



APPLICATION SPECIFICATION



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| DOCUMENT NUMBER: AS-76090-001 | CREATED / REVISED BY: P. CASHER/JGONZALEZ | CHECKED BY: KREGNIER | APPROVED BY: M. BANAKIS |



APPLICATION SPECIFICATION

HIGH-SPEED ROUTING RECOMMENDATIONS

1.0 SCOPE

These high-speed routing recommendations cover the Molex Stacked SFP+ Multi-Port Connectors.

Disclaimer: Molex does not guarantee the performance of the final product to the information provided in this document. All information in this report is considered Molex proprietary and confidential. This guide is not intended as a substitute for engineering analysis

2.0 PRODUCT DESCRIPTION

Stacked SFP+ Multi-Port Connector with Elastomeric EMI Gasket and Light Pipes

- 76090 (2x1)
- 76091 (2x2)
- 76092 (2x4)
- 76093 (2x5)
- 76094 (2x6)
- 170017 (2x8)
- 76202 (2x6 without Light Pipes)
- 76100 (2X1 without Light Pipes)
- 76101 (2X2 without Light Pipes)
- 76102 (2X4 without Light Pipes)
- 76103 (2X5 without Light Pipes)
- 76104 (2X6 without Light Pipes)

Stacked SFP+ Multi-Port Connector with Metal EMI Gasket and Light Pipes

- 76044 (2x1)
- 76045 (2x2)
- 76046 (2x4)
- 76047 (2x5)
- 76048 (2x6)
- 76352 (2X8)
- 76200 (2x6 without Light Pipes)
- 76064 (2X1 without Light Pipes)
- 76065 (2X2 without Light Pipes)
- 76066 (2X4 without Light Pipes)
- 76067 (2X5 without Light Pipes)
- 76068 (2X6 without Light Pipes)

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APPLICATION SPECIFICATION

Stacked SFP Multi-Port Connector with Light Pipes

75310 (2X1)
75786 (2X1)
75640 (2X1)
75714 (2X2)
75450 (2X4)
75734 (2X5)
75451 (2X6)

Stacked SFP Multi-Port Connector without Light Pipes

75462 (2X1)
75759 (2X2)
75454 (2X4)
75733 (2X5)
75477 (2X6)

3.0 REFERENCE DOCUMENTS

Product Specification – PS-76090-NNN
SI Guidelines – TS-75310-NNN
Electrical Model – EE-75310-NNN

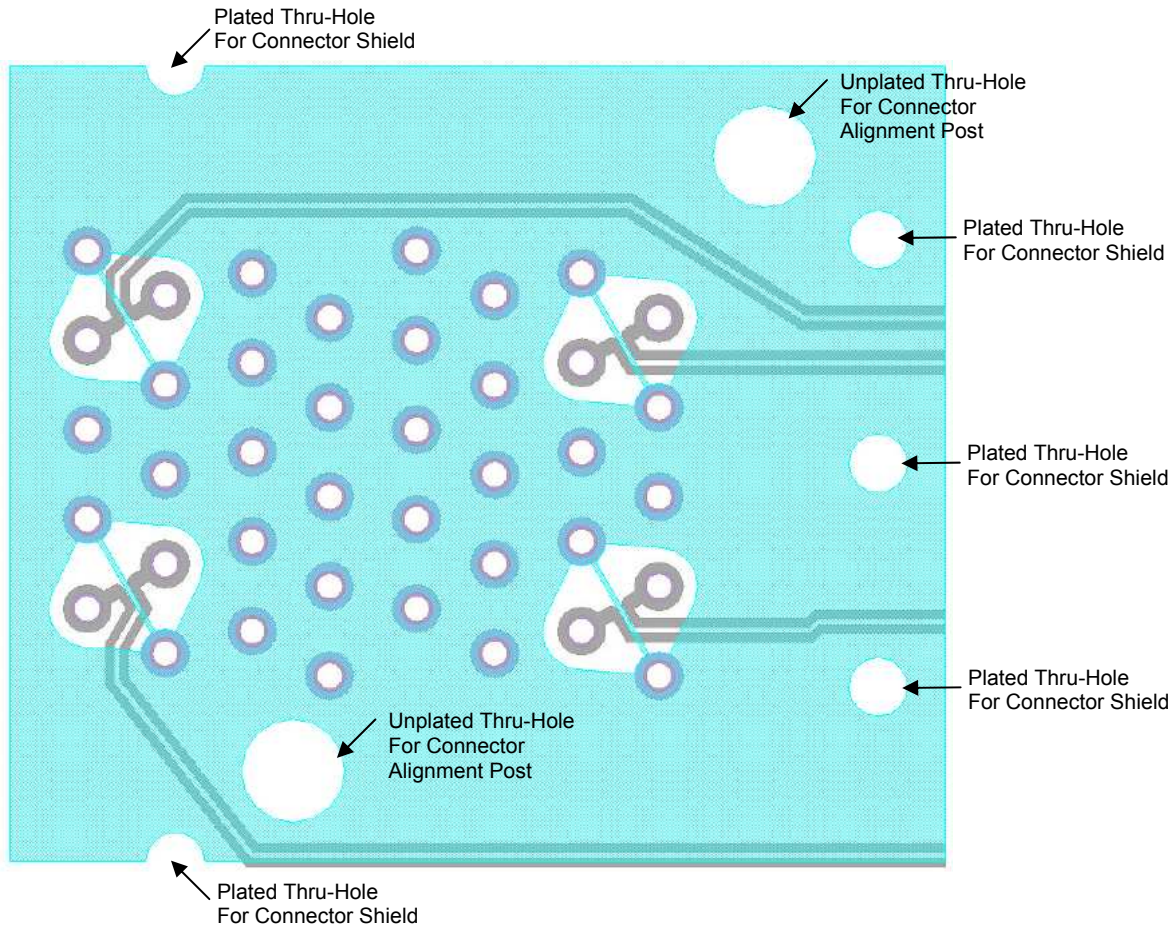
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4.0 RECOMMENDATIONS

4.1 GENERAL ROUTING EXAMPLE



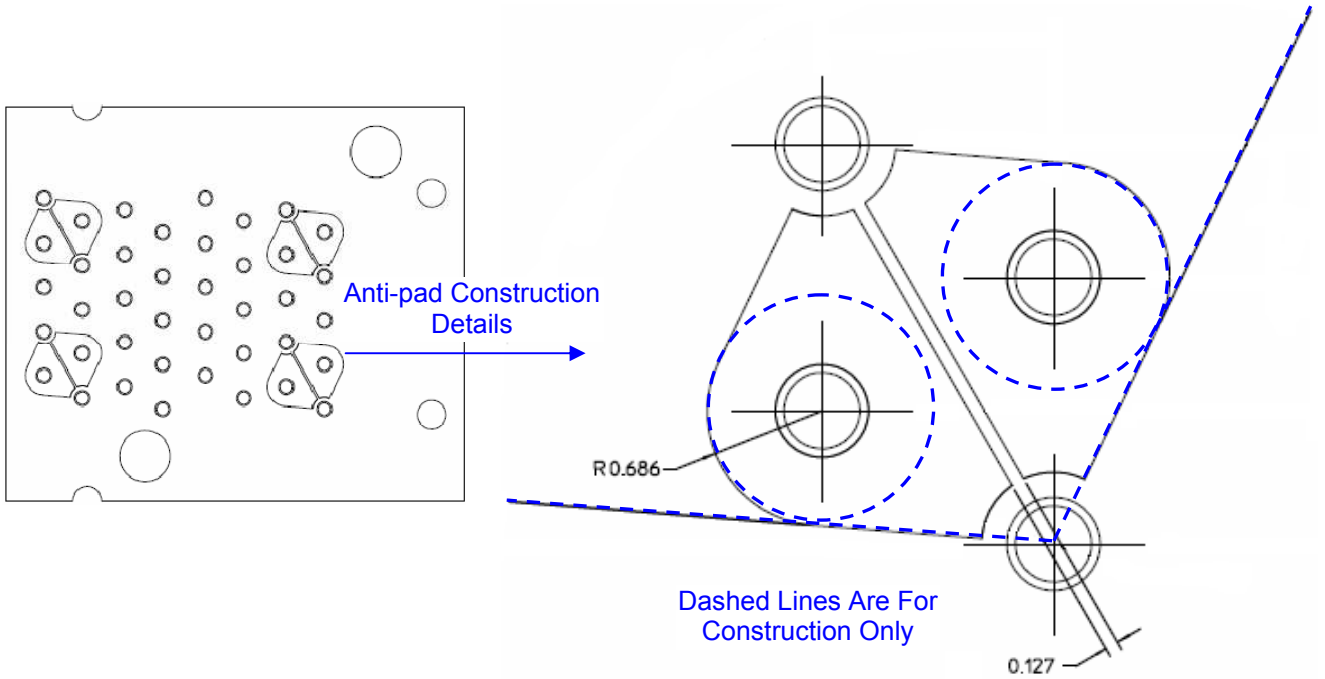
Note: This routing is shown as a 2X1, but is side-by-side repeatable for higher port connectors, such as 2X2, 2X4, etc.

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4.2 HIGH-SPEED REFERENCE PLANE ANTI-PAD

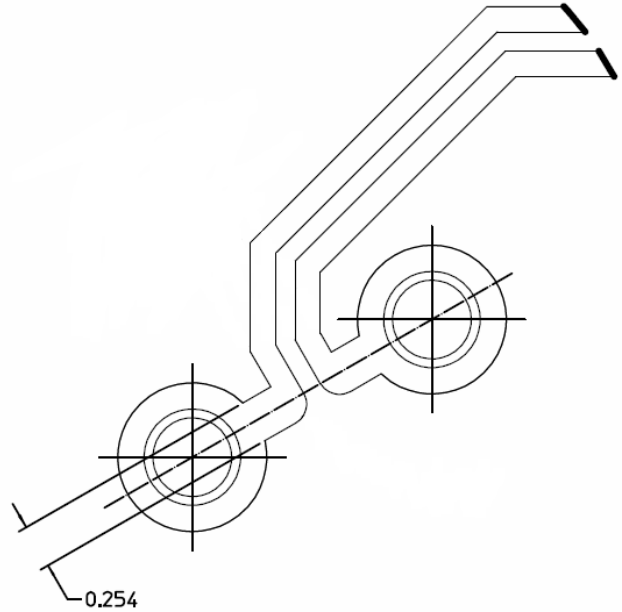
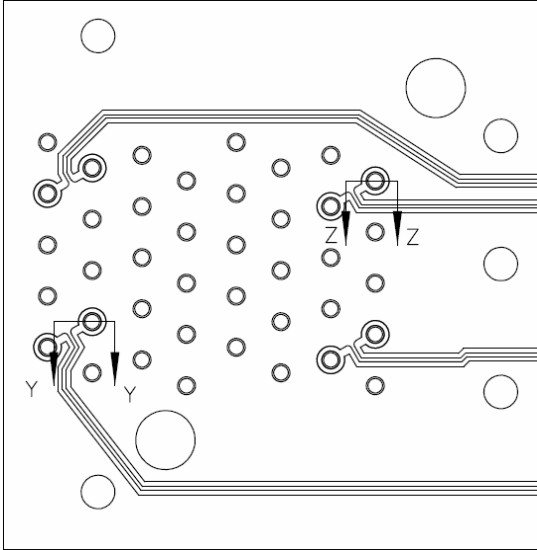


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4.3 HIGH-SPEED TRANSMISSION LINE PLANE

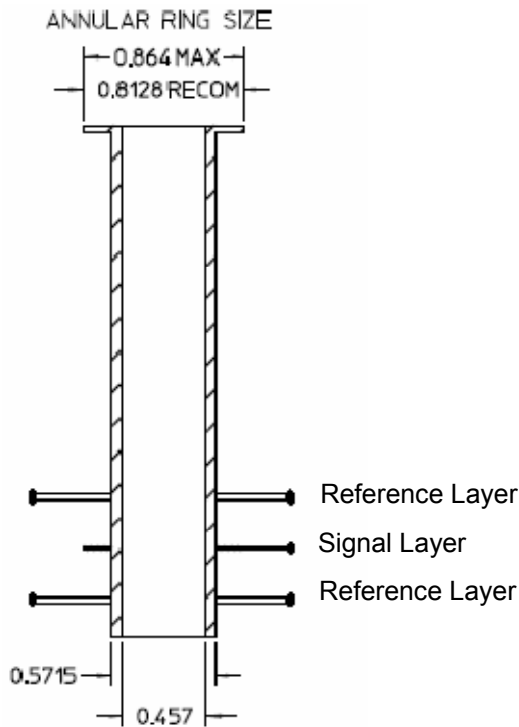


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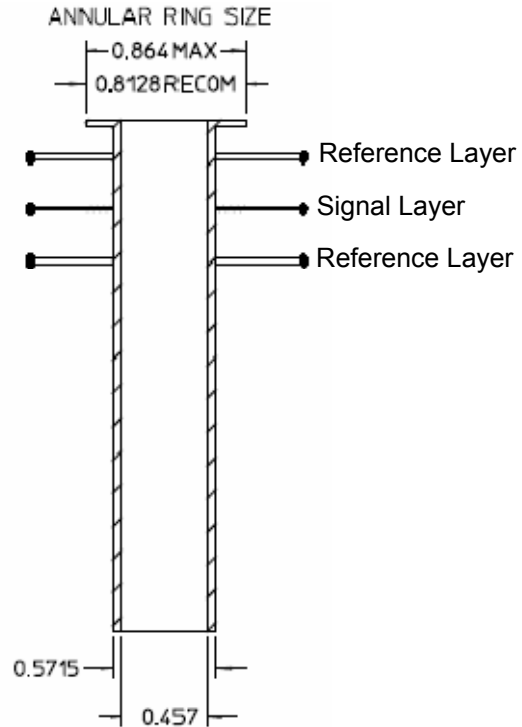
APPLICATION SPECIFICATION

4.4 CONNECTOR PRESS-FIT INTERFACE VIA STUBS



SECTION Z-Z

**BOTTOM LAUNCH
DRIVEN VIA
(PREFERRED)**



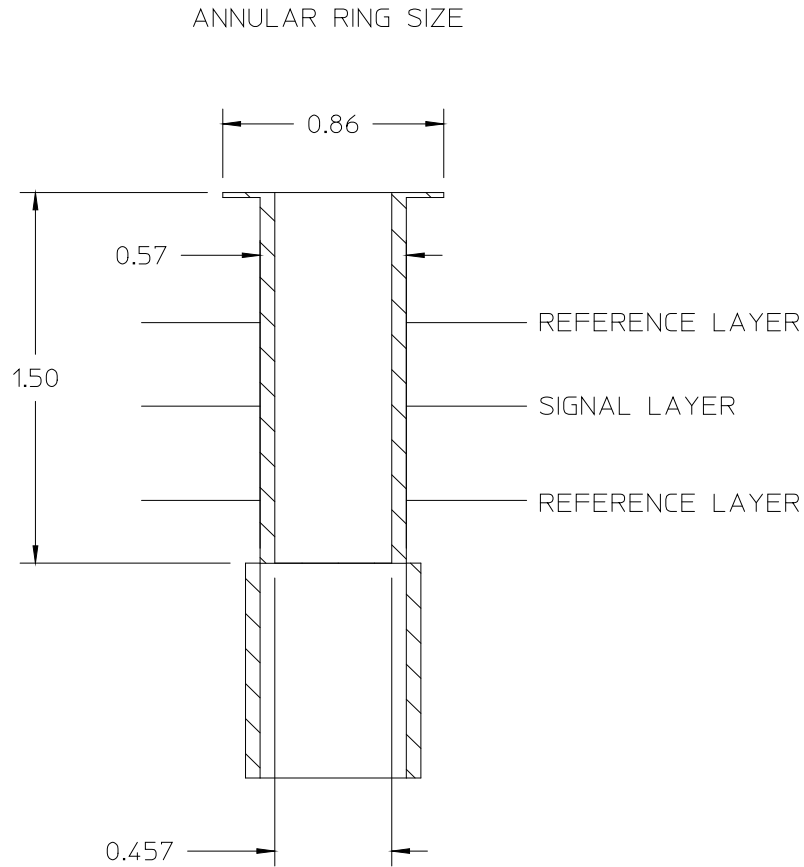
SECTION Y-Y

**TOP LAUNCH
STUB VIA
(WORST_CASE)**

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Only two annular rings are required for retention of the press-fit via within the printed circuit consequently annular rings on the bottom layer are not needed. Removing the bottom layer annular ring helps minimize the parasitic stub capacitance created by the via.

The anti-pad can be used on other ground layers not shown above. Alternatively, the anti-pad can be made larger with a broader keep-out region on these other ground layers to minimize parasitic capacitance.

For the connector press-fit vias, specify not only the 0.457mm (0.018") finished hole size but also the 0.5715mm (0.0225") drill size for the board fabrication.

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