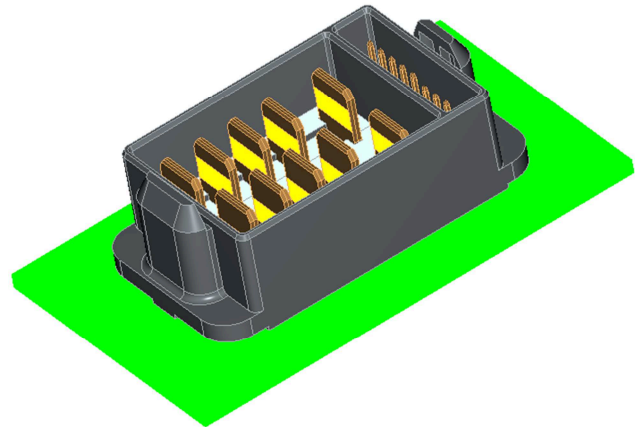
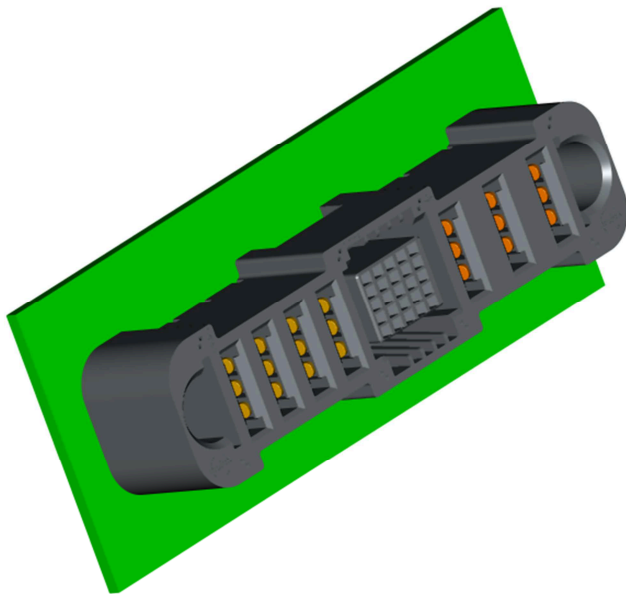


APPLICATION SPECIFICATION

TEN60, TEN60 MEZZANINE, AND TEN60 SPLIT POWER APPLICATION SPECIFICATION



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APPLICATION SPECIFICATION

1.0 SCOPE

This specification applies to the series: 46436-Right Angle Receptacle connectors with press-fit tails, 46437-Right Angle Plugs connectors with press-fit tails, 46562-Vertical Receptacle connectors with press-fit tails, 76541 Vertical Receptacle connectors and 76546-Vertical Plug connectors with press-fit tails.

Also, include: 171088- Right Angle Plugs connector with press-fit tails, 171089- Vertical Receptacle connectors with press-fit tails and 171090- Right Angle Receptacle connectors with press-fit tails

2.0 PRODUCT DESCRIPTION

The connector systems consist of various power modular and signal modular configurations, with or without guide modules. The Vertical Receptacle connectors are through-hole devices with eye-of-the-needle compliant pin terminals.

3.0 REFERENCE DOCUMENTS

3.1 Refer to the appropriate sales or manufacturing drawing for information on dimensions, materials, plating, and markings.

3.2 PS-46436-100 – TEN60 Product Specification.

3.3 PS-171088-0000 – TEN60 SPLIT POWER Product Specification.

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4.0 TEN60/SP / TEN60 MEZZANINE CONNECTORS NOMENCLATURE AND FEATURES

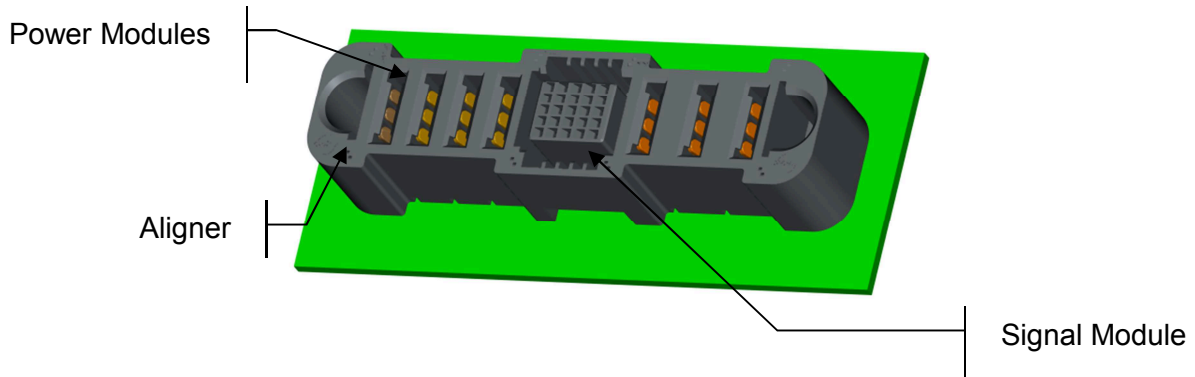


Figure 4.1
Vertical TEN60 Receptacle Assembly

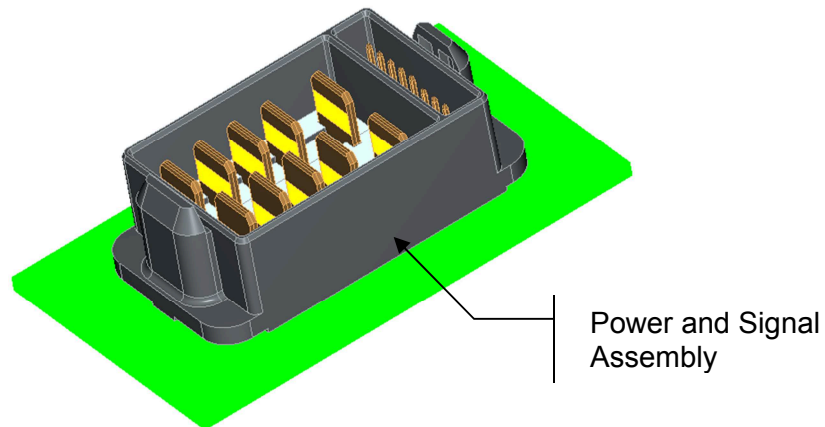


Figure 4.2
Vertical TEN60 Mezzanine Plug Assembly

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5.0 PRINTED CIRCUIT BOARD SUPPORT

The TEN60/SP and TEN60 Mezzanine connector requires up to 20 lb. per pin of force to press the connectors into the printed circuit boards. Therefore, a backup or support fixture is required to prevent damage to the PCB. The support fixture should have clearance for the connector terminals when they protrude through the underside of the PCB. It is also recommended that the support fixture have locating pins. Due to the custom nature of each application, Molex does not supply support and locating fixtures, the customer normally supplies them.

The following is one simple way of making a PCB support and locating fixture:

- 5.1 Locate a suitable piece of material for the backup. It should be approximately $\frac{3}{4}$ inch thick and the same size or slightly larger than the PCB to be used. While aluminum can be used, a rigid nonconductive material such as phenol is preferred (A stack of scrap PCBs of suitable size can be fastened together and used as a fixture).
- 5.2 Obtain a scrap PCB like the ones to be assembled. Attach this PCB to the material from step 5.1.
- 5.3 Using an oversize drill bit, drill through each hole where a pin from the connector will go. Drill deep enough into the lower material to be certain the pins do not bottom out when inserted (at least 5mm [0.20in] deep).
- 5.4 Clear out the support for any components mounted on the underside of the PCB.

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6.0 INSTALLATION PROCEDURE

- 6.1 Be certain the correct application tooling and board support are clean of debris or any other material that could damage the connector or PCB.
- 6.2 Place the board support under the ram of the press.
Note: Be certain the board support is square and sits level on the press; this is important due to the high forces generated during the press in process. Any flexing during the press in process could damage the board support, PCB, connector or the application tooling. The board support must provide clearance to all press-fit tails.
- 6.3 Program the press (if applicable) for the optimum force necessary to fully seat the connector on the PCB. Consult the TEN60 Power product spec for recommended insertion force.
- 6.4 Place the printed circuit board on the board support.
Note: The PCB should be doweled to the board support so no shifting occurs during the press in process that will cause miss-alignment between the PTH and the clearance holes in the board support.
- 6.5 Before placing the connector on the PCB inspect for any bent pins that would interfere with proper alignment to the PCB. Refer to workmanship criteria for descriptions and examples of product defects.
- 6.6 Place the connector on the PCB.
- 6.7 Secure the application/insertion tool on to the press (see Paragraph 7.0)
- 6.8 Cycle the press to seat connector on the PCB.
- 6.9 Check that connector is fully seated on the PCB and that all compliant tails were pressed in without any bent pins. See Figure 6.1.

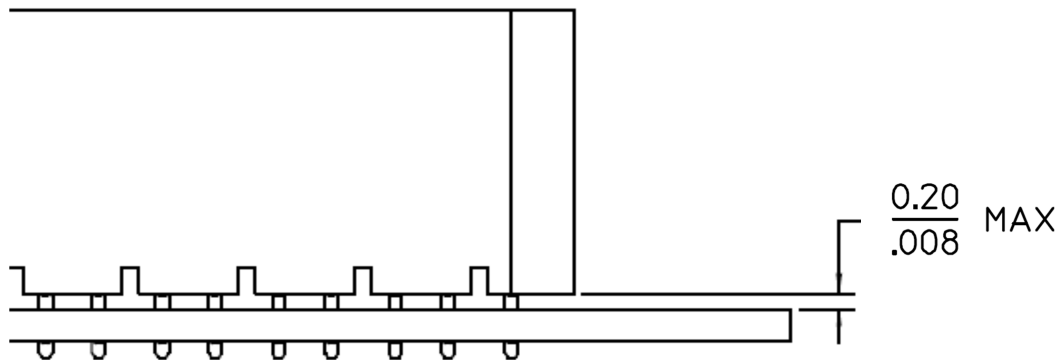


Figure 6.1: CONNECTOR SEATING DIMENSION

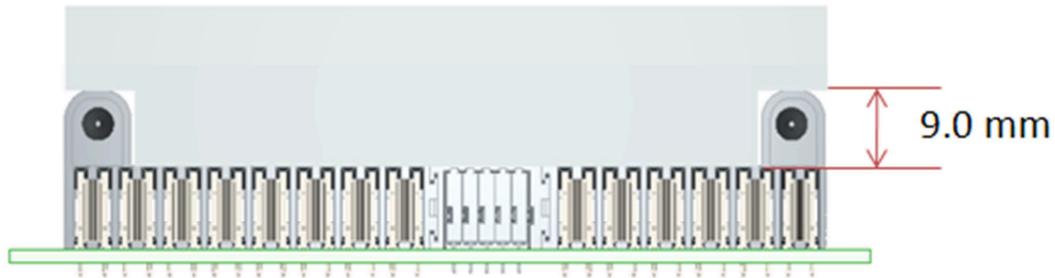
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7.0 APPLICATION TOOLING NUMBER:

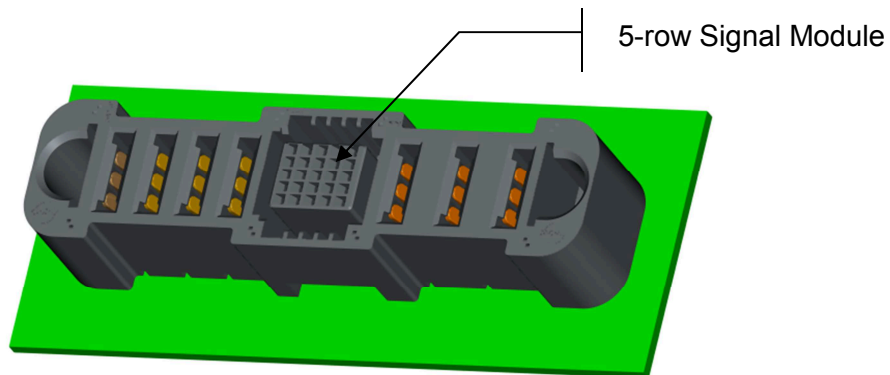
7.1 Right Angle connector assembly series 46436-XXXX, 46437-XXXX, 171088-XXXX and 171090-XXXX:

Press-fit operation can be processed with standard flat rock tooling. If a connector assembly comes with the top guide feature, the press fit tooling must have a 9.0mm clearance as shown in the illustration below.



7.2 Vertical Receptacle connector assembly series 46562-XXXX and 171089-XXXX, with a 5-row signal module (HDS):

Press fit operations can be processed with appropriately sized flat rock tooling. The entire connector body, from end to end, must be fully covered with the flat rock tooling to ensure proper forces.



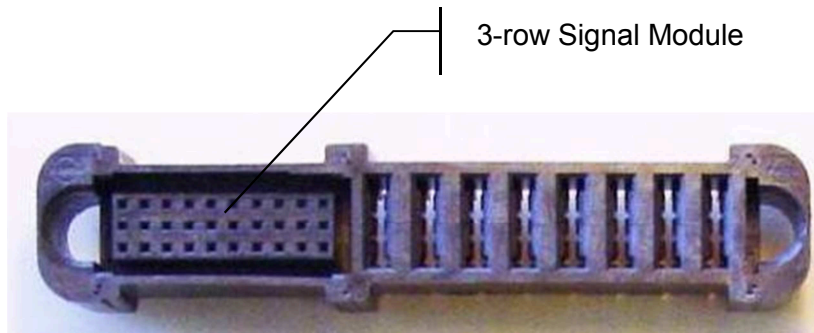
(p/n: 46562-3111 shown)

7.3 Vertical Receptacle connector assembly series 46562-XXXX, with a 3-row signal module:

Assemblies that have up to 9-ckt signals can be processed with appropriately sized flat rock tooling. The entire connector body, from end to end, must be fully covered with the flat rock tooling to ensure proper forces. For Vertical Receptacle connector assemblies with 12-ckt signal module and above, please contact Molex for assistance.

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46562-2001; Vertical Receptacle connector with 24-ckt pin signal module:
62201-8670 assembly press-in tool.

7.4 For Vertical connector assembly series 76541 and 76546, with press-fit tails:

- Tooling is custom for all part numbers.
- If your part number is not listed in the table below please contact the Ten60 Product Manager for more information.

Connector P/N	Application Tool P/N
76541-0002	62201-8673
76546-0002	62201-8673

NOTE: All tooling information and tooling instructions are available on www.molex.com

8.0 INSPECTION PROCEDURE (POST INSTALLATION)

After the connector is pressed on the PCB the final assembly should be inspected. The following is a recommended inspection procedure.

First, inspect the mating side of the connector

- * The plastic shroud should be seated and flush to the PCB, a maximum allowable gap of 0.20mm is acceptable (see figure 6.1).
- * If the seating height is not correct, the connectors may be repressed to obtain the correct seating height.

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- * Inspect the plastic housing, verify it is not cracked, deflected or damaged in any way. To avoid a miss-mate condition the daughter-card lead-in zone must be free of debris and not damaged in any way.

Second, inspect the bottom side of the PCB

- * Verify all pins were pressed into the PCB, if a pin did not get pressed into a hole the most common cause for this condition is miss-loading of the connector.

9.0 RE-WORK, REMOVAL OF THE CONNECTOR ASSEMBLIES

Vertical Receptacle connector assemblies 46562- with press-fit tails, 76541 Vertical Receptacle connectors and 76546- Vertical Plug connectors with press-fit tails can be completely removed from the PCB.

9.1 For removal of 46562- and 171089- series assembly connectors:

1. Use tool 62100-7700 to remove receptacle power housing
2. Use tool 62100-7800 to remove signal plug module (see p/n 46562-2001).
3. Use tool 62100-6600 to remove the power terminals.
4. Removal of the signal contacts requires no special tooling.

9.2 For removal of 76546- series plug assembly connector:

1. Use tool 62100-6400 to remove housing.
2. Use tool 62100-6600 to remove the power terminals.
3. Removal of the signal contacts requires no special tooling.

9.3 For removal of 76541- series receptacle assembly connectors:

1. Use tool 62100-6400 to remove housing,
2. Use tool 62100-6500 to remove the power terminals.
3. Removal of the signal contacts requires no special tooling.

NOTE: All tooling information and tooling instructions are available on www.molex.com

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