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SYSTEM CHANNELS FOR IEEE802.3 COM TESTING

IEEE 802.3 bm
CAUI-4 Ad-hoc

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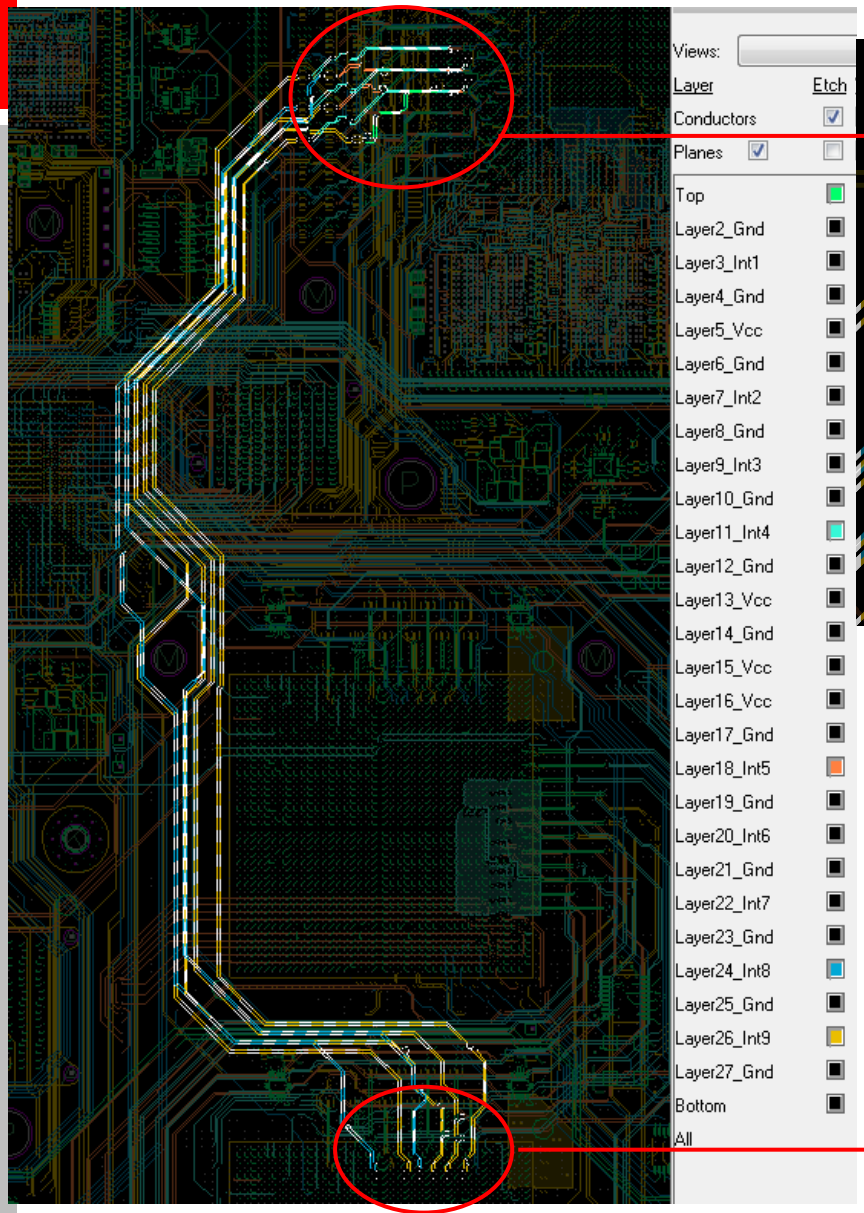
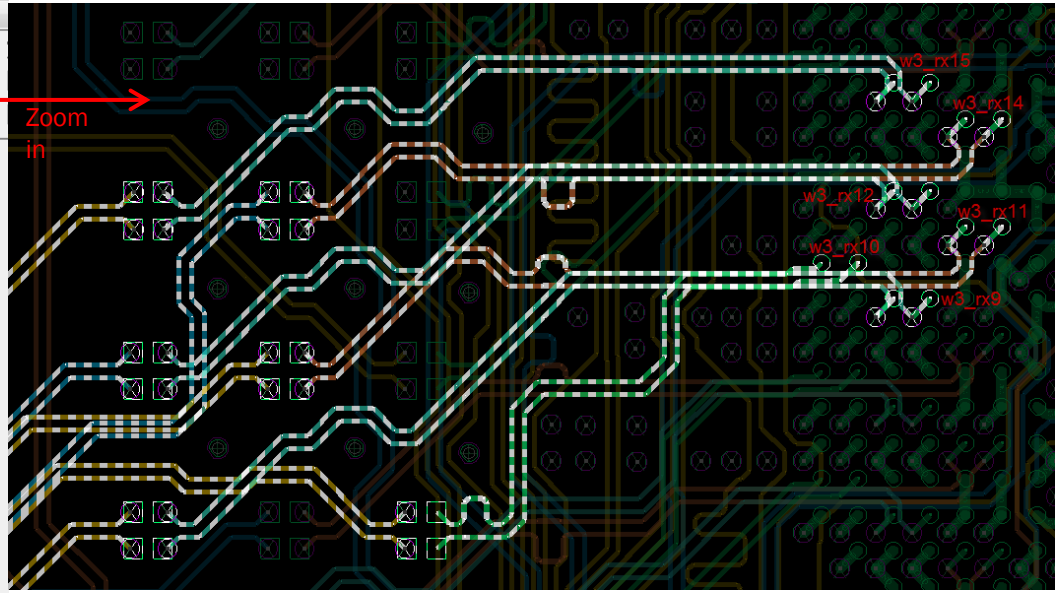
Introduction

- Some channels from our system board are selected to support 20dB CAUI-4 chip to chip channel COM program.
- The S parameter provided includes the near end and far end cross talk measured from chip ball to chip ball using Picoprobes.

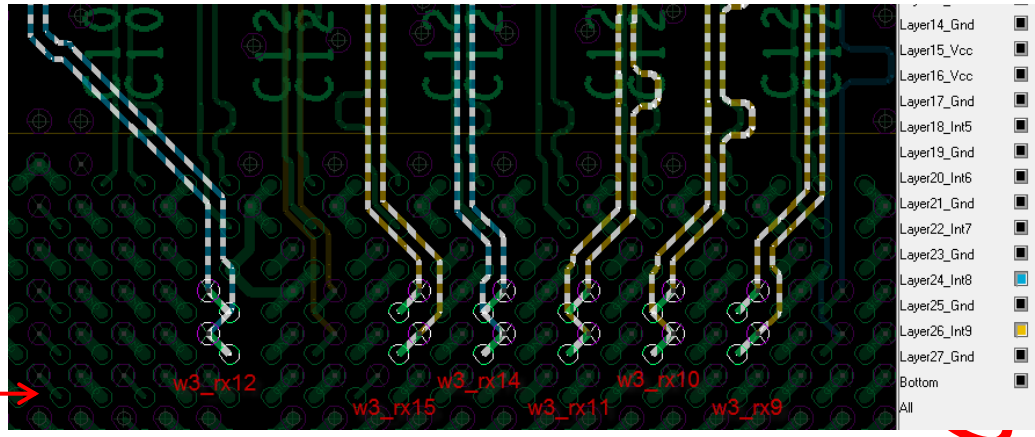
Channel from Chip W3 to Chip H1



Zoom in

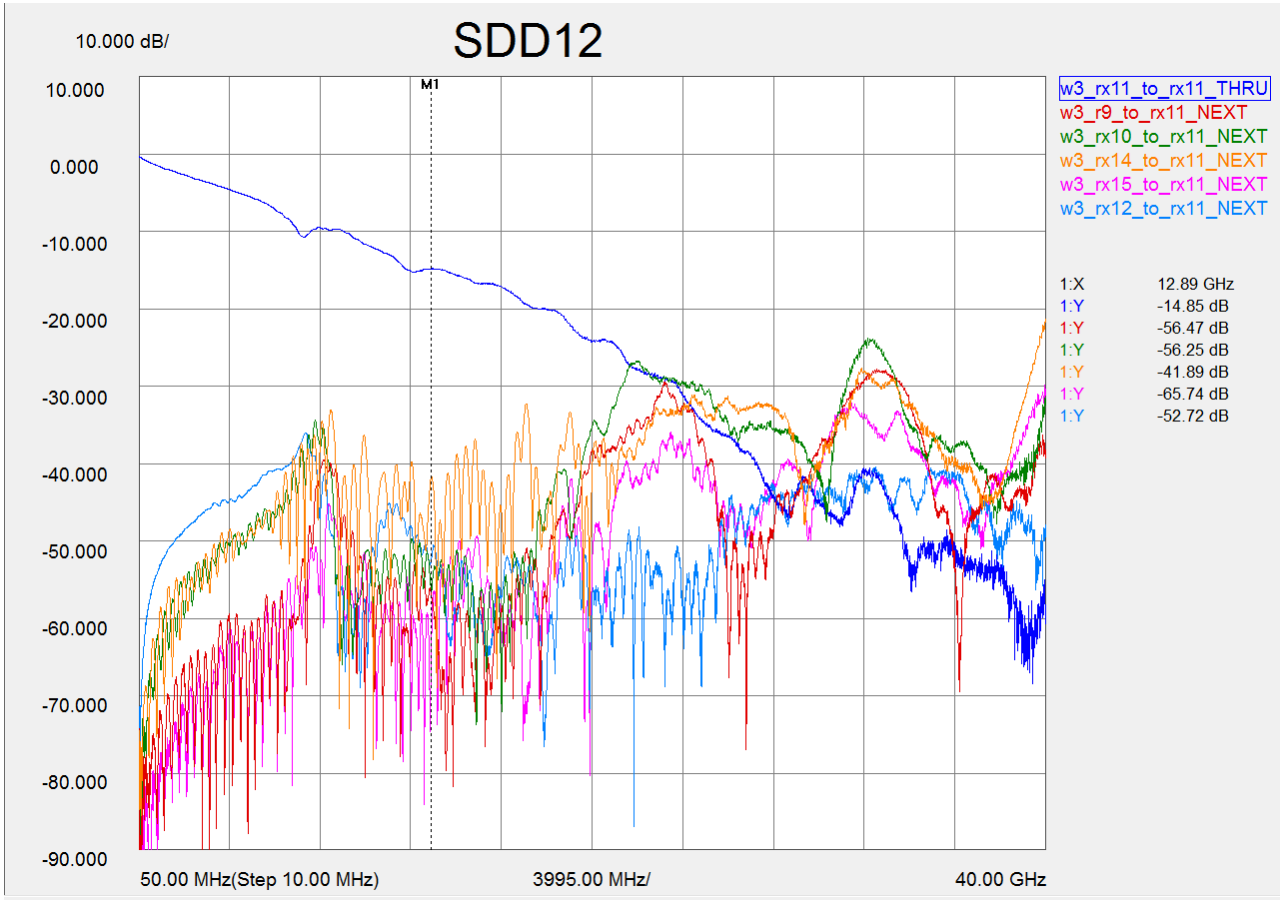


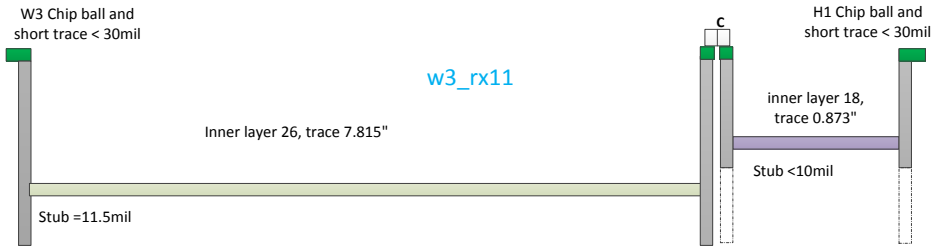
Chip H1



Chip W3

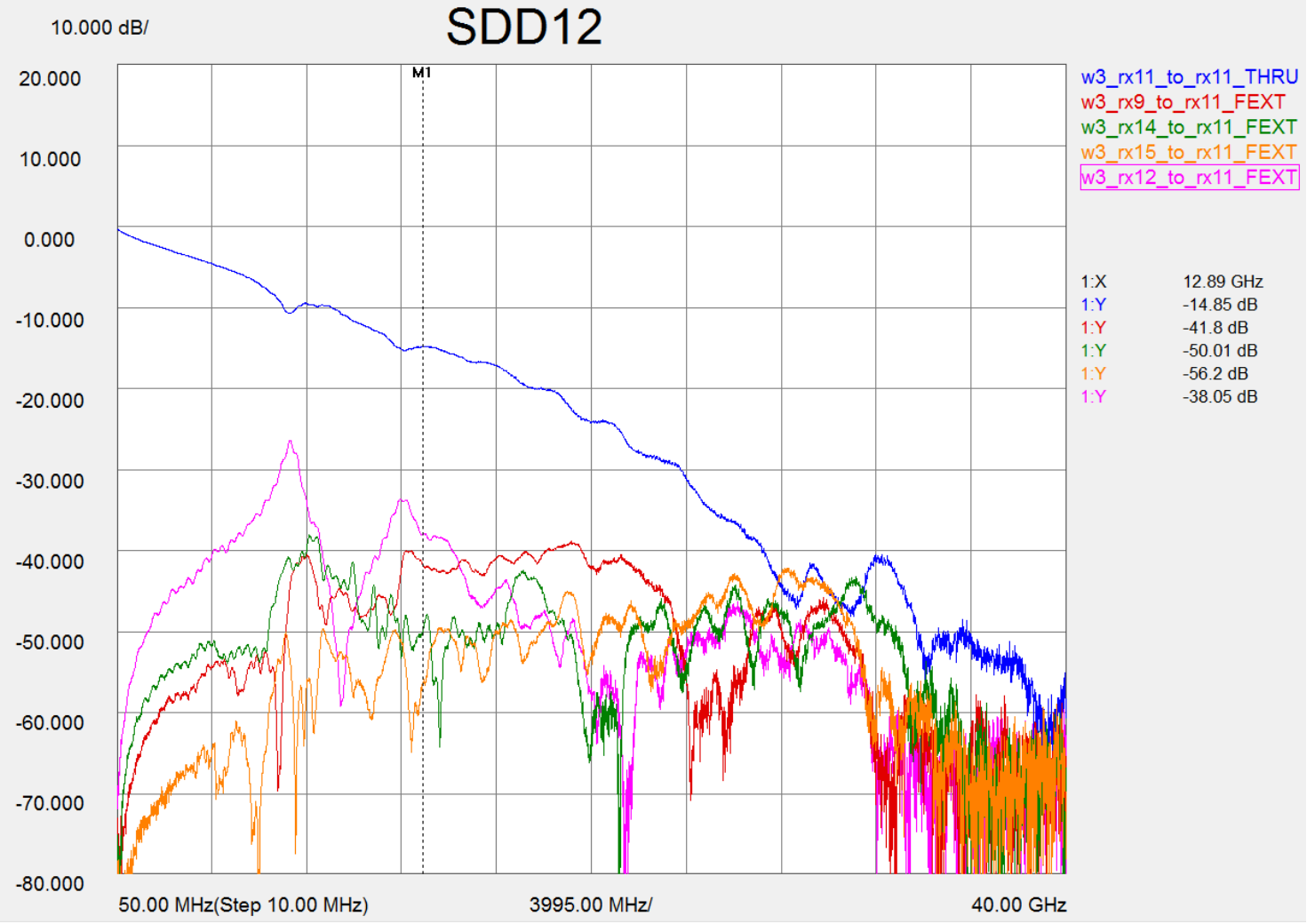
Near End Cross Talk on Chip W3



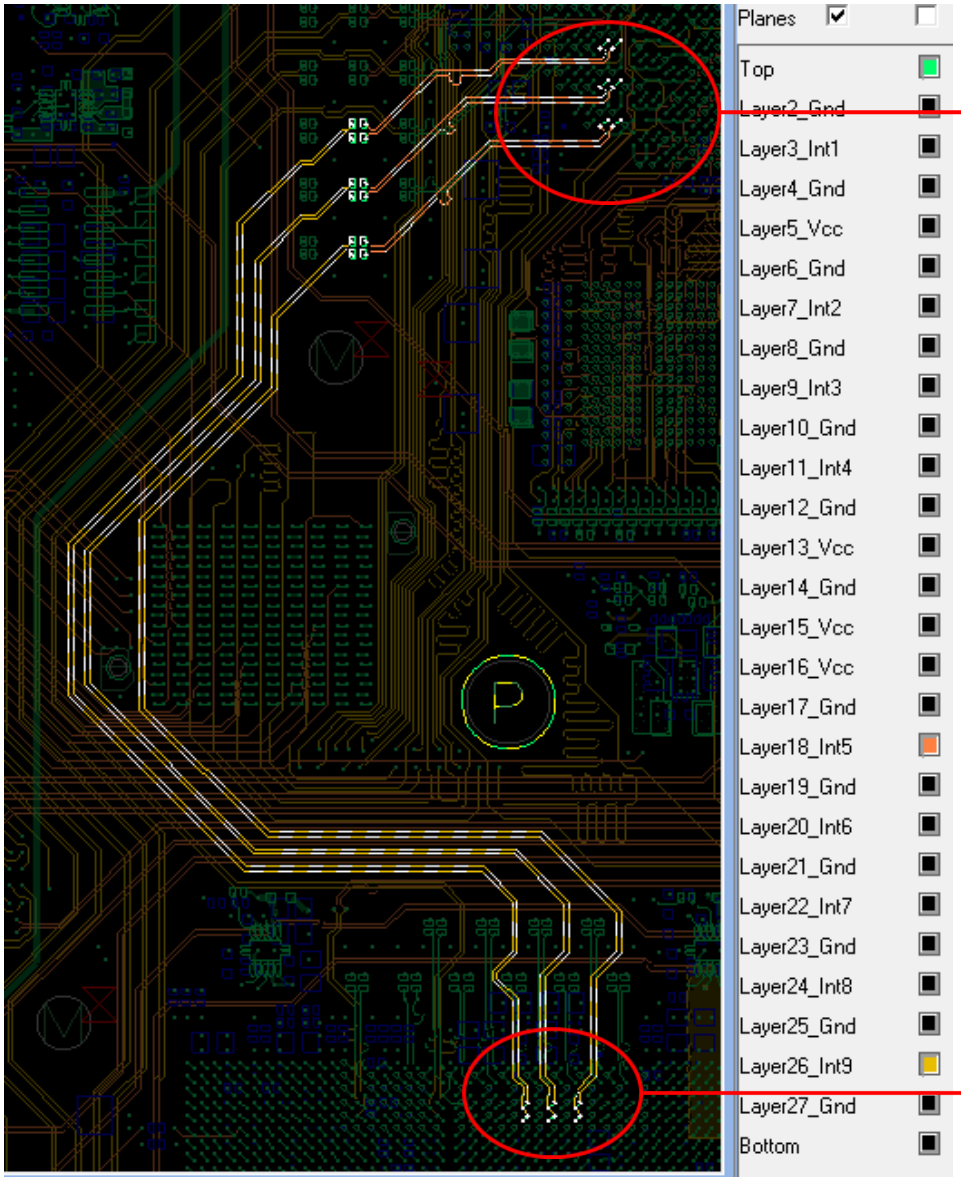


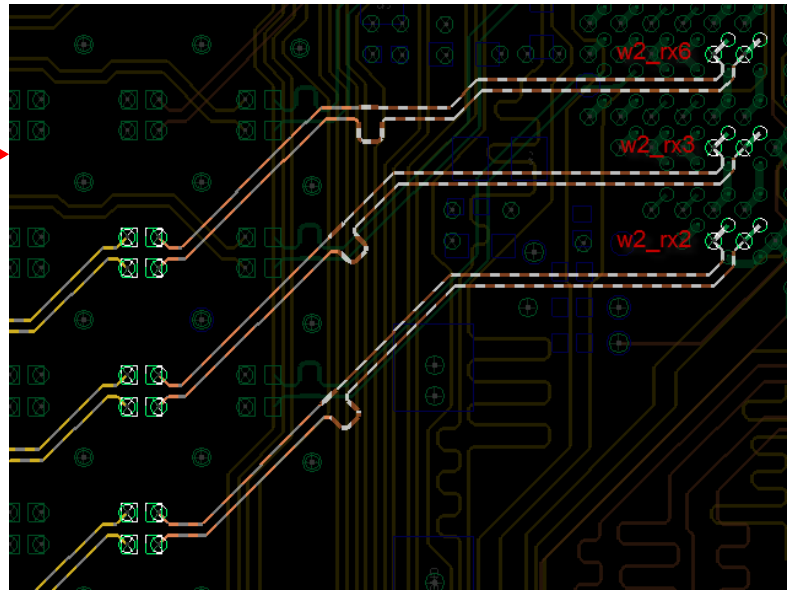
TUC872, with loss tangent 0.0078-0.0087. The differential pair is controlled at 92.5Ohm with trace width about 4.5mil and core thickness 4 mil.

Far End Cross Talk on Chip W3

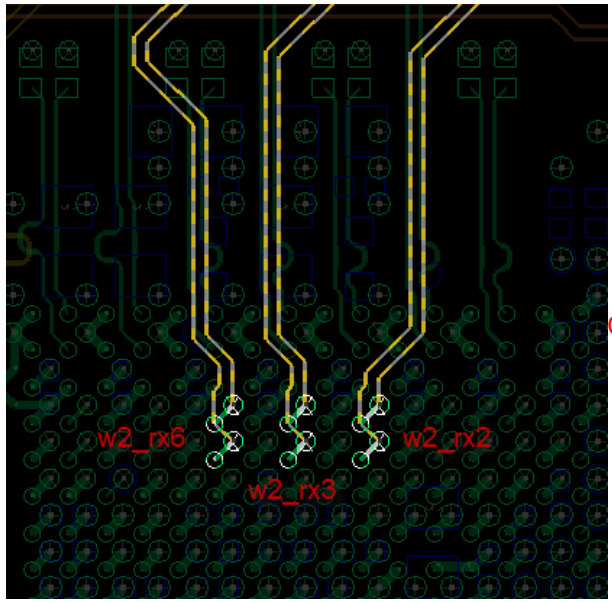


Channel from Chip W2 to Chip H1



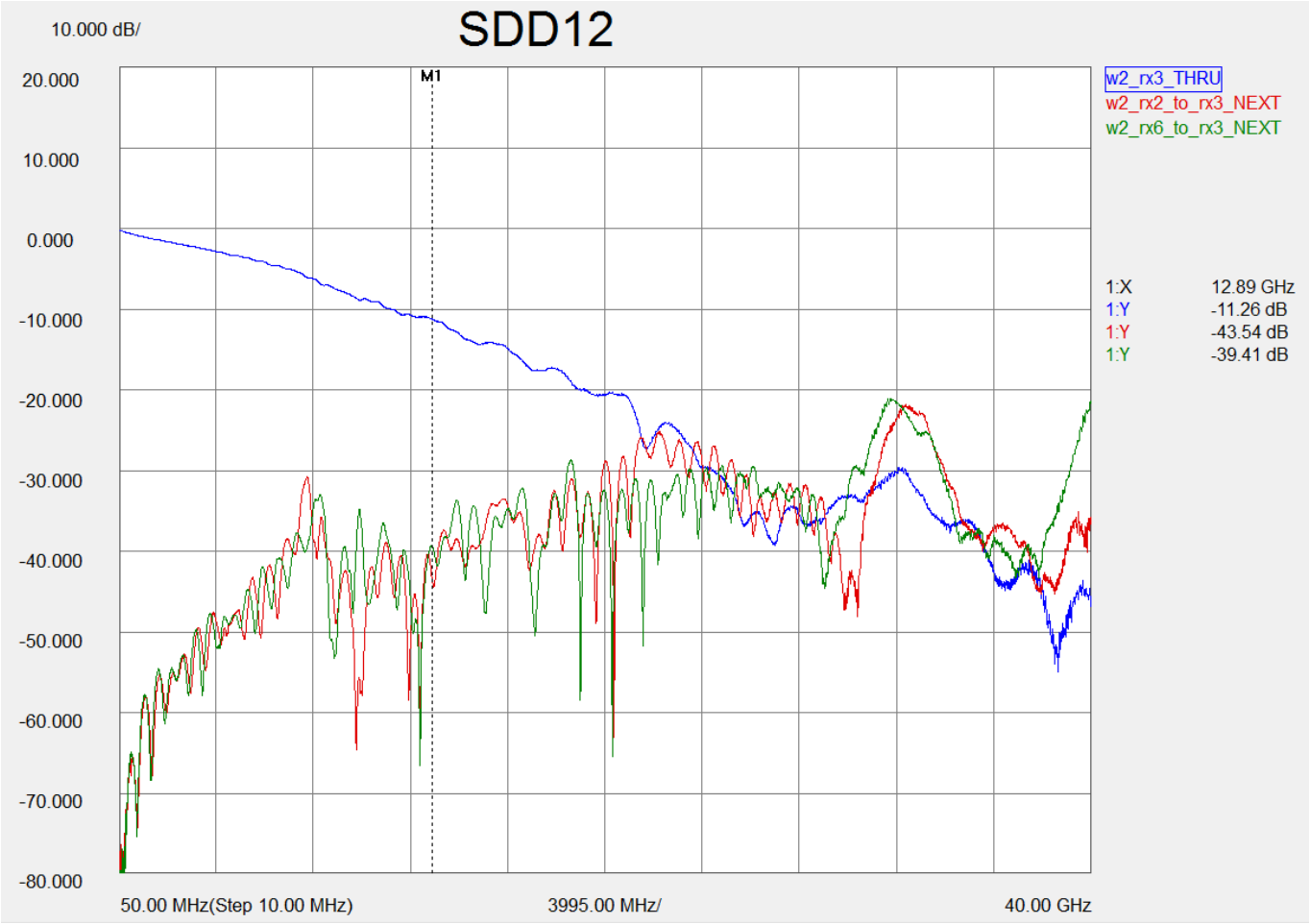


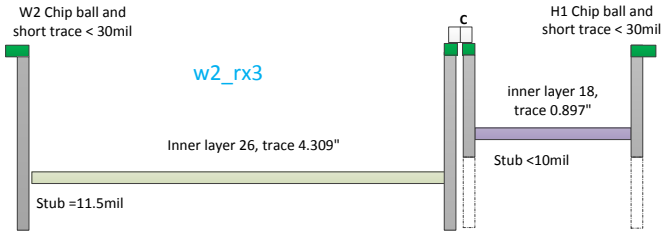
Chip H1



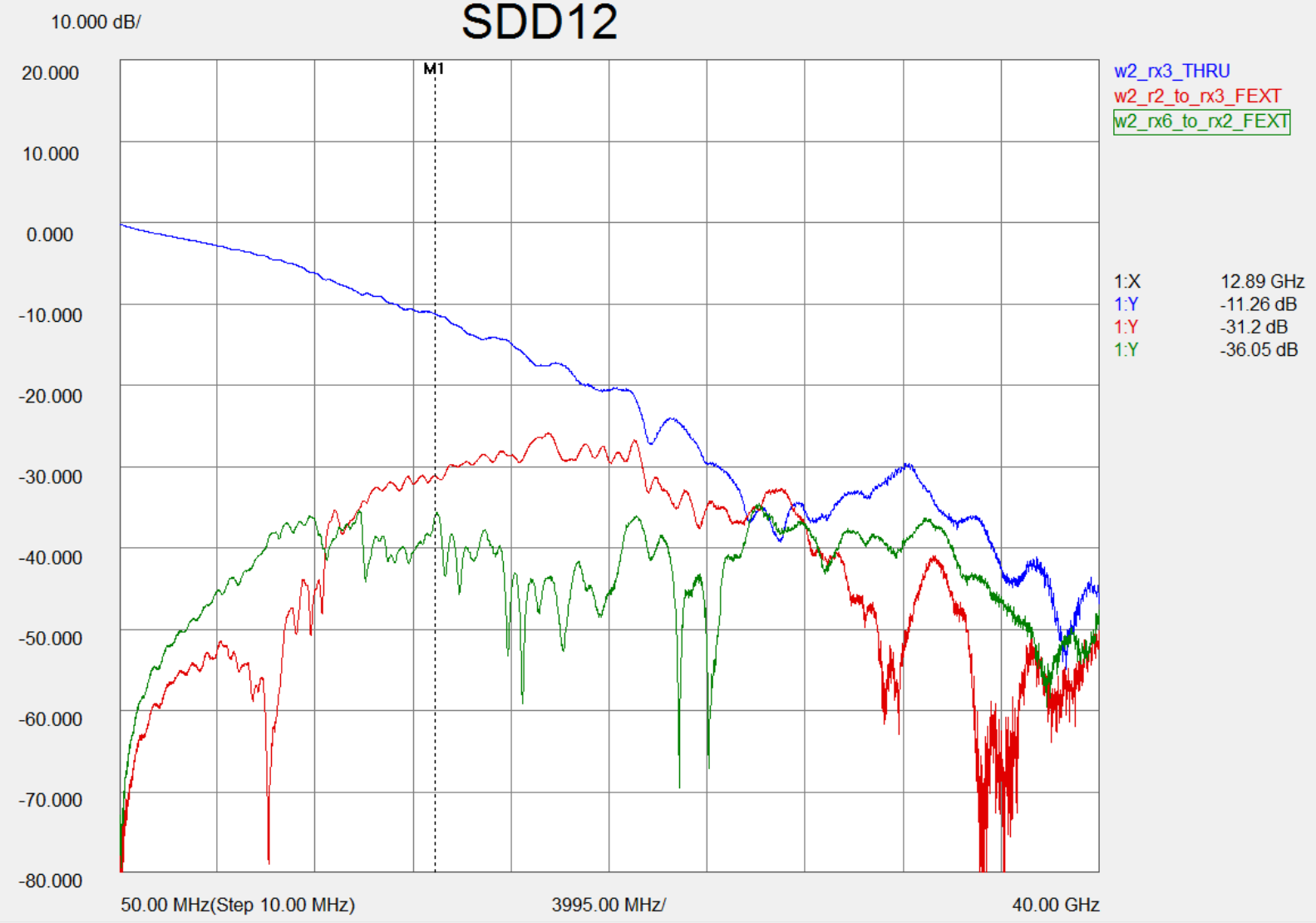
Chip W2

Near End Cross Talk on Chip W2

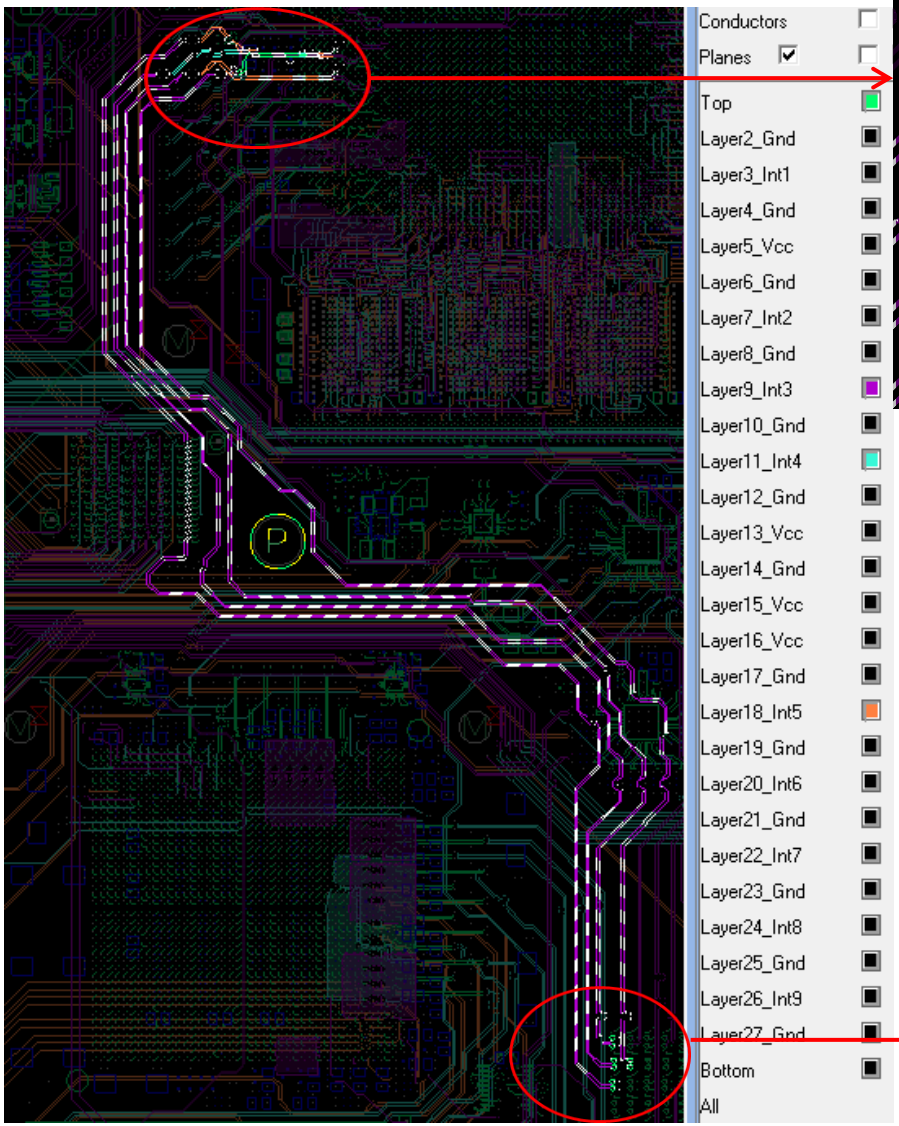


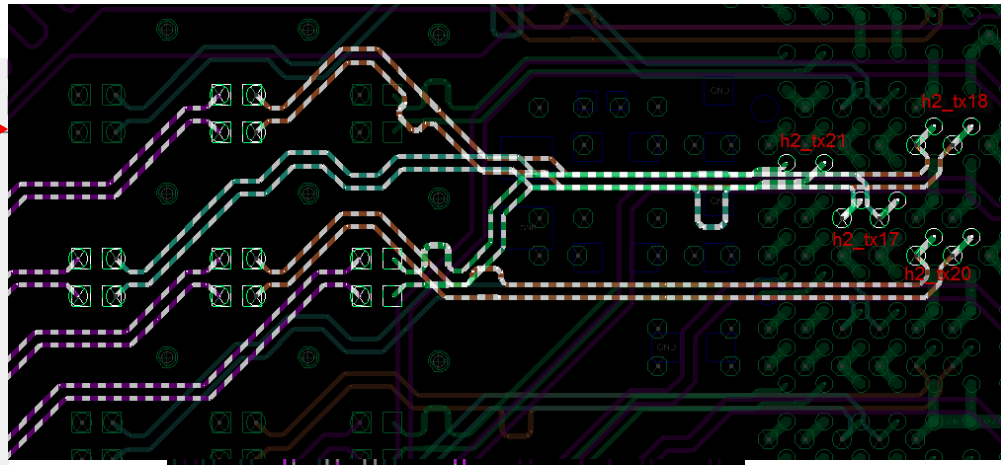


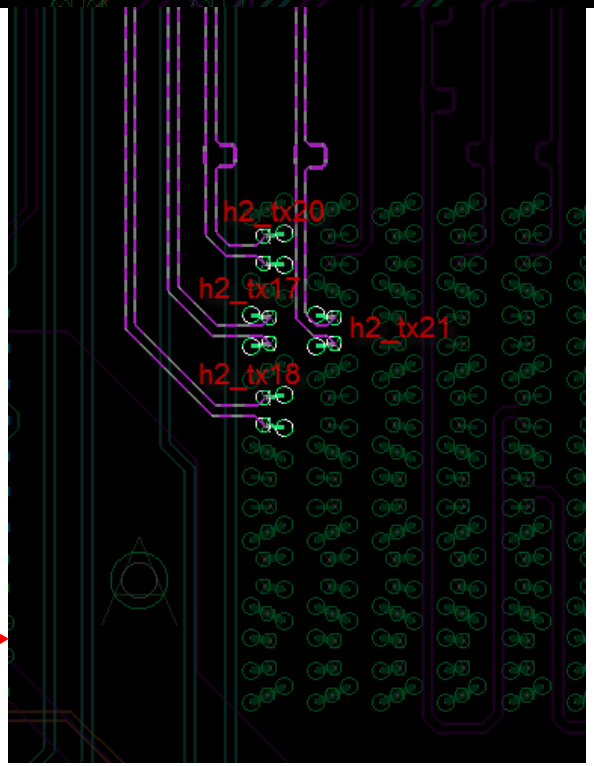
Far End Cross Talk on Chip W2



Channel from Chip H1 to the Connector

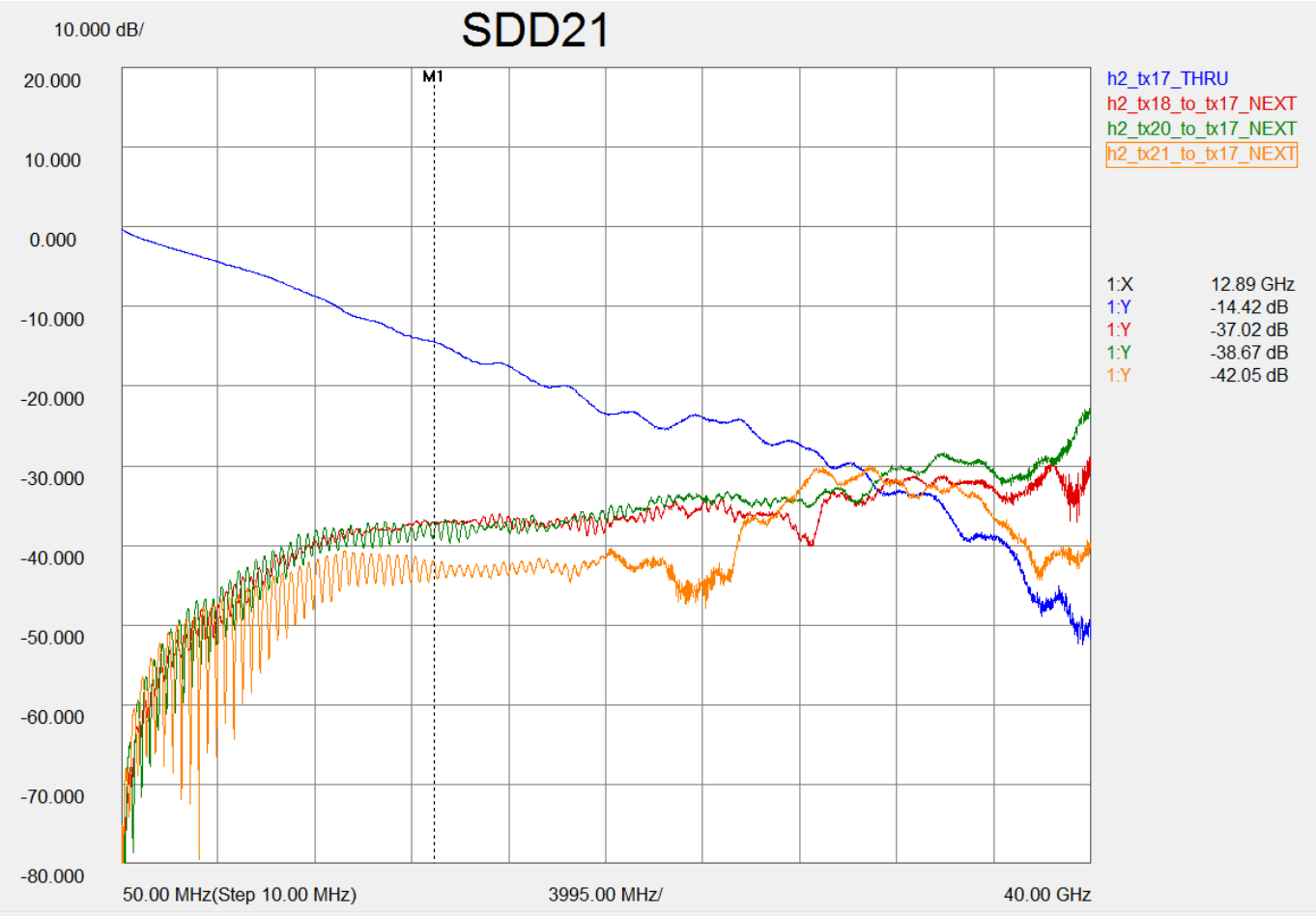


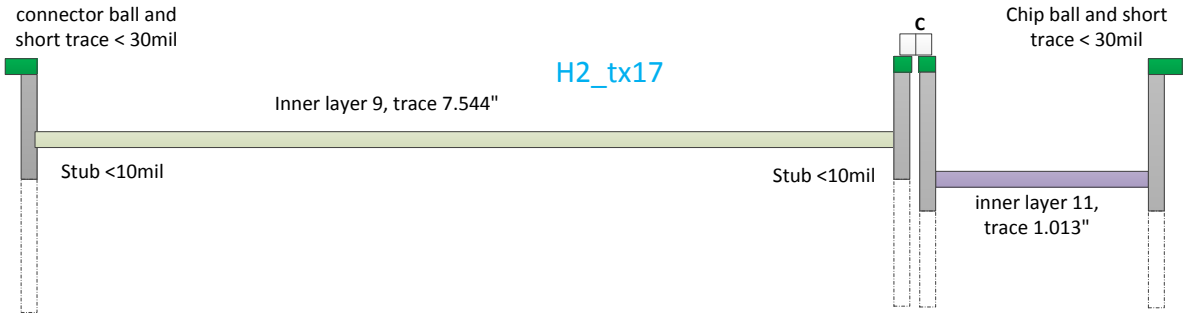




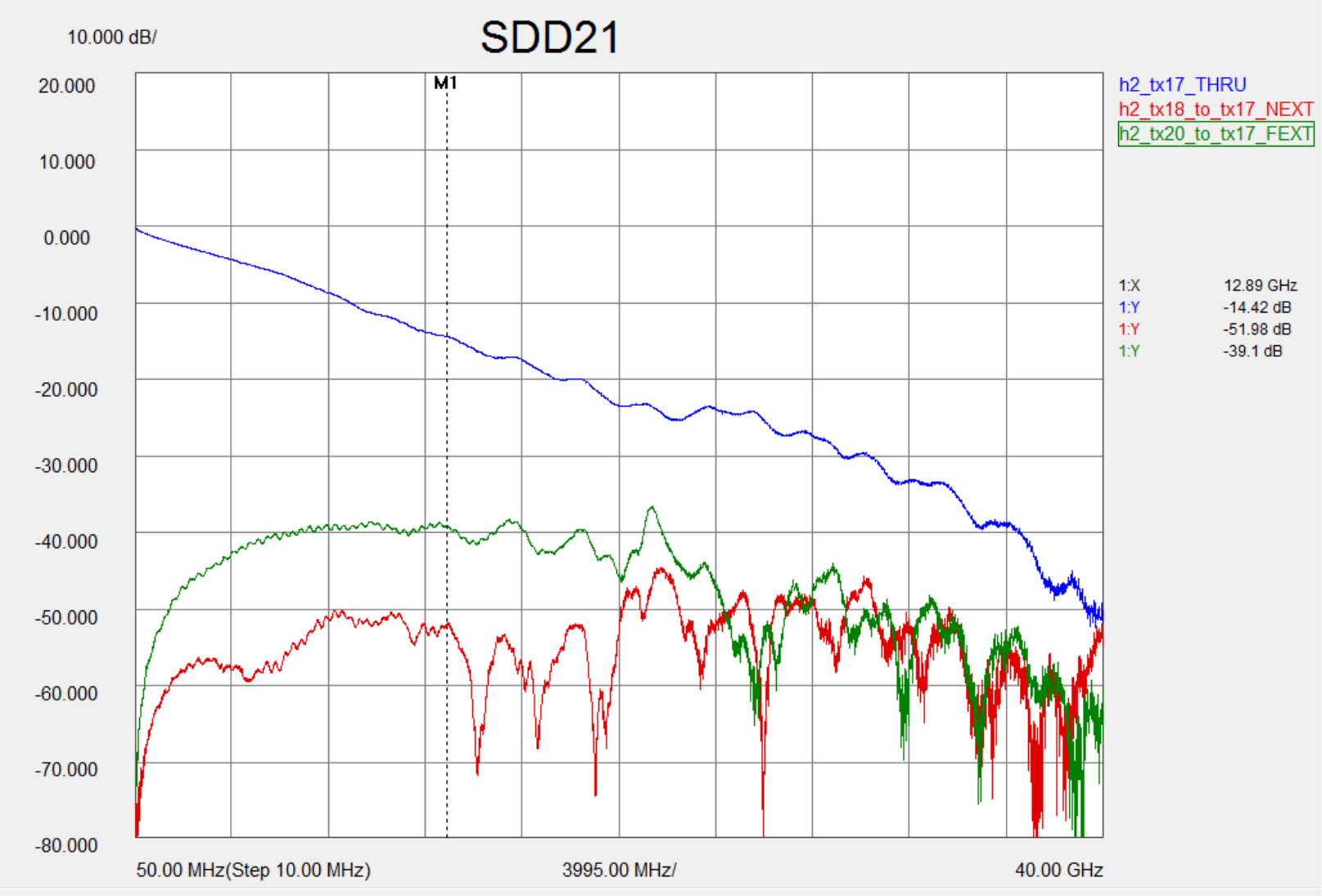
Mezzanine connector

Near End Cross Talk on the Connector Pad





Far End Cross Talk on the Connector Pad



Conclusions

- In this presentation, I have shown some system channels around 15 dB loss at 12.9 GHz excluding the B-B connector and daughter card length.
- The cross talk S parameter is attached for COM program study.
- Our system vendors are facing the challenge of the more layer counts and thinner PCB core which increases the channel loss and shorts the routing length. 20 dB CAUI-4 chip to chip channel will better fit system vendors' needs.

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Thank You