1m Backplane Channels Using Standard and Embedded Capacitor Connectors

40” System Measurements

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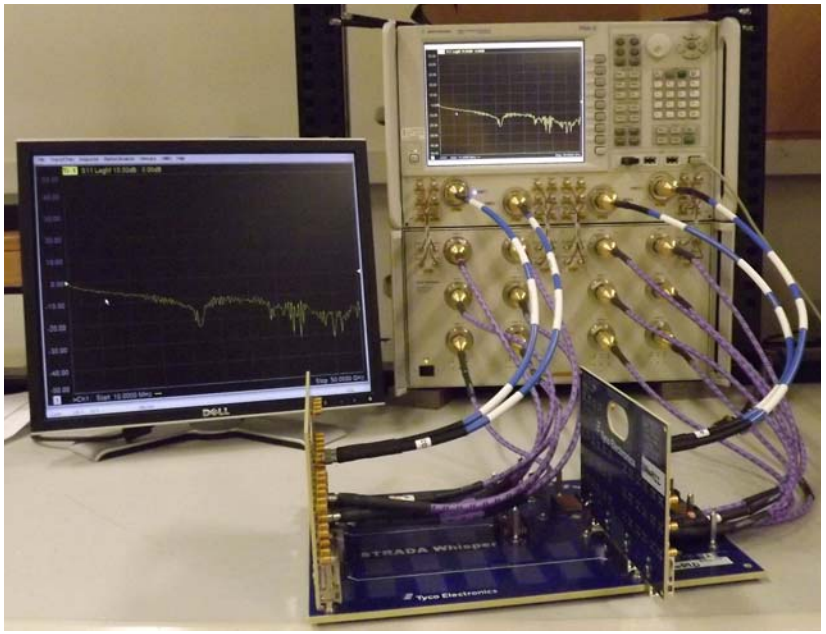
July 2013 Plenary Meeting, Geneva, Switzerland

STRADA Whisper™ Backplane Channel

40” Link Test Set-up



H11-H12	H14-H15	H17-H18
G11-G12	G14-G15	G17-G18
F11-F12	F14-F15	F17-F18

- All data is measured and includes 2.4mm test points
- Measurements are pair G14-G15 centric .s4p files
- 4 Near-End and 4 Far-End measurements
- Data is from 0-30GHz in 10MHz steps

DAUGHTER CARD

- Board Material = Megtron6 VLP
- Trace length = 5”
- Trace geometry = Stripline
- Trace width = 6 mils
- Differential trace spacing = 9 mils
- PCB thickness = 110mils, 14 layers
- Counterbored vias, up to 6mil stub
- Test Points = 2.4mm (included in data)

BACKPLANE

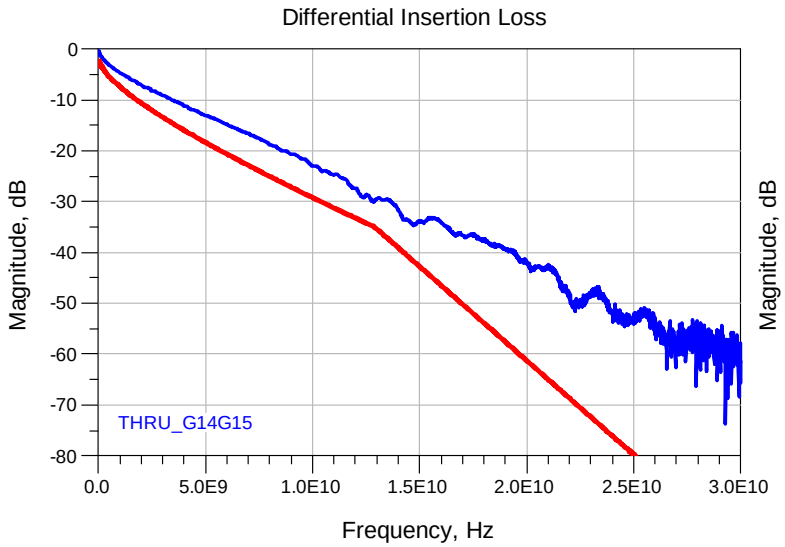
- Board Material = Megtron6 HVLP
- Trace length = 30”
- Trace geometry = Stripline
- Trace width = 6 mils
- Differential trace spacing = 9 mils
- PCB thickness = 200 mils, 20 layers
- Counterbored vias, up to 6mil stub

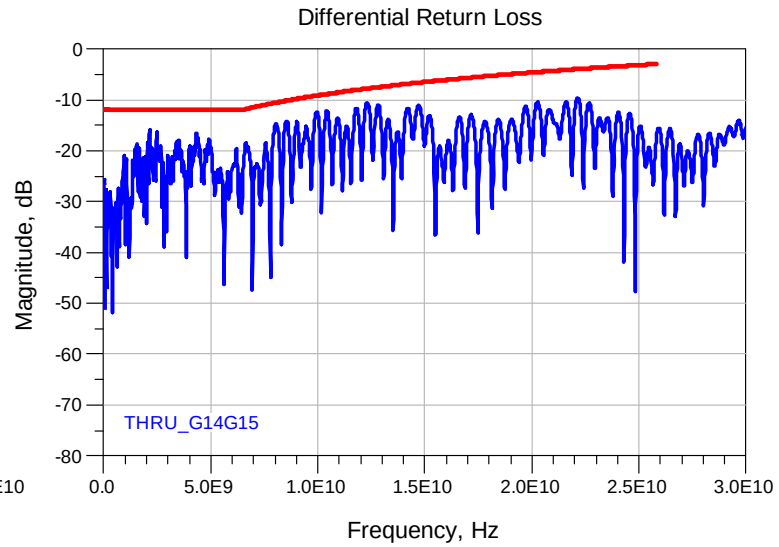
CONNECTORS

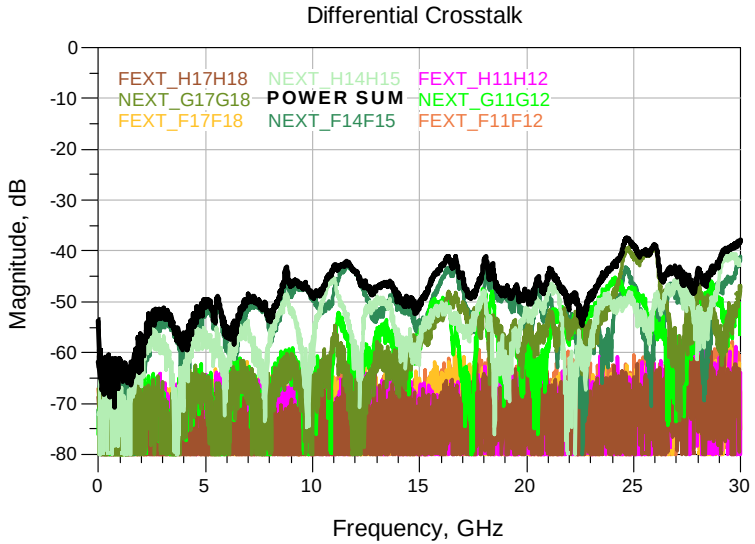
- Dataset 1 includes
  - Mated standard STRADA Whisper connector at each end
- Dataset 2 includes
  - Mated Embedded Capacitor STRADA Whisper connector at one end and,
  - Mated standard STRADA Whisper connector at other end

STRADA Whisper 4.5mm 40” System

STANDARD







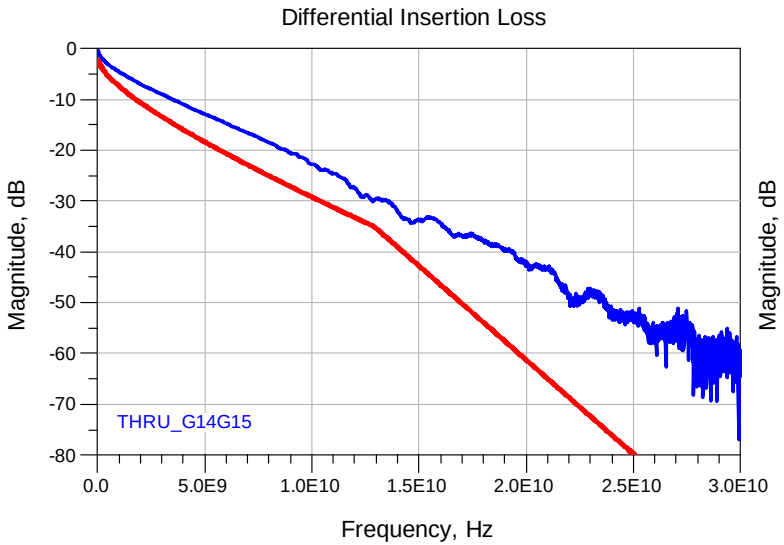
8 Crosstalk Aggressors – 4 NEXT AND 4 FEXT
Maximum Frequency = 30 GHZ

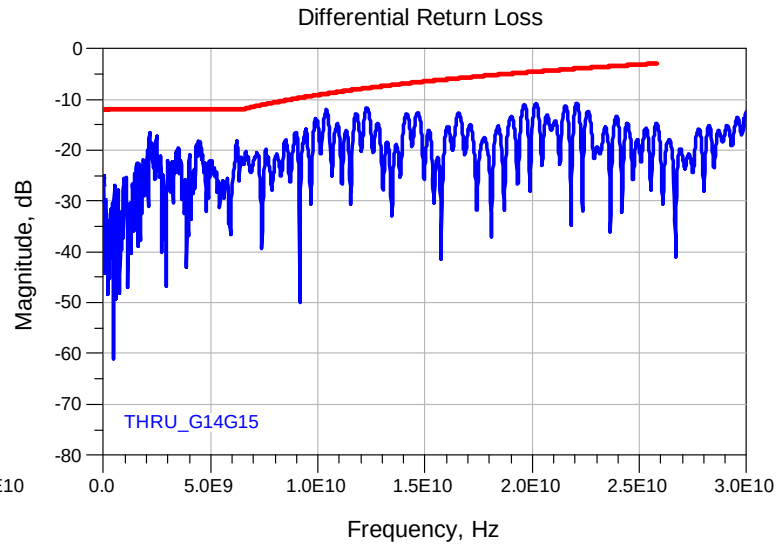
	PAM-2 [100GBASE-KR4]	PAM-4 [100GBASE-KP4]
COM*	5.4817 dB	8.6749 dB

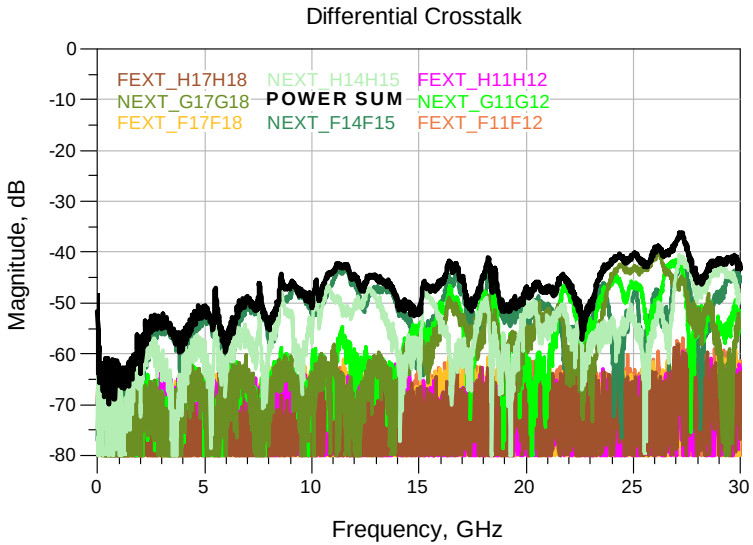
* COM = Channel Operating Margin, Figure of Merit for the channel per IEEE802.3bj Draft 2.1
Calculated using COM Matlab code provided on the IEEE 802.3bj website
Code Revision = com_d2p1_02_0613
COM needs to be >3dB for the channel to be compliant.

STRADA Whisper 4.5mm 40” System

EMBEDDED CAPACITOR







8 Crosstalk Aggressors – 4 NEXT AND 4 FEXT
Maximum Frequency = 30 GHZ

	PAM-2 [100GBASE-KR4]	PAM-4 [100GBASE-KP4]
COM*	5.663 dB	9.0487 dB

* COM = Channel Operating Margin, Figure of Merit for the channel per IEEE802.3bj Draft 2.1
Calculated using COM Matlab code provided on the IEEE 802.3bj website
Code Revision = com_d2p1_02_0613
COM needs to be >3dB for the channel to be compliant.

Summary

- Data will be uploaded to the 802.3bj public channel data web site
- Please use the data for your simulations and provide feedback