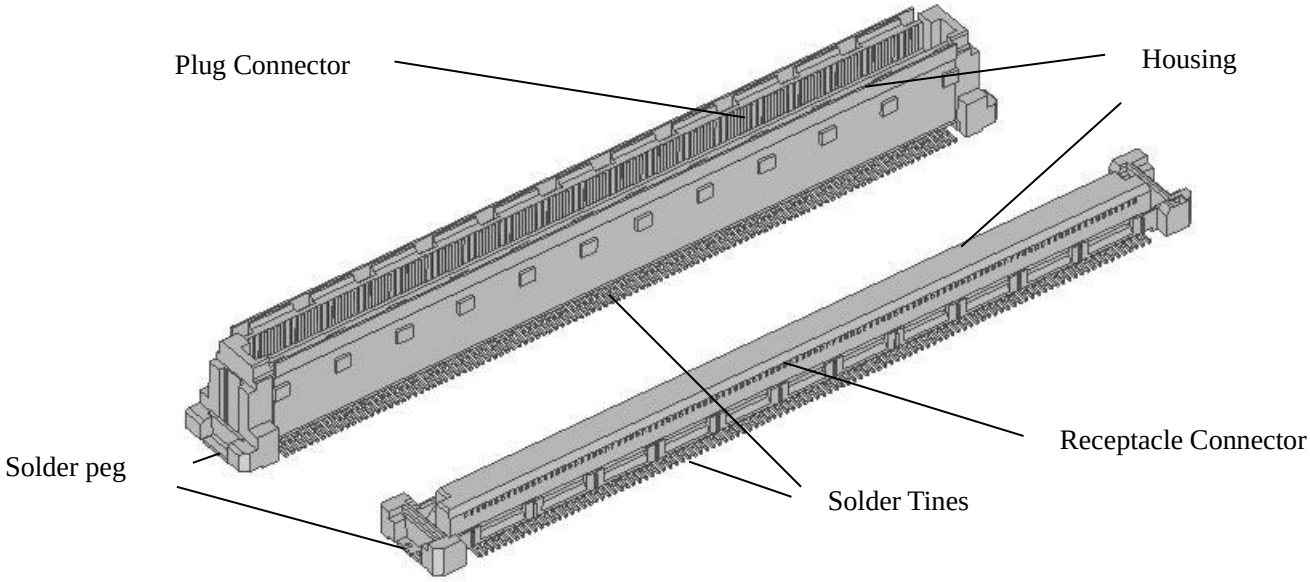


Figure 1

2 REFERENCE MATERIAL

2.1 Revision Summary

- Initial release of document

2.2 Customer Assistance

A service network established can help you obtain product and tooling information which can be obtained through a local TE Representative or, after purchase, by calling the Product Information Center at the number at the bottom of page 1.

2.3 Drawings

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, the Customer Drawing takes preference.

2.4 Related Specifications

108-5560	Product Specification
108-32658	Product Specification of High Speed 05FH
501-5226	Qualification Test Report
501-32576	Qualification Test Report of High Speed 05FH

3. REQUIREMENTS

3.1 Storage

(A). This connector is packaged and shipped in an emboss tape, tube or hard tray. We recommend that the connector remain in the container to prevent contamination or dust, and it is stored, keeping at normal temperatures, normal humidity and no poisonous gas.

(Normal temperatures and humidity: 5~35℃, 45~75% RH)

(B). If this connector is stored in the middle of operating, it should not remain naked.

(C). We recommend that this connector isn't stored for a long time after opening a package and that it is used within three months.

3.2 Printed Circuit Board

The PC board shall be glass epoxy. If a thin board is used, we recommend you to give support to it from reverse side in order to prevent bowing of board during mating.

3.3 PC Board Layout

Please refer to customer drawing.

3.4 Solder Techniques

(A) Recommend Solder Paste

1. Alloy type shall be either 63 Sn/37 Pb or 60 Sn/40 Pb for leaded application, or SAC 405 for lead-free application.

2. Flux shall be RMA type.

(B) Stencil

Stencil aperture will be determined by the thickness of the stencil being used. Generally, the thinner stencils will have a larger aperture to maintain a given volume of solder paste. Solder deposition should be within the pad area of the contact solder tines. The recommended thickness of stencil: 0.15~0.18mm.

(C) Solder Mask

Solder mask is recommended between all pads. If a trace is run between adjacent pads on the solder side of the pc board, a solder mask must be applied over the trace to prevent bridging and wicking of solder away from the contact solder tines. Liquid photo imageable or dry film solder masks are recommended. The recommended thickness of mask: 0.01~0.05mm.

(D) Reflow Condition

For leaded application:

Preheat: 100~150℃ 60 Sec. Min

Heat: 210℃ Min 30 Sec. Max

Heat peak: 240℃ Max

For lead-free application:

Refer to IPC/JEDEC J-STD-020.

Preheat: 150~200℃ 60~180 Sec.

Heat: 217℃ Min 60~150 Sec.

Heat peak: 260℃ Max

(E) Connector Placement

Connectors can be placed on the pc board by hand by gripping the connector at the ends of the housing without touching the contacts. This procedure will prevent contamination and deformation of the solder tines. Care must be taken during positioning of the connectors on the pc board so as to not exceed the allowable misalignment absorption. See Figure 2. They can also be positioned with robotic equipment using vacuum pickup or robotic grippers. Optimally, the connector solder tines should be centered on the pc board pads.

(F) Repair

If a soldering iron is used, full care must be taken not to contact the solder tine by tip of a soldering iron.

Recommended temperature of soldering iron: 300℃ Max

Operating time: 3 Sec. Max. per pad.

3.5 Mating and Un-mating Connector

a. mating and un-mating angle (for mechanical installation)

Please do the mating or un-mating work within 1.5° and 1.1° . See figure 2.

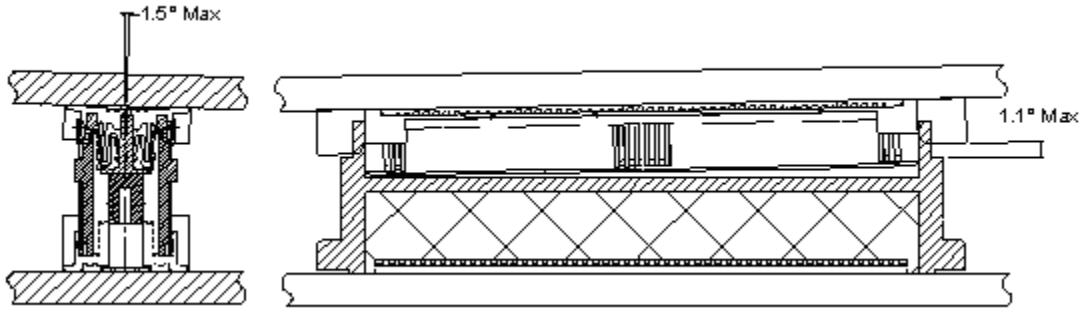
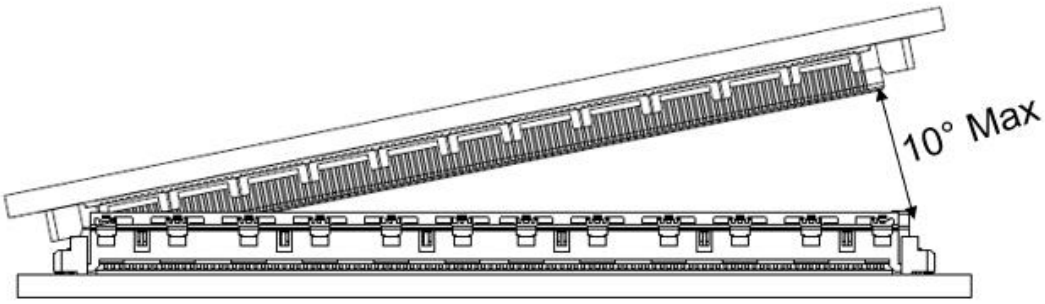


Figure 2

b. the mating/un-mating process can also be done by hand for manual installation.

Mating connectors:

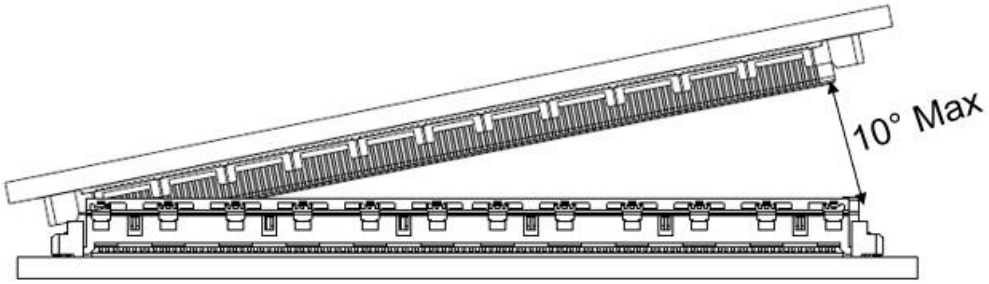
1. Place the Receptacle both ends on the Plug slightly, but without the pressure on the Plug.
2. Wiggle the connector gently to test its proper positioning on the Plug.
3. Press Receptacle and Plug together using slight pressure to ensure they are fully mated, the pressure should be only applied above Receptacle.



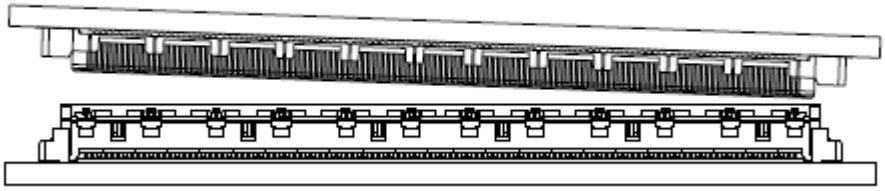
Place one side in and the other side is 10° Max. upwards and then place the other side in.

Un-mating connectors:

1. Pull the Receptacle connector one side upwards 10° Max.



2. Then pull the Receptacle the other side upwards.



3. Separate the Receptacle and Plug using slight pressure completely.