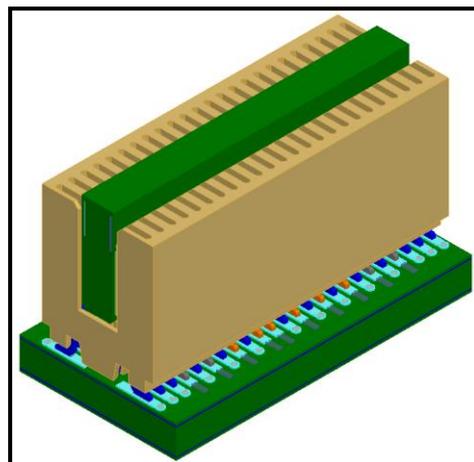




SIGNAL INTEGRITY REPORT

DOCUMENT SUMMARY

This document compares the performance of Molex's DDR4 MiniDIMM 0.5mm pitch vertical SMT mated connector between simulation and measurement using Molex Connector Test Board.



APPLICABLE SERIES NUMBER:

151105

DISCLAIMERS: Information contained in this document is simulated. Molex Incorporated does not guarantee the performance of the final product to the information provided in this document.

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The user is responsible for verifying the results of their use of this information, and assumes all risk of doing or not doing so. Use of the electronic file evidences user's agreement to the above terms.

Any charts or schematics in this report are only for general reference. The schematic allows the user to configure a similar simulation circuit in any simulation tool. The resulting charts provided allow a comparison of results to the Molex simulation using the stated schematic.

REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 1 of 10
DOCUMENT NUMBER: SI-151105-0001	CREATED / REVISED BY: WHFOO 2015/10/27	CHECKED BY: CMWONG 2015/10/27	APPROVED BY: WTCHUA 2015/10/27



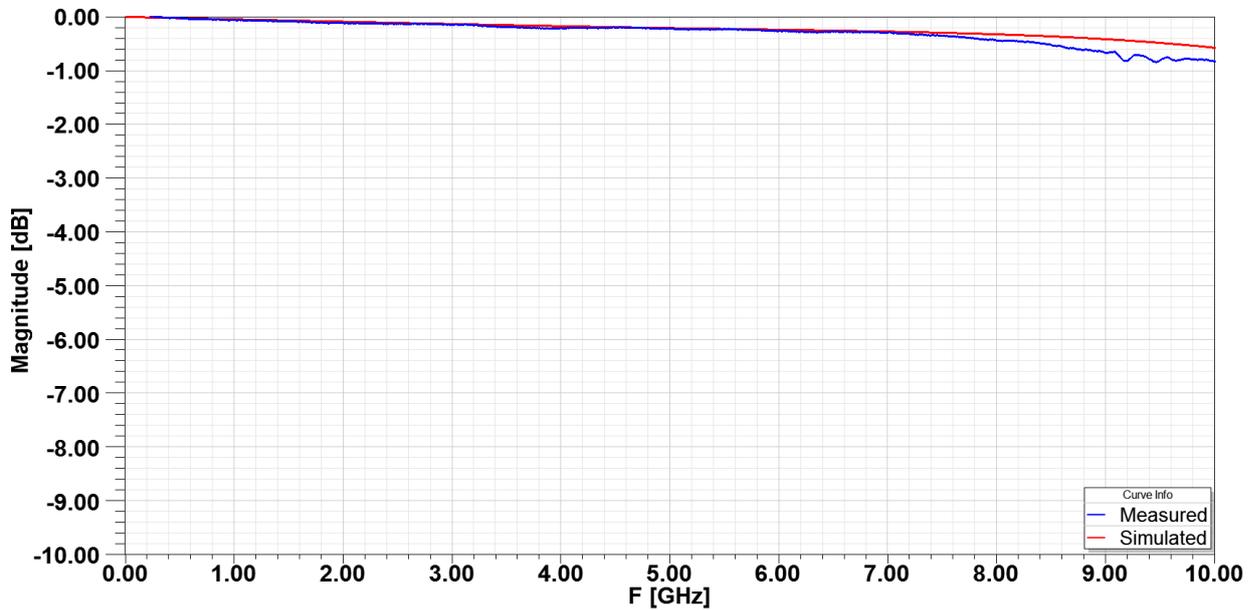
SIGNAL INTEGRITY REPORT

DOCUMENT SCOPE

This document uses modeled connector data (SP-151105-0001_rev1.s24p) to compare the performance of the simulated against measured data. Information about this model can be found in the Electrical Model Documentation (EE-151105-0001_rev1.docx) for this modeled data.

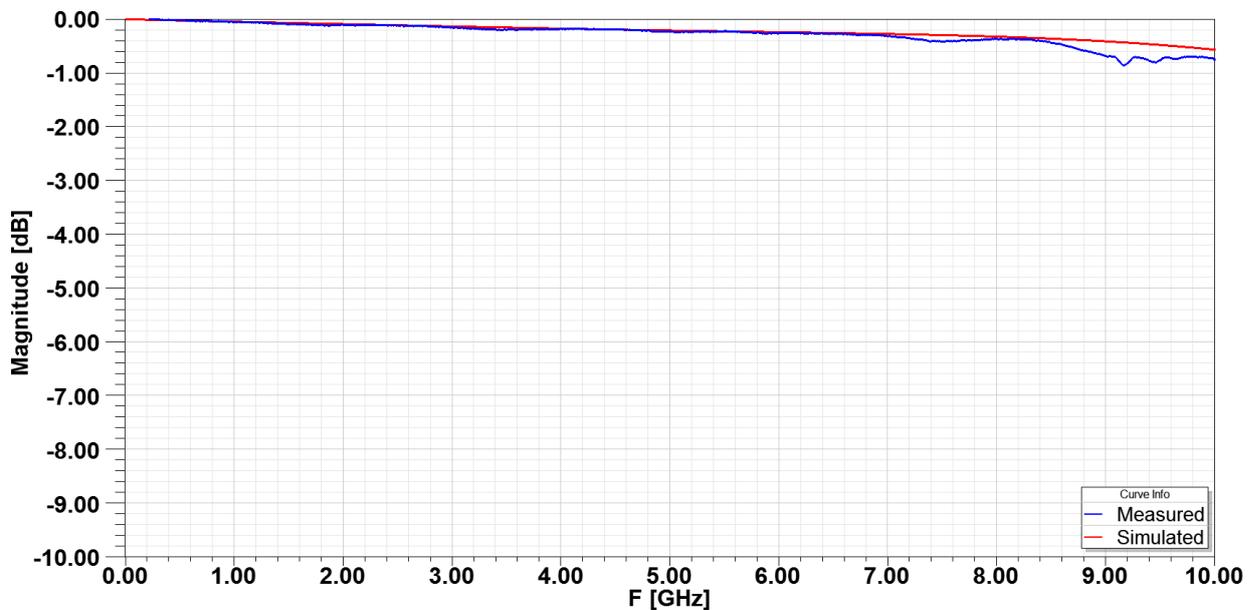
Insertion Loss

- Front terminal



Insertion Loss

- Back terminal



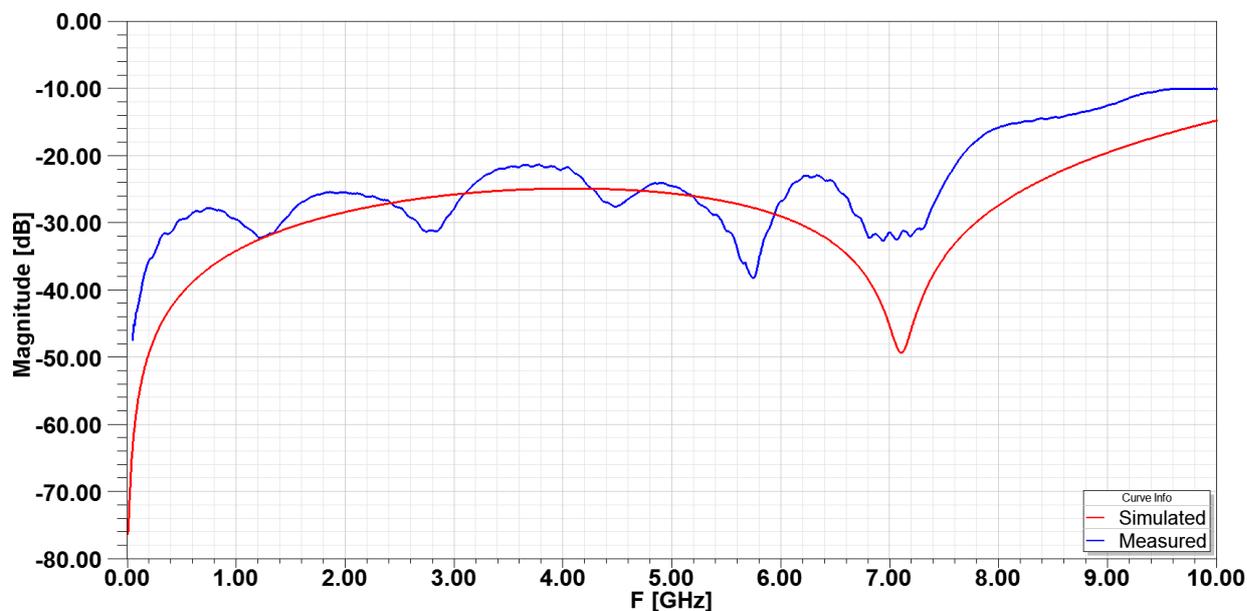
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SIGNAL INTEGRITY REPORT

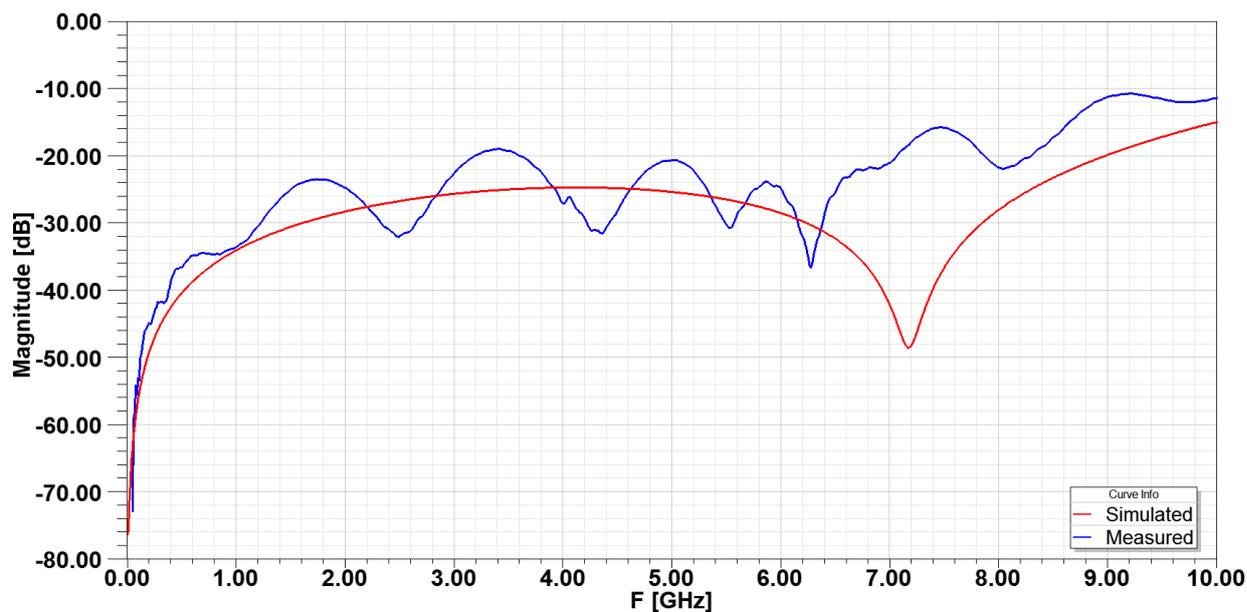
Return Loss

- Front terminal



Return Loss

- Back terminal



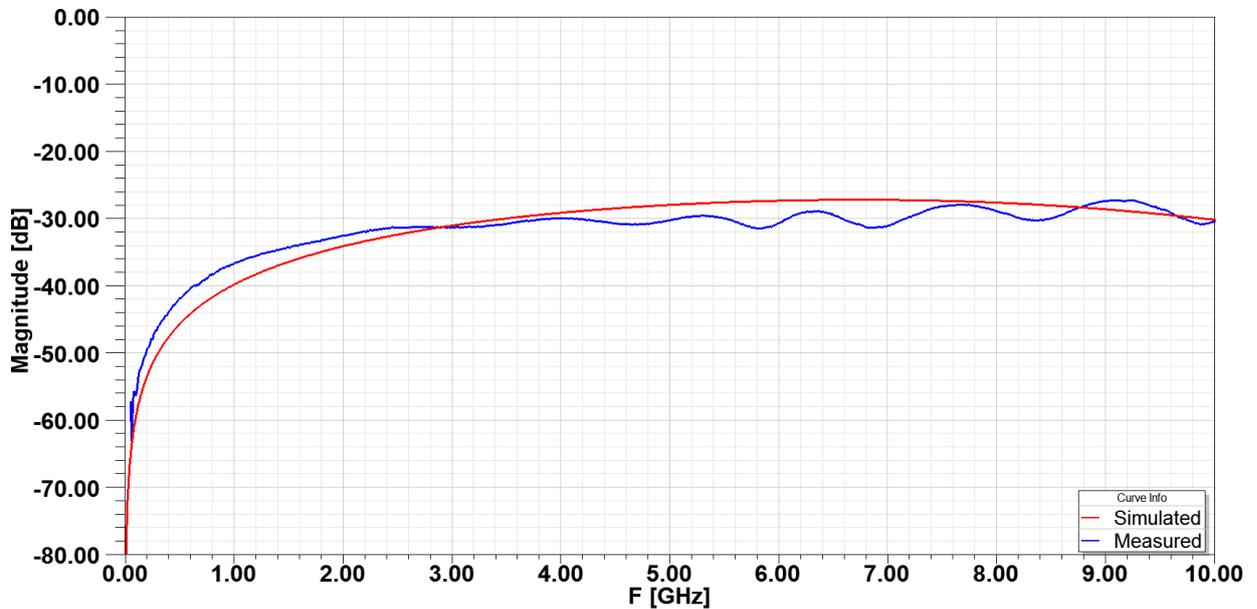
REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 3 of 10
DOCUMENT NUMBER: SI-151105-0001	CREATED / REVISED BY: WHFOO 2015/10/27	CHECKED BY: CMWONG 2015/10/27	APPROVED BY: WTCHUA 2015/10/27



SIGNAL INTEGRITY REPORT

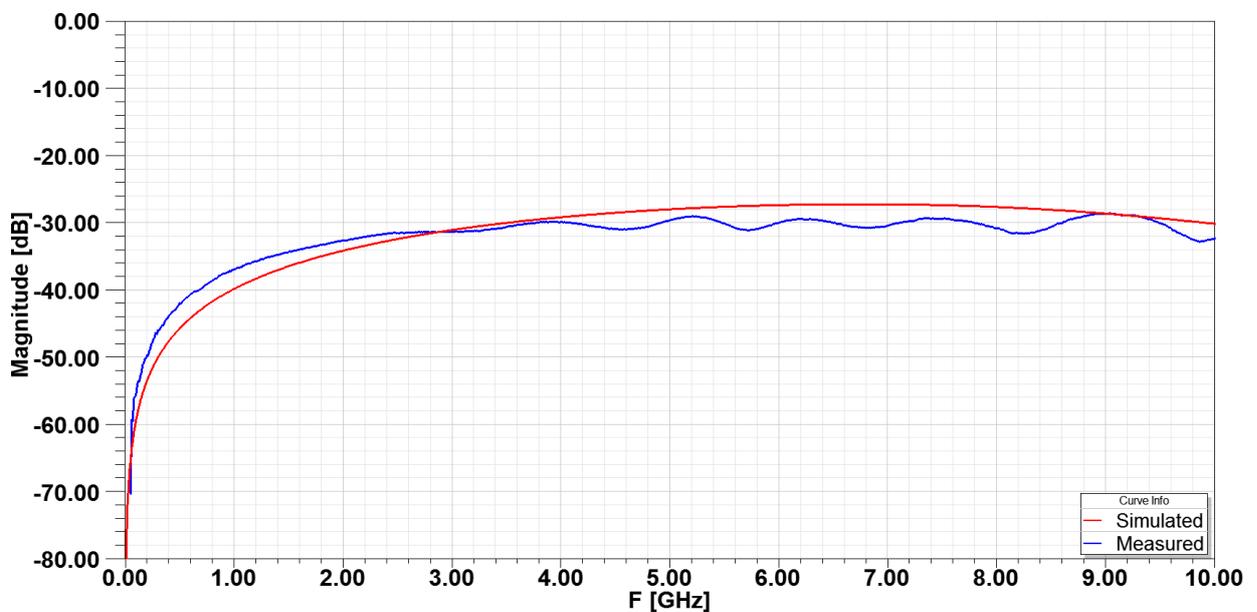
Near End Cross-Talk (Same Side)

- Front terminal
- 1:1 S/G ratio
- Both victim and aggressor located in same row



Near End Cross-Talk (Same Side)

- Back terminal
- 1:1 S/G ratio
- Both victim and aggressor located in same row



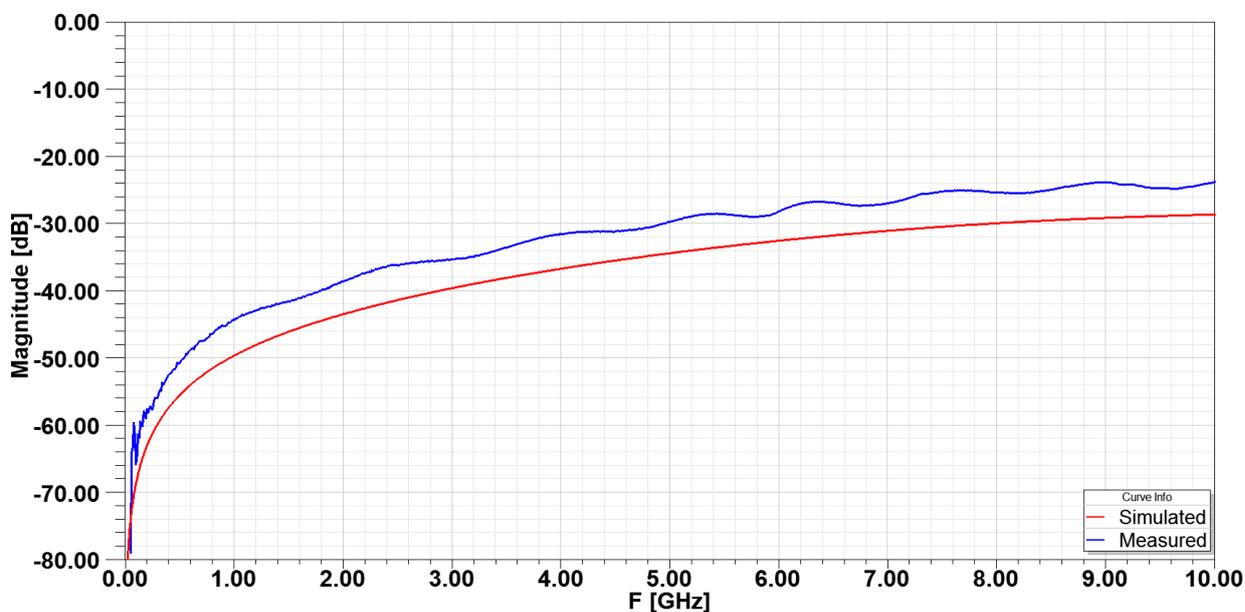
REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 4 of 10
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SIGNAL INTEGRITY REPORT

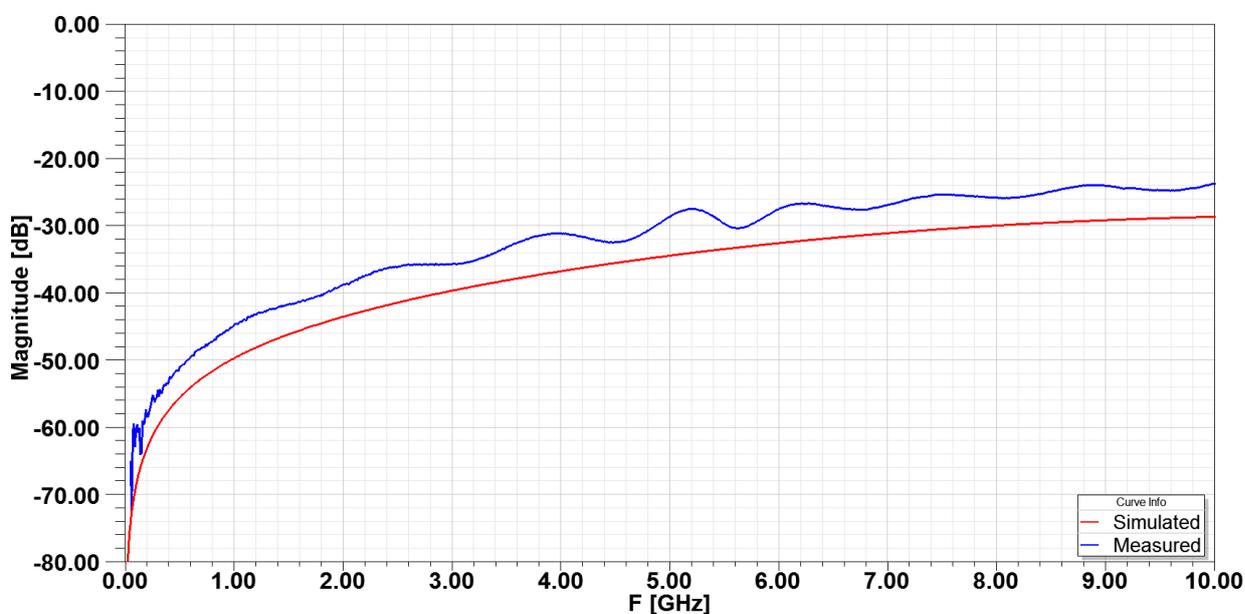
Far End Cross-Talk (Same Side)

- Front terminal
- 1:1 S/G ratio
- Both victim and aggressor located at same row



Far End Cross-Talk (Same Side)

- Back terminal
- 1:1 S/G ratio
- Both victim and aggressor located at same row



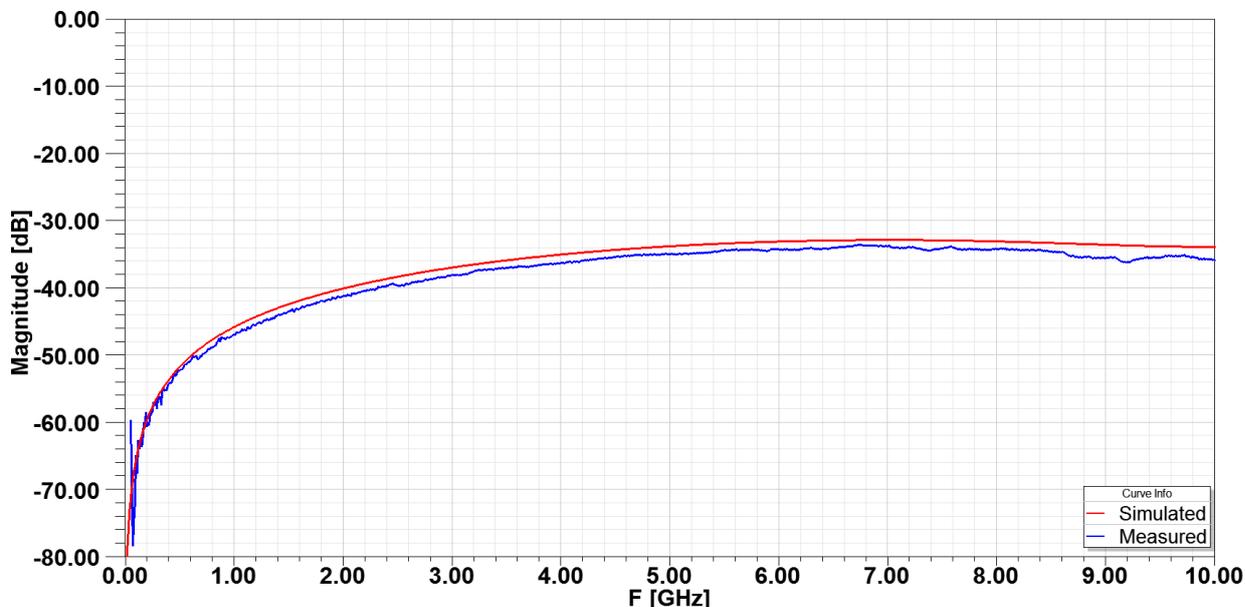
REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 5 of 10
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SIGNAL INTEGRITY REPORT

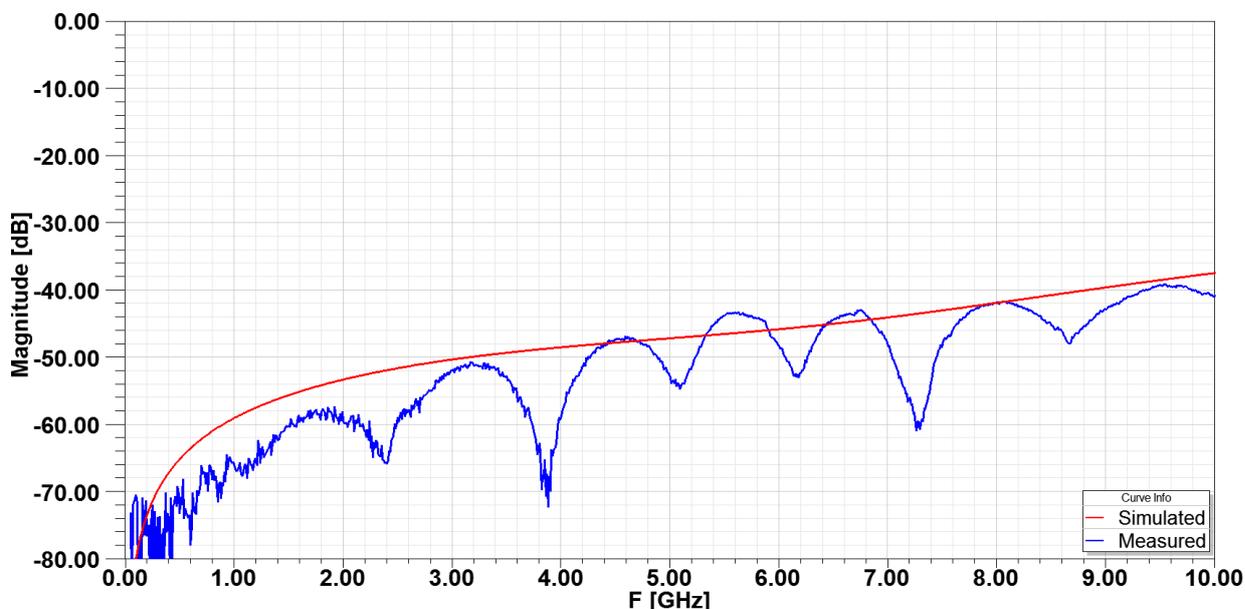
Near End Cross-Talk (Opposite Sides)

- 1:1 S/G ratio
- Victim located in front row
- Aggressor located in back row



Far End Cross-Talk (Opposite Sides)

- 1:1 S/G ratio
- Victim located in front row
- Aggressor located in back row



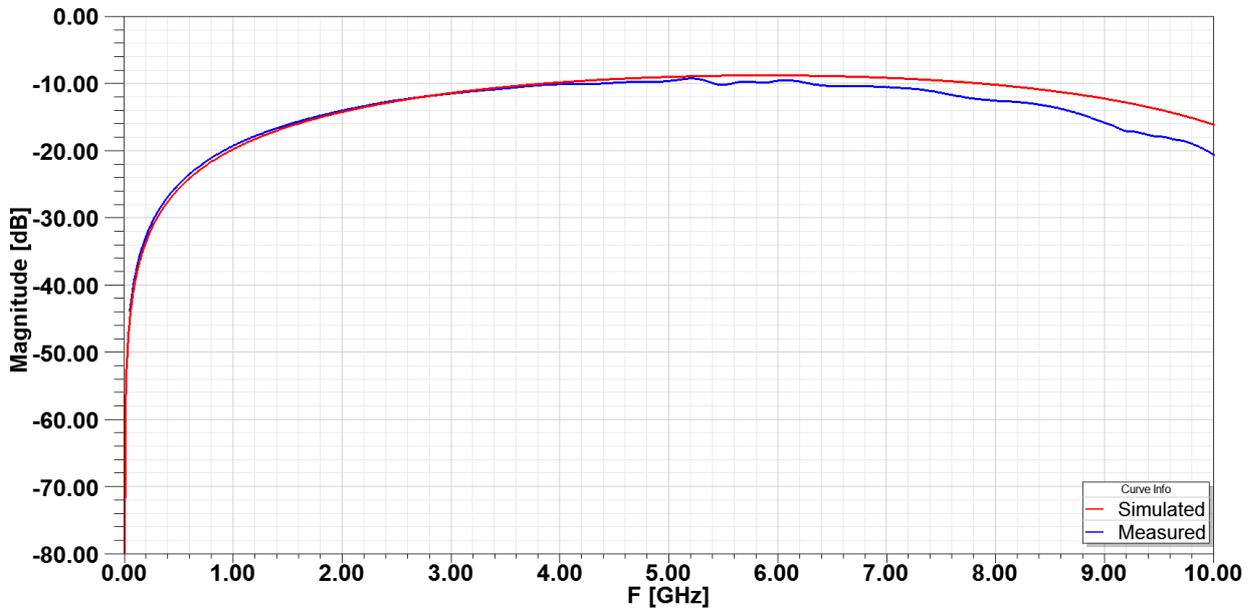
Near End Cross-Talk (Front)

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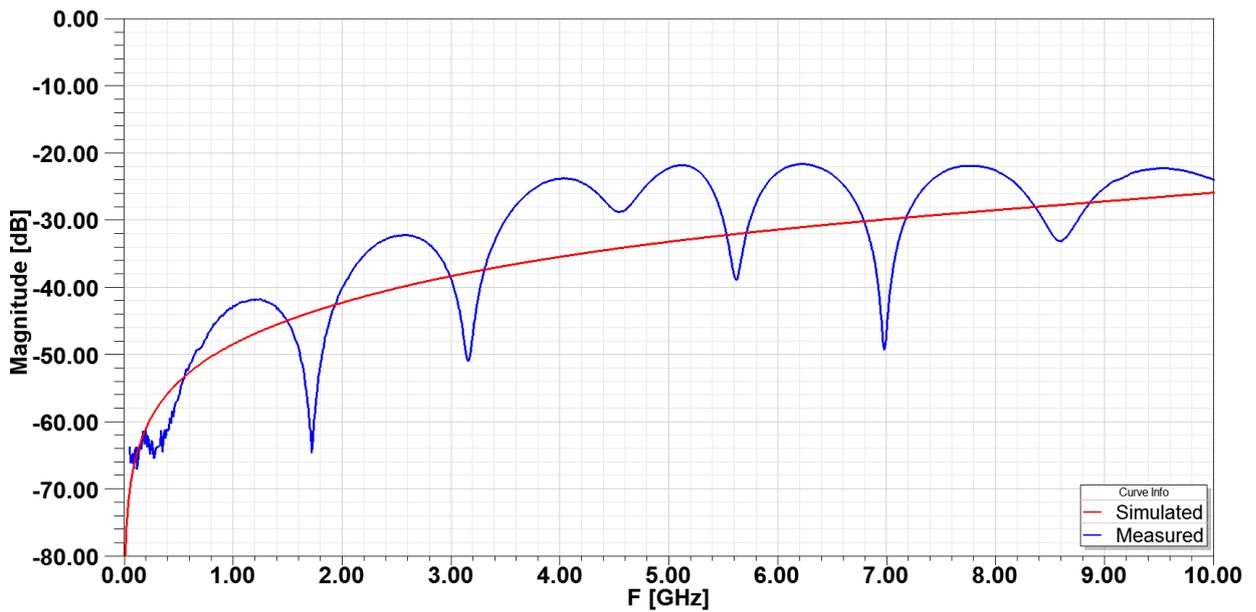
SIGNAL INTEGRITY REPORT

- 2:1 S/G ratio



Far End Cross-Talk (Front)

- 2:1 S/G ratio



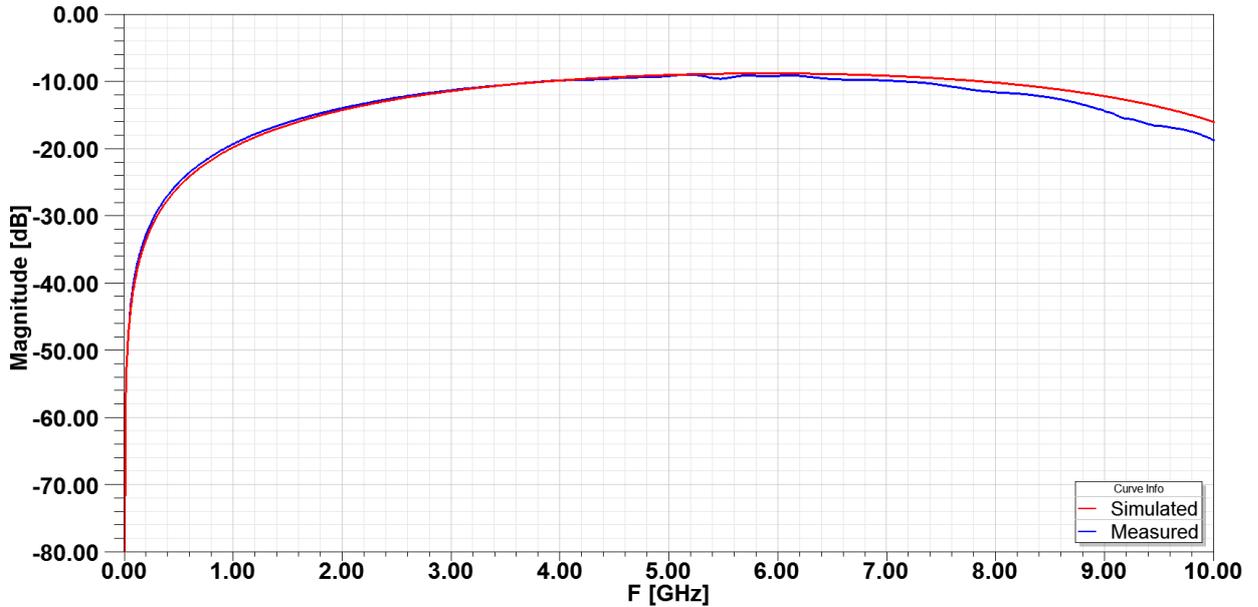
Near End Cross-Talk (Back)

REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 7 of 10
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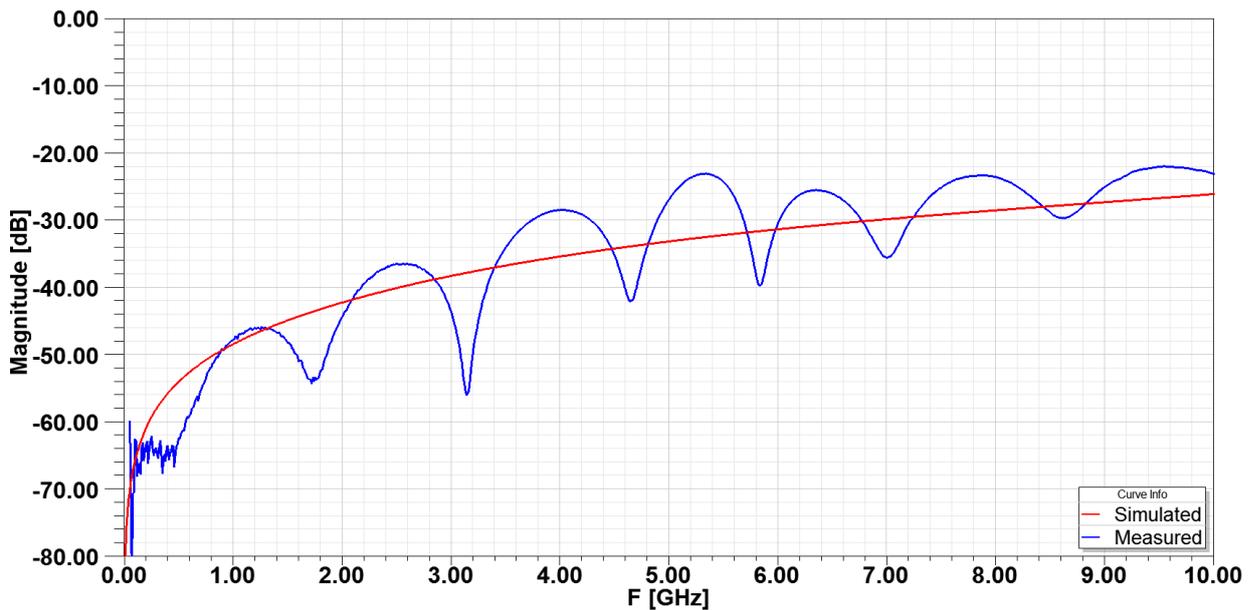
SIGNAL INTEGRITY REPORT

- 2:1 S/G ratio



Far End Cross-Talk (Back)

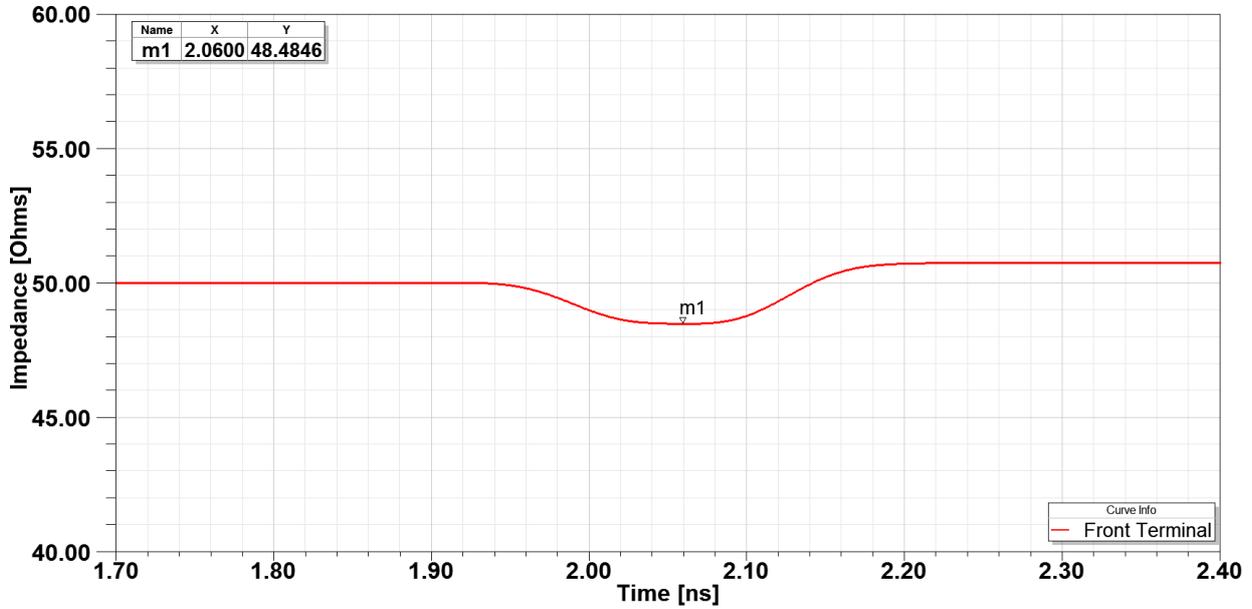
- 2:1 S/G ratio



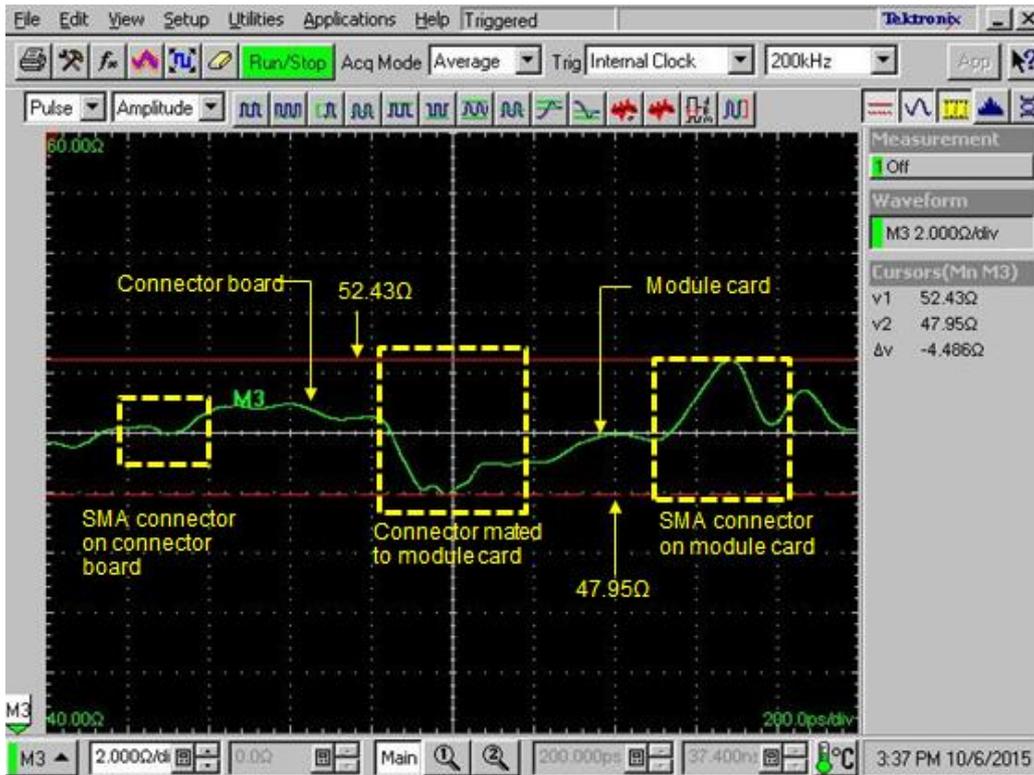
REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 8 of 10
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TDR Impedance Front Terminal

- Reference rise-time of 100ps [10%~90%] at connector launch



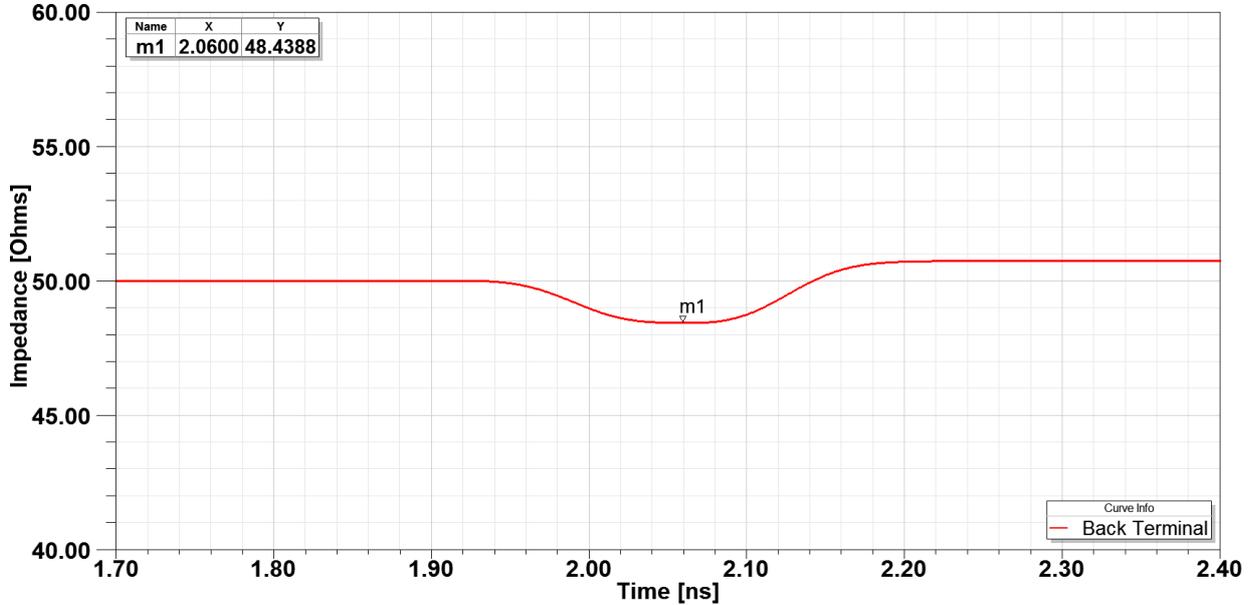
- Reference rise-time of 100ps [10%~90%] at connector launch



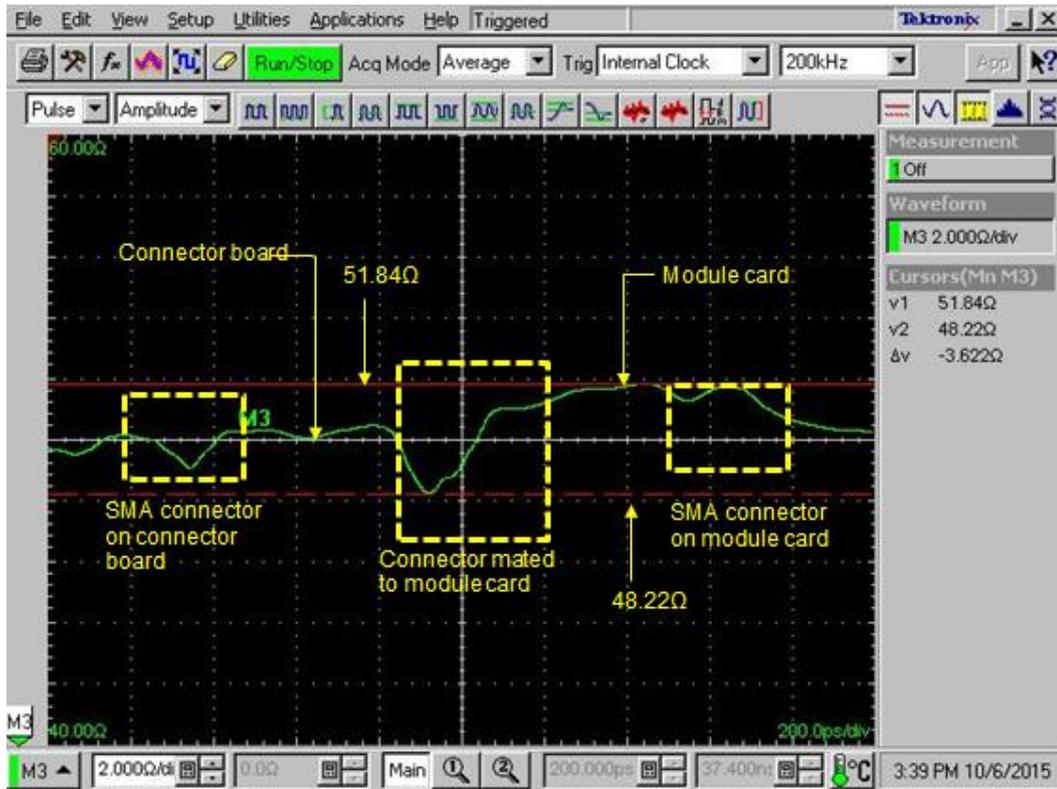
REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 9 of 10
DOCUMENT NUMBER: SI-151105-0001	CREATED / REVISED BY: WHFOO 2015/10/27	CHECKED BY: CMWONG 2015/10/27	APPROVED BY: WTCHUA 2015/10/27

TDR Impedance Back Terminal

- Reference rise-time of 100ps [10%~90%] at connector launch



- Reference rise-time of 100ps [10%~90%] at connector launch



REVISION: 1	ECN INFORMATION: EC No: S2016-0403 DATE: 2015/10/27	TITLE: Signal Integrity Report DDR4 MiniDIMM 0.5mm Pitch Vertical SMT Connector	SHEET No. 10 of 10
DOCUMENT NUMBER: SI-151105-0001	CREATED / REVISED BY: WHFOO 2015/10/27	CHECKED BY: CMWONG 2015/10/27	APPROVED BY: WTCHUA 2015/10/27