



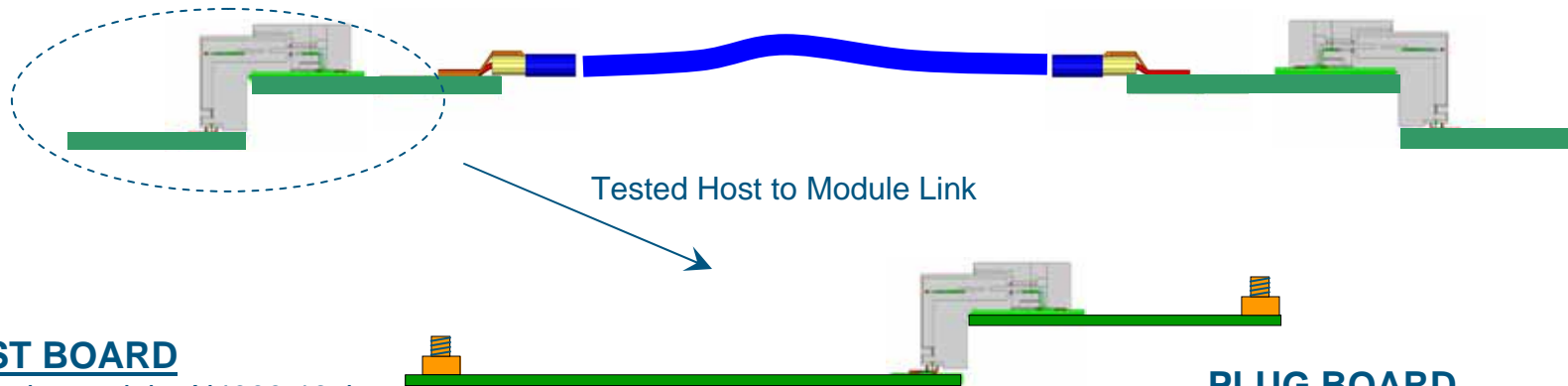
# 25Gb/s VSR LINK DATA

100Gb/s Ethernet Electrical Backplane and Twinaxial  
Copper Cable Assemblies Study Group

January 2011, Fort Lauderdale, FL

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# PASSIVE COPPER CABLE ASSEMBLY



Tested Host to Module Link

## HOST BOARD

- Board material = N4000-13si
- Trace length = **4" and 7"**
- Trace geometry = stripline
- Trace width = 5 mils
- Differential trace spacing = 6 mils
- PCB thickness = 0.093"
- 2 signal layers
- 6 ground planes
- Layer connection = layer 2 (near top)
- Counterbored

## CONNECTOR

- QUADRA
- 2 piece connector design
- All 8 high speed pairs on top of the module board
- No vias required on module PCB
- Approximately the size of QSFP

## PLUG BOARD

- Board Material = N4000-13si
- Trace length = 1.25"
- Trace geometry = mStrip
- Trace width = 7 mils
- Differential trace spacing = 5 mils
- PCB thickness = 1 mm

- All data is tested data
- Models are .s8p files,  
pairs 3/ 4 are adjacent pairs (one upper one lower),  
pairs 3/ 5 are two-aways in upper row  
and pair 4/ 6 are two-aways in lower row

08-09

14-15

11-12

17-18

# HOST TO MODULE LINK

RX

TX

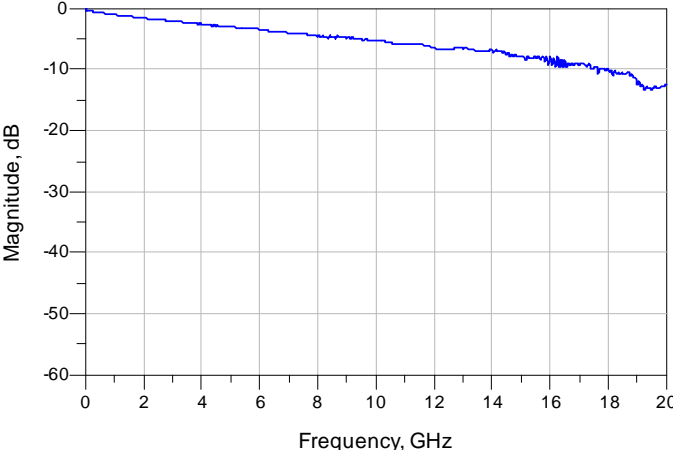
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## 4" Host Trace

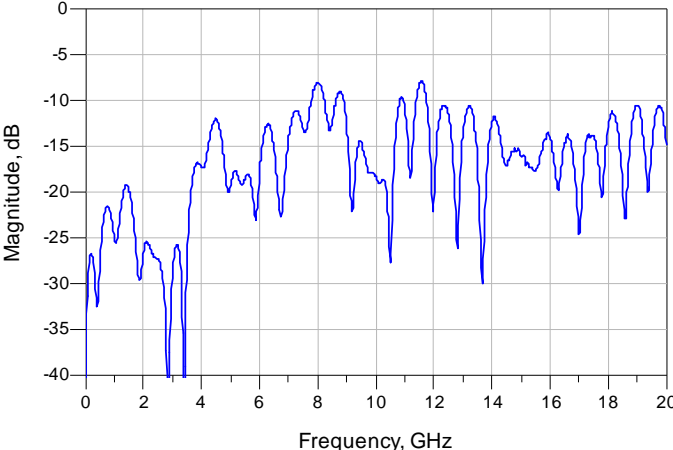
RX

TX

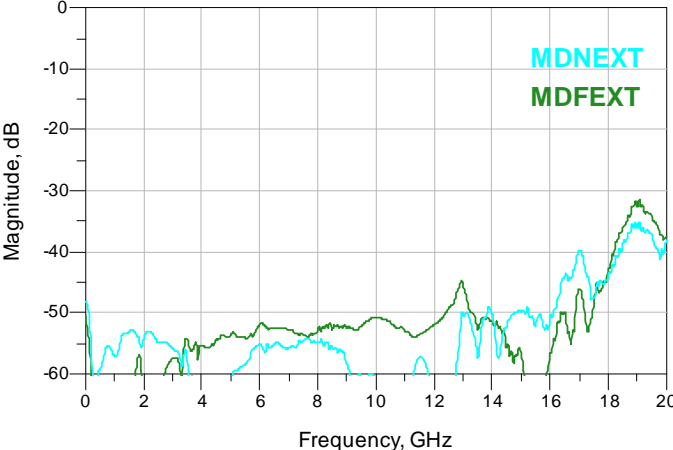
CHANNEL INSERTION LOSS



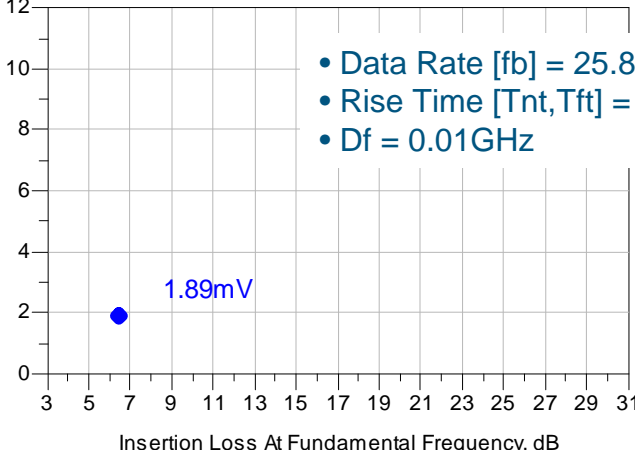
CHANNEL RETURN LOSS



MULTI DISTRIBUTOR CROSSTALK



INTEGRATED CROSSTALK NOISE



# HOST TO MODULE LINK

RX

**TX**

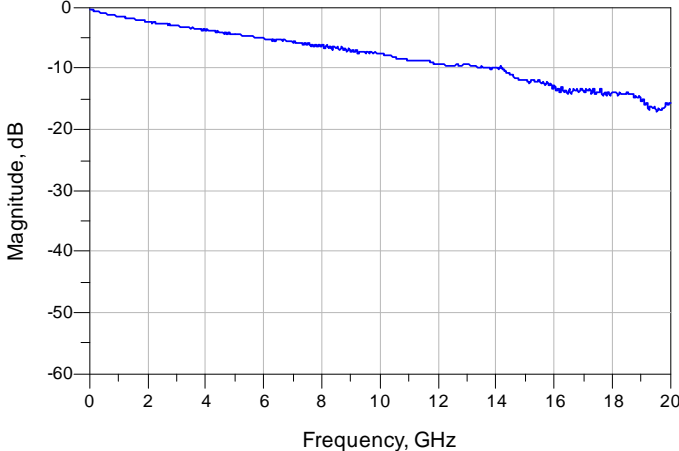
TX

## 7" Host Trace

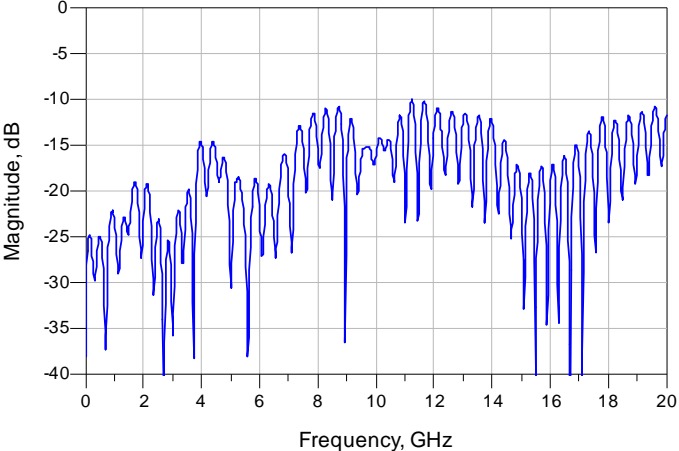
RX

TX

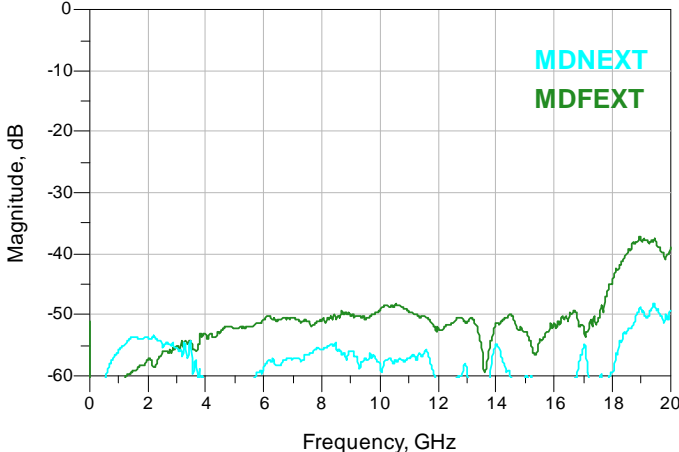
CHANNEL INSERTION LOSS



CHANNEL RETURN LOSS



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