



# SIGNAL INTEGRITY REPORT

## DOCUMENT SUMMARY

This document compares the performance of Molex's enhanced zSFP+ product to the SFF-8081 revision 0.9 specification.

Further information regarding this connector product line and other related Molex zSFP+ products can be found at <http://www.molex.com/>

**zSFP+ SMT**



**APPLICABLE PART NUMBER(S): Molex series 170382: 170382-0001, 170382-0002**

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REVISION: <b>A</b>	ECN INFORMATION: EC No: <b>UCP2012-2865</b> DATE: <b>3/2/2012</b>	TITLE: <b>zSFP+ SMT SFF-8081 Analysis</b> <b>MOLEX CONFIDENTIAL</b>	SHEET No. <b>1 of 6</b>
DOCUMENT NUMBER: <b>SI-170382-0001</b>	CREATED / REVISED BY: <b>X. Wu</b>	CHECKED BY: <b>M. Rowlands</b>	APPROVED BY: <b>R. Benson</b>



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## DOCUMENT SCOPE

This document uses modeled connector data (SP-170382-0001.s8p and SP-170382-0001\_revB.s8p) to demonstrate conformance to the SFF-8081 revision 0.9 specification. Information about these models can be found in Electrical Model Documentation (EE-170382-001\_rev3.pdf and EE-170382-0001\_revB.pdf) for these modeled data.

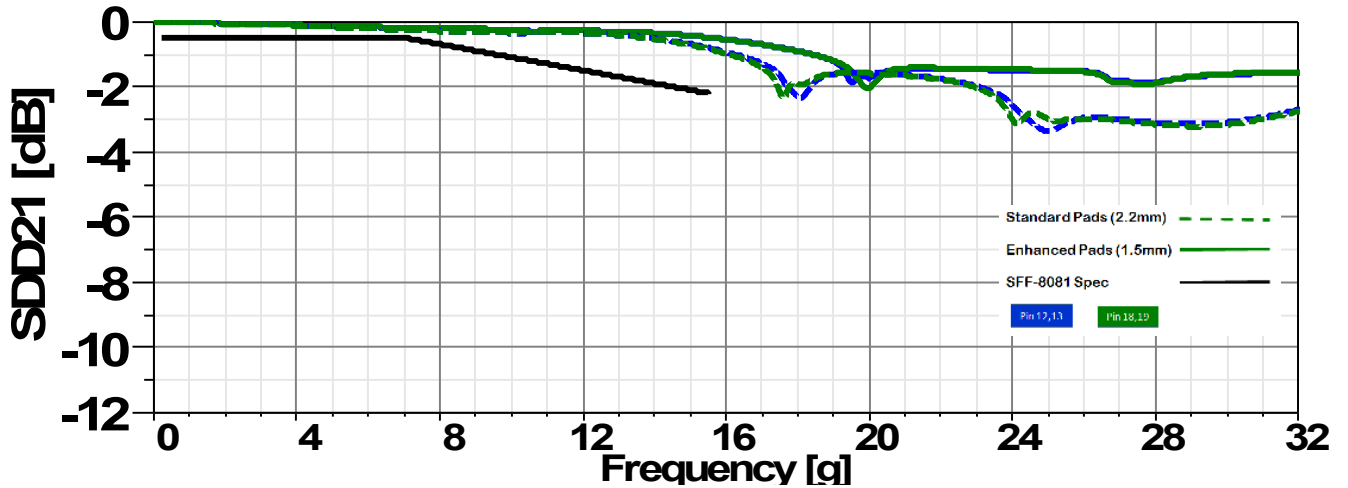
For the differential requirements the defined SFF-8081 reference board losses, shown below, were added to the modeled connector data. Note, that SFF does not define any common mode insertion losses for the applicable test fixtures. There for no adjustments were made to the connector only common mode data to show conformance. Actual measured values would vary depending on the common mode insertion loss performance of the test fixtures.

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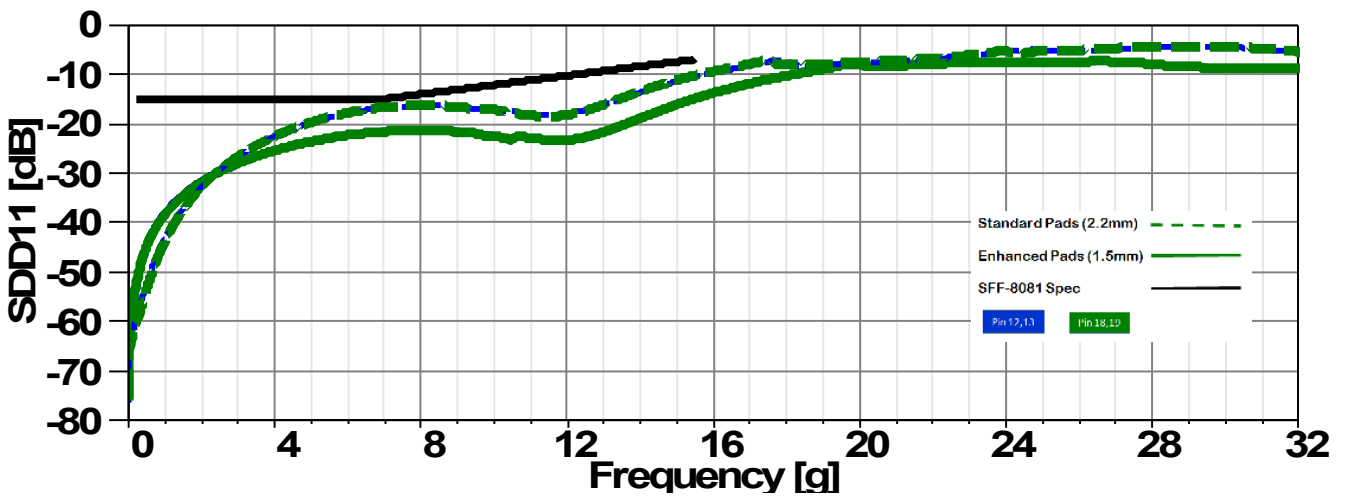


# SIGNAL INTEGRITY REPORT

## Differential Insertion Loss



## Differential Return Loss

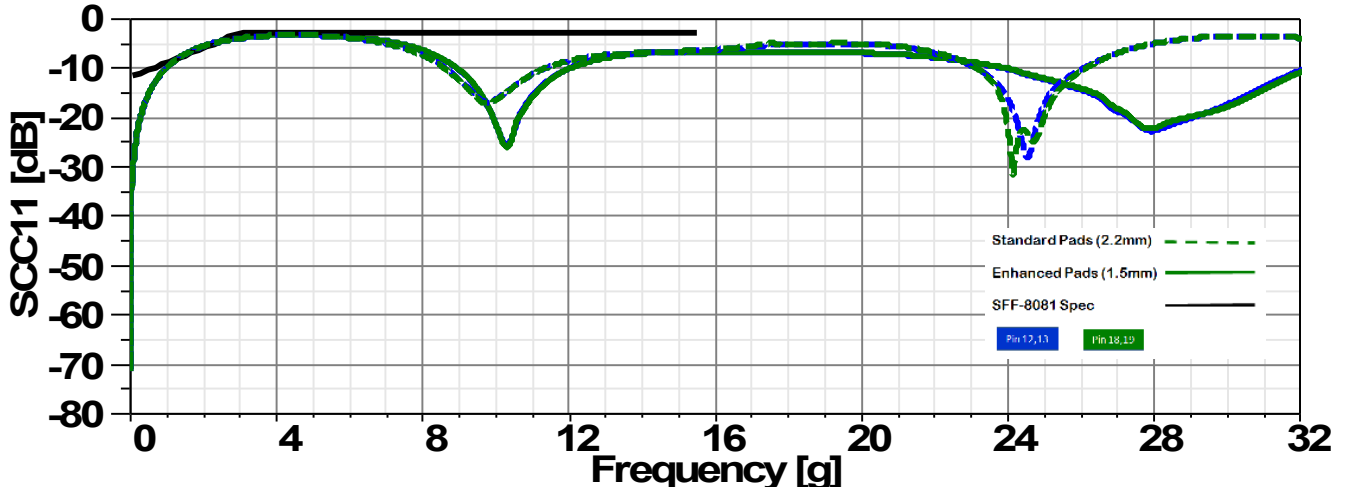


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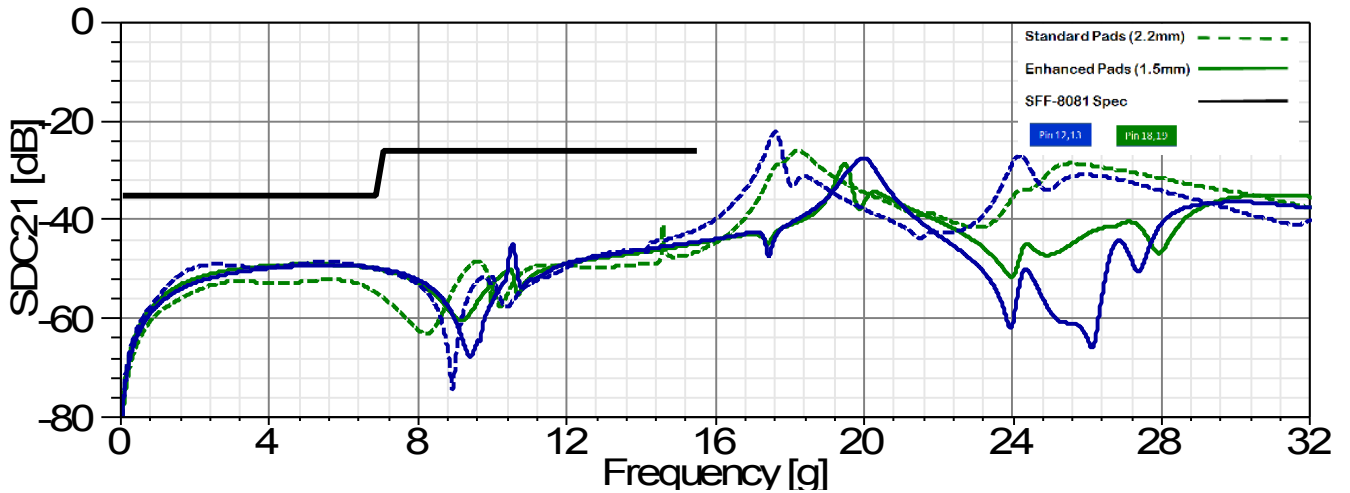


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## Common Mode Return Loss



## Differential-to-Common Mode Conversion (Through)



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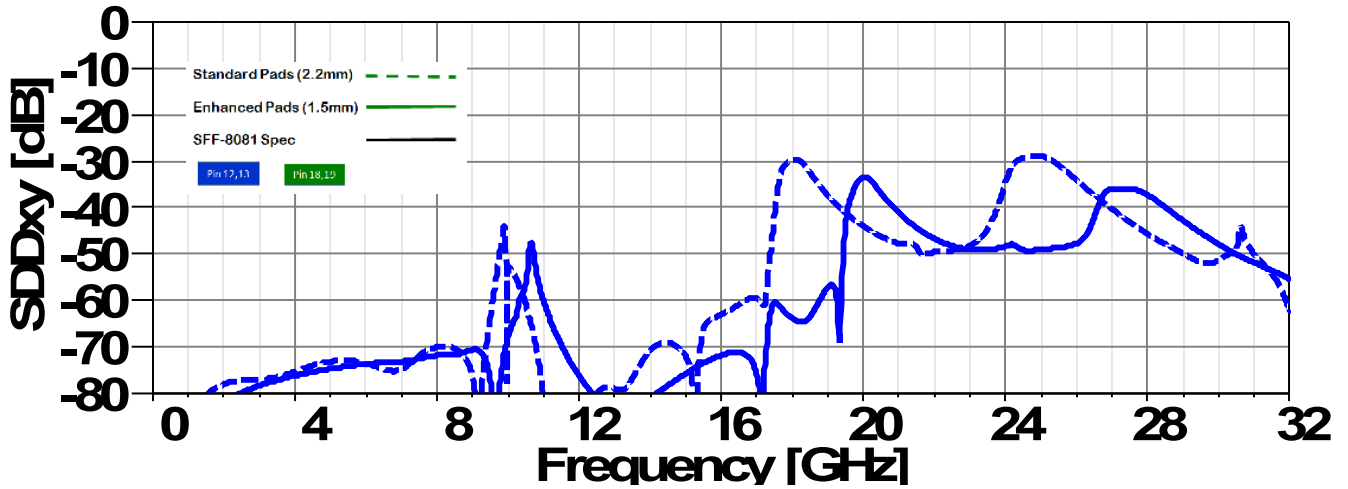
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## Differential Near-end Crosstalk

SFF-8081 spec (20GHz BW, 1.0Vdiff, 24ps 20-0 risetime): 1.8 mVrms

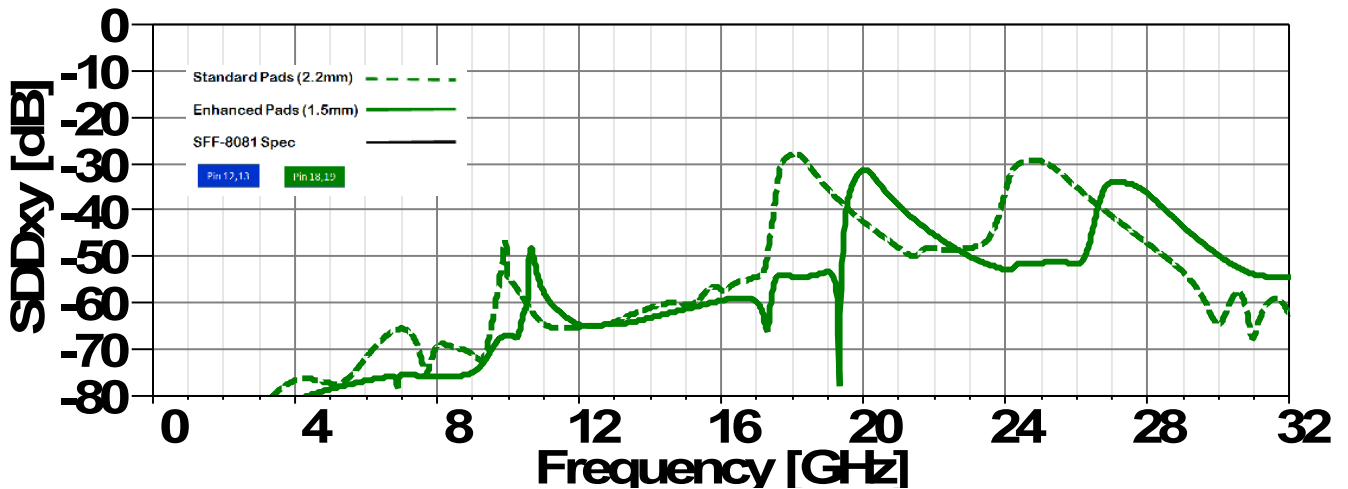
zSFP+ SMT standard pads: 0.3 mVrms

zSFP+ SMT standard pads: 0.2 mVrms



## Differential Far-end Crosstalk – FOR REFERENCE

SFF-8081 spec: Not applicable

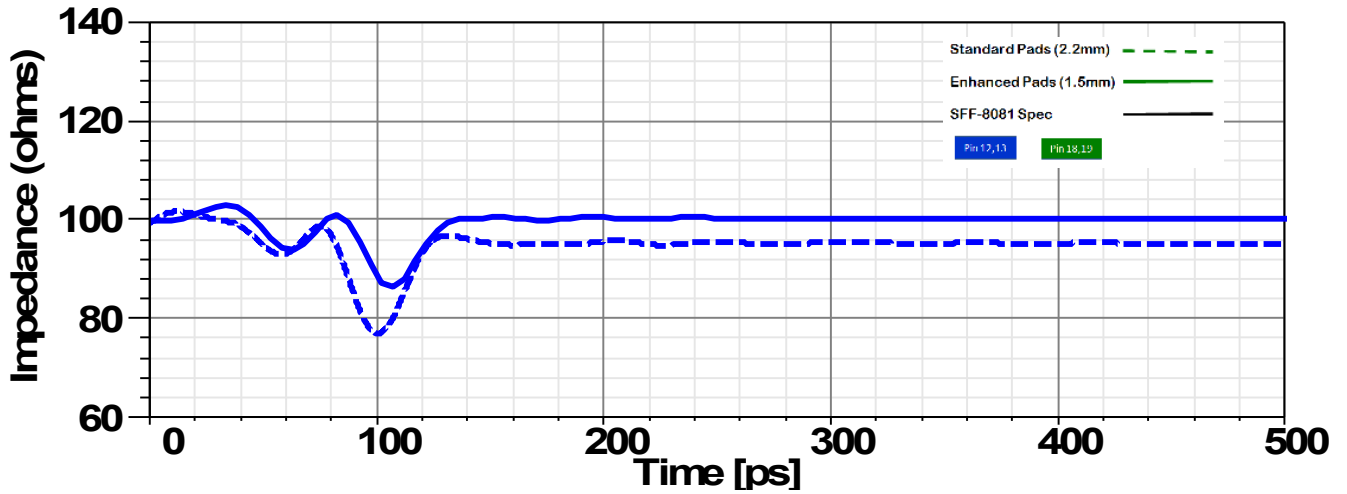


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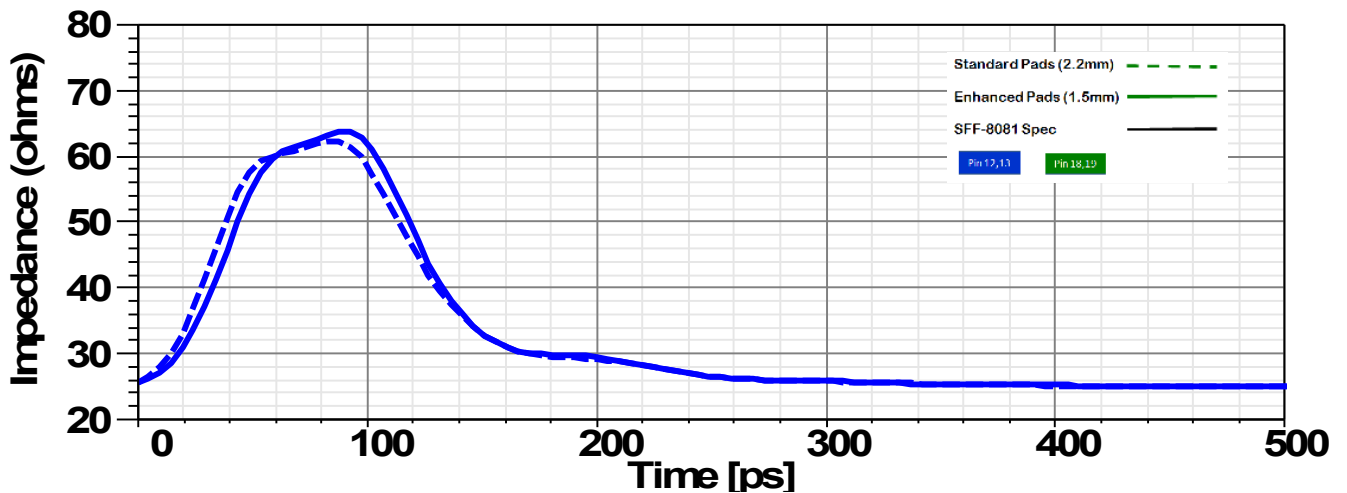


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## Differential Impedance (TDR)



## Common Mode Impedance (TDR)



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