802.3bj
Test Fixture Specifications

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Purpose

- **Demonstration of achievability of 802.3bj mated test fixture specifications.**

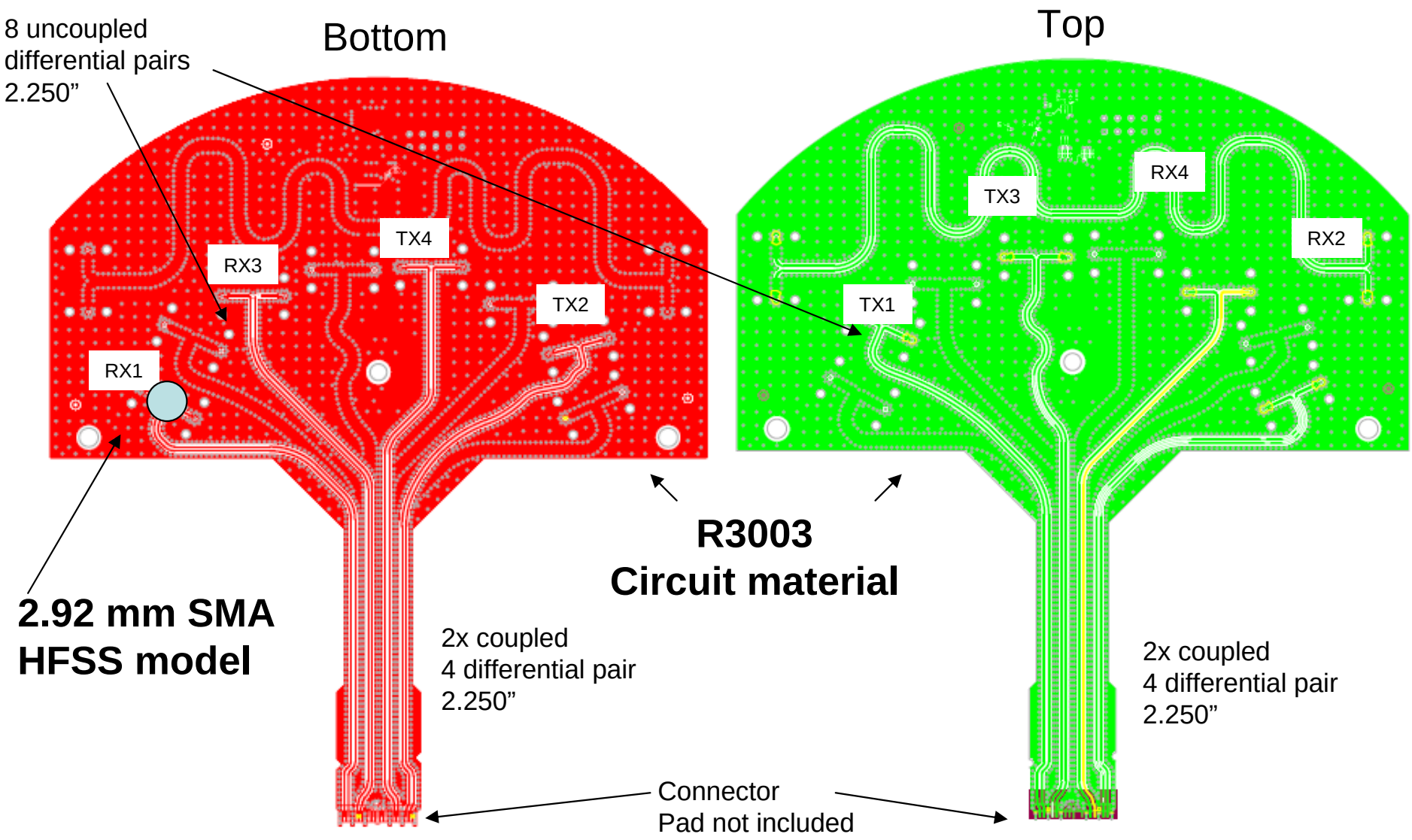
Contributors

- Patrick Casher, Molex
- Nathan Tracy, Tyco

Supporters

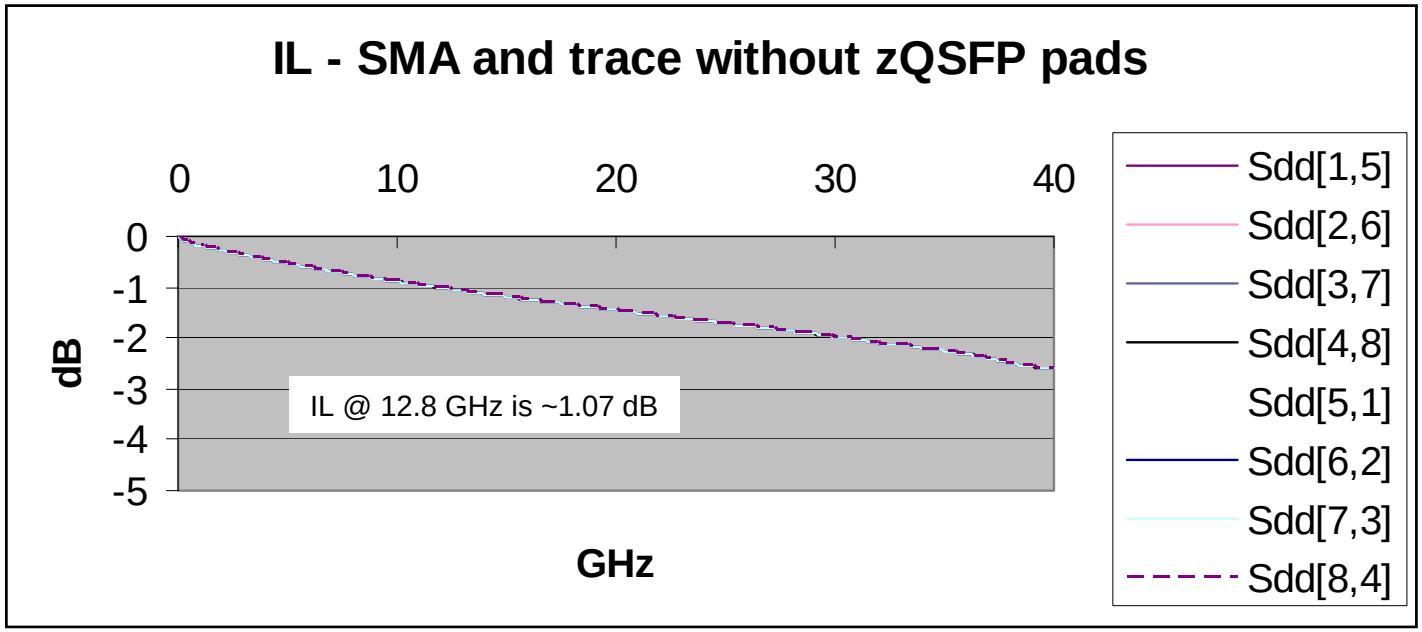
- Patrick Casher, Molex
- Nathan Tracy, Tyco

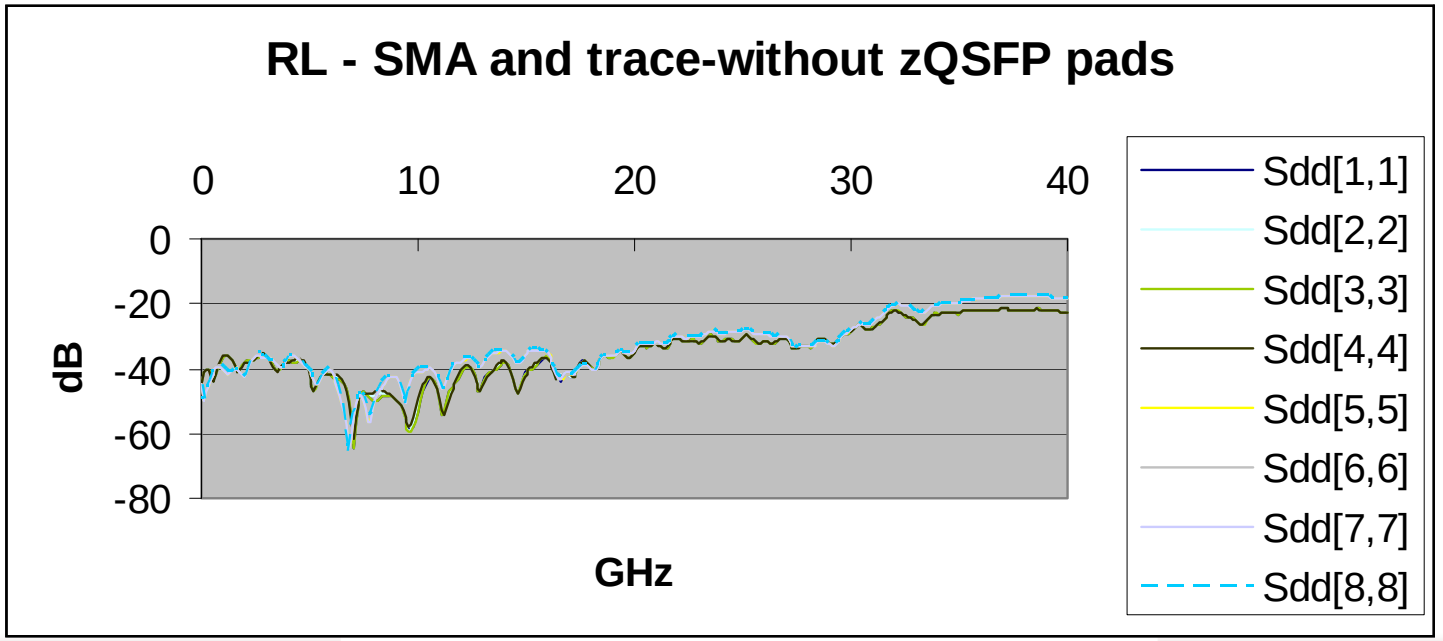
HFSS Model – SMA + PCB trace



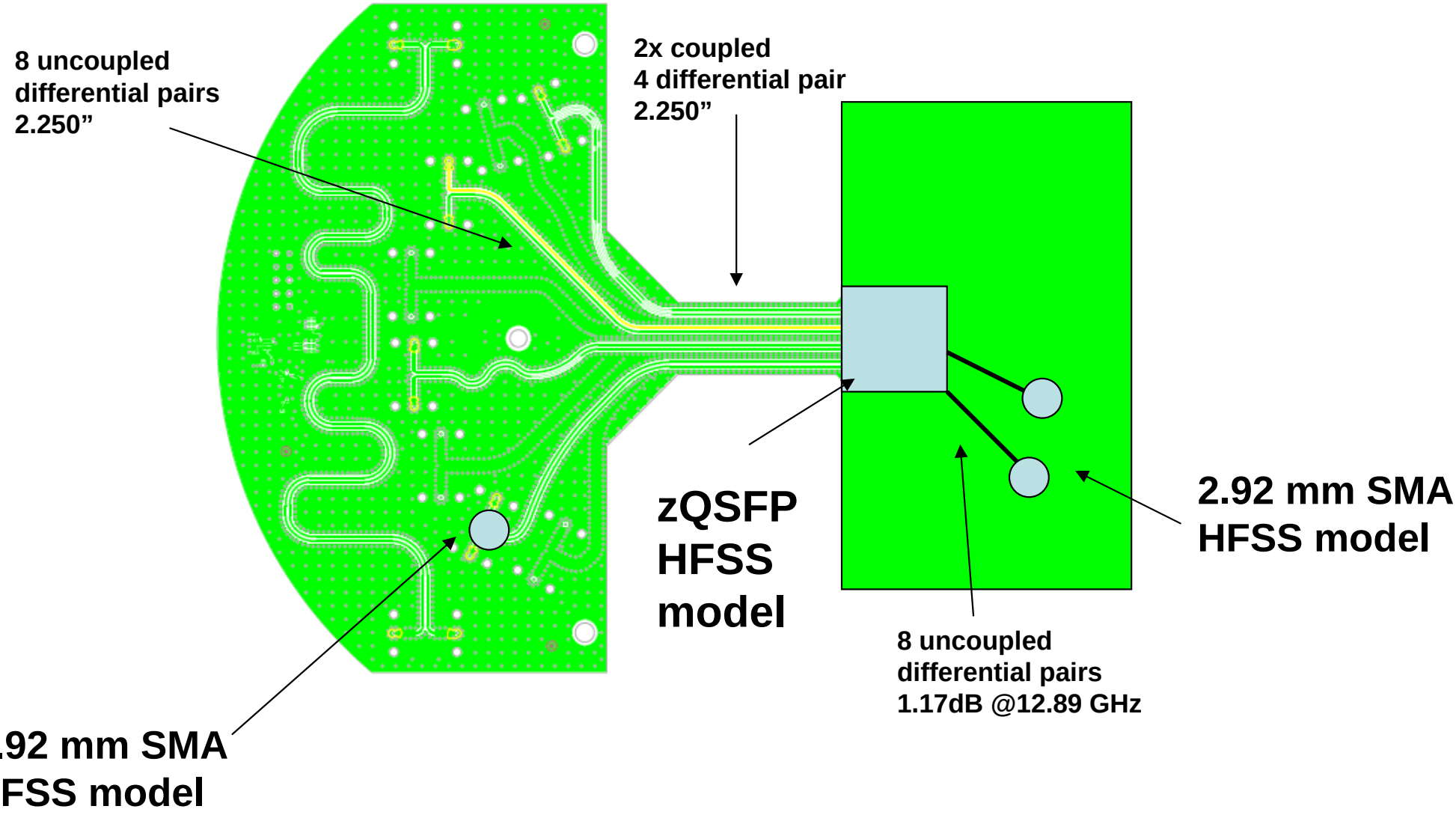
Note: Model does not include silver surface finish top and bottom layers

HFSS Model – SMA + PCB trace – IL and RL



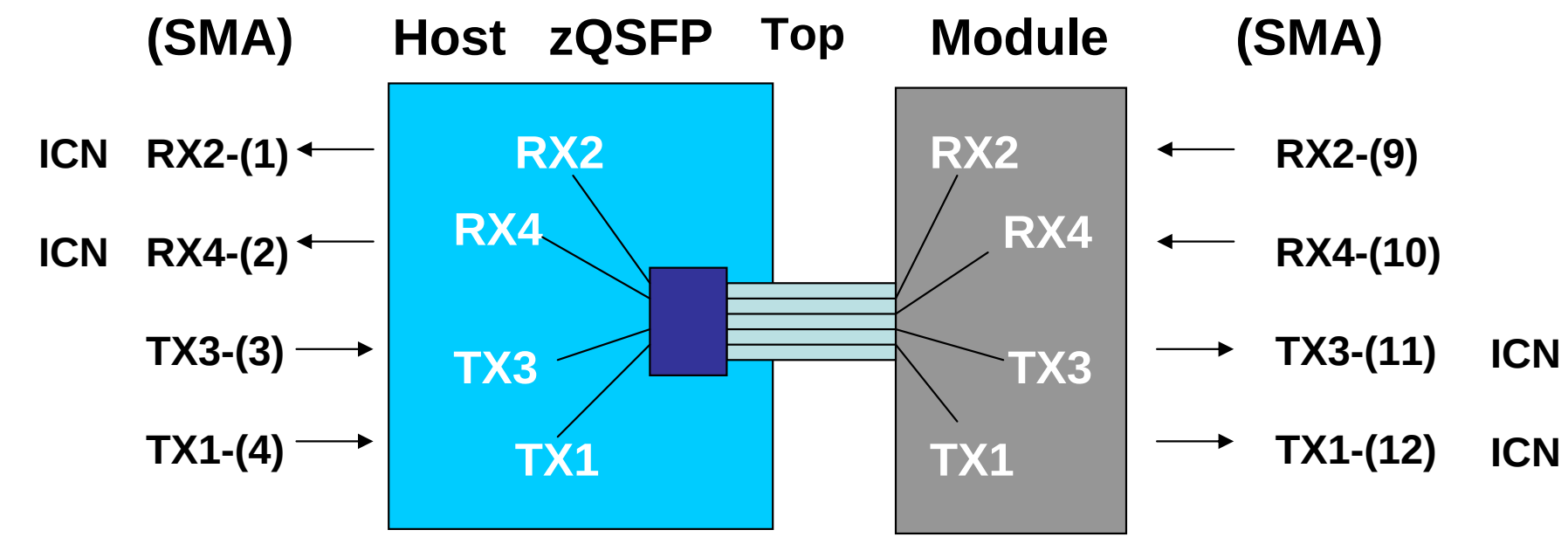


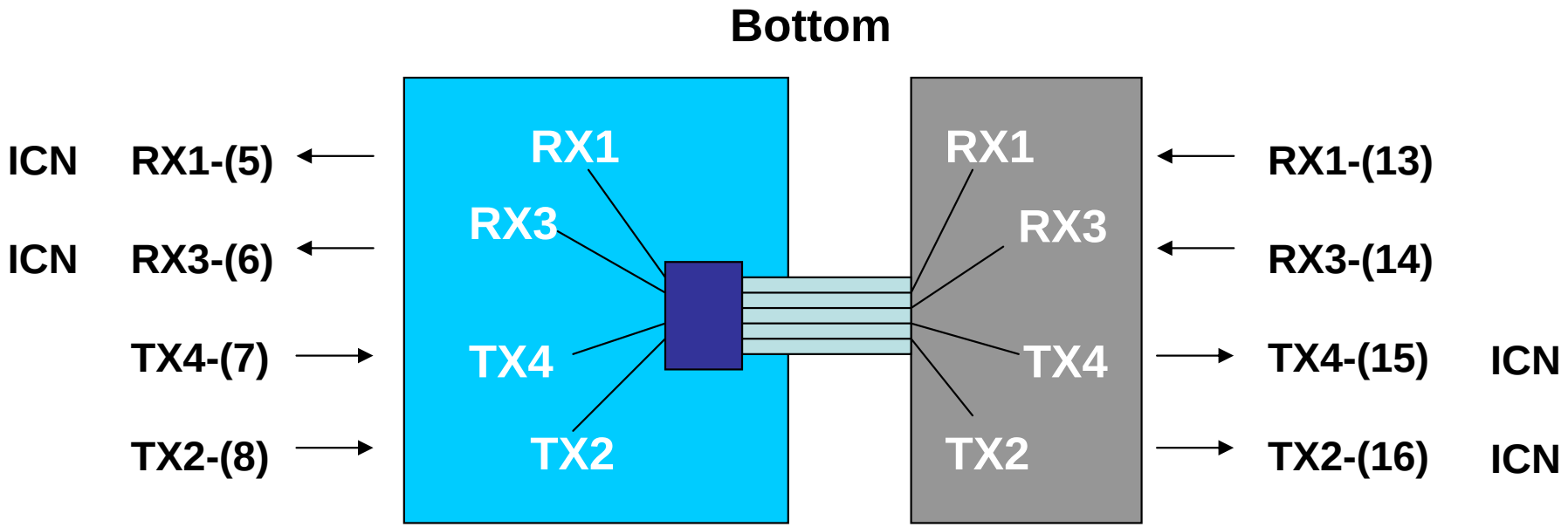
HFSS Model MTF



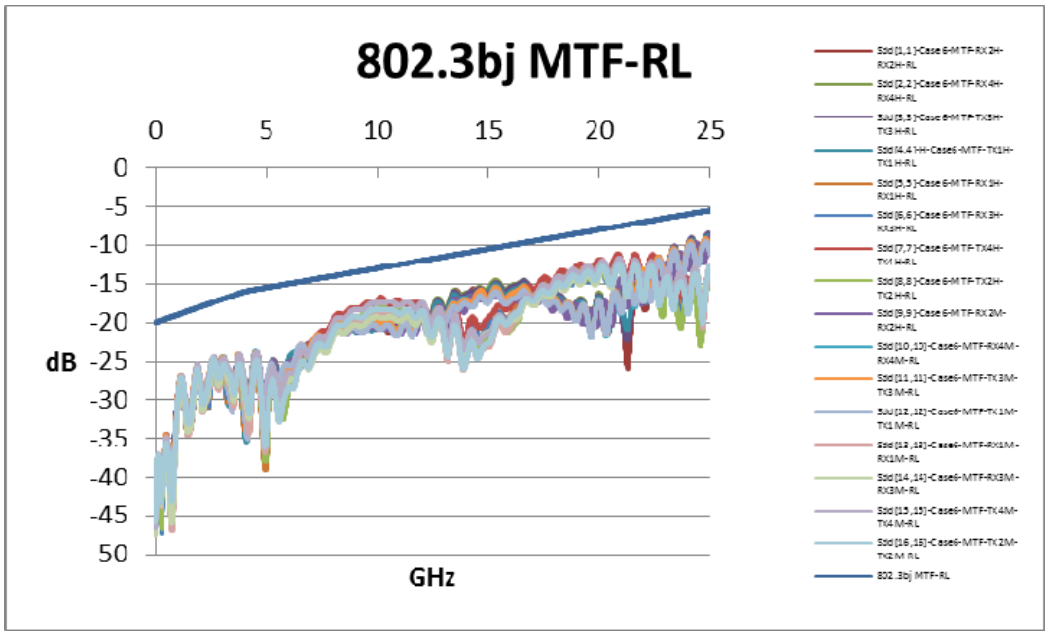
Note: Model does not include silver surface finish top and bottom layers

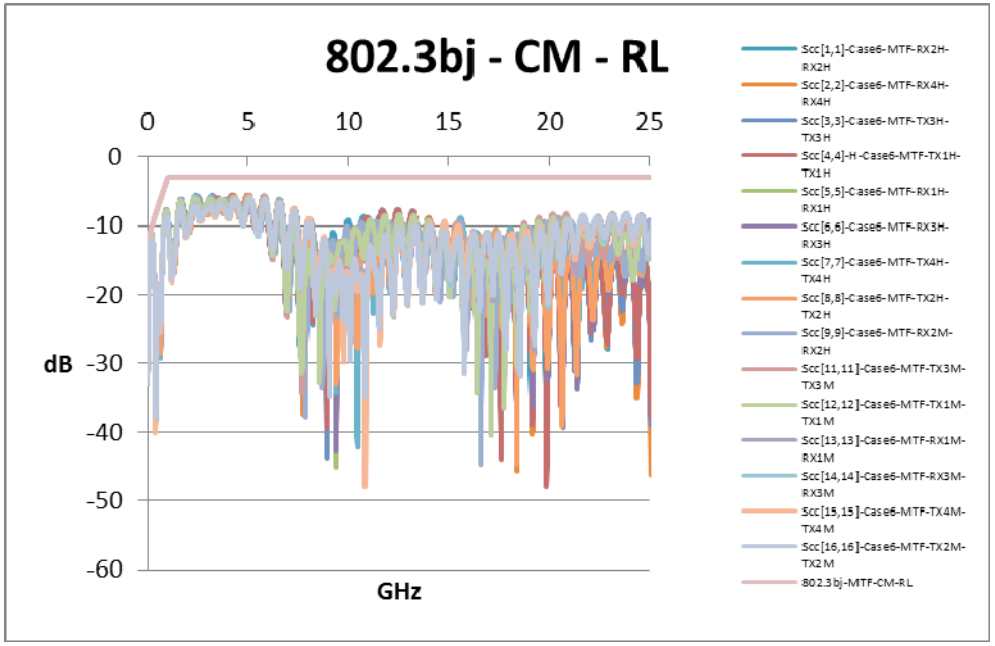
HFSS Model MTF – Port mapping

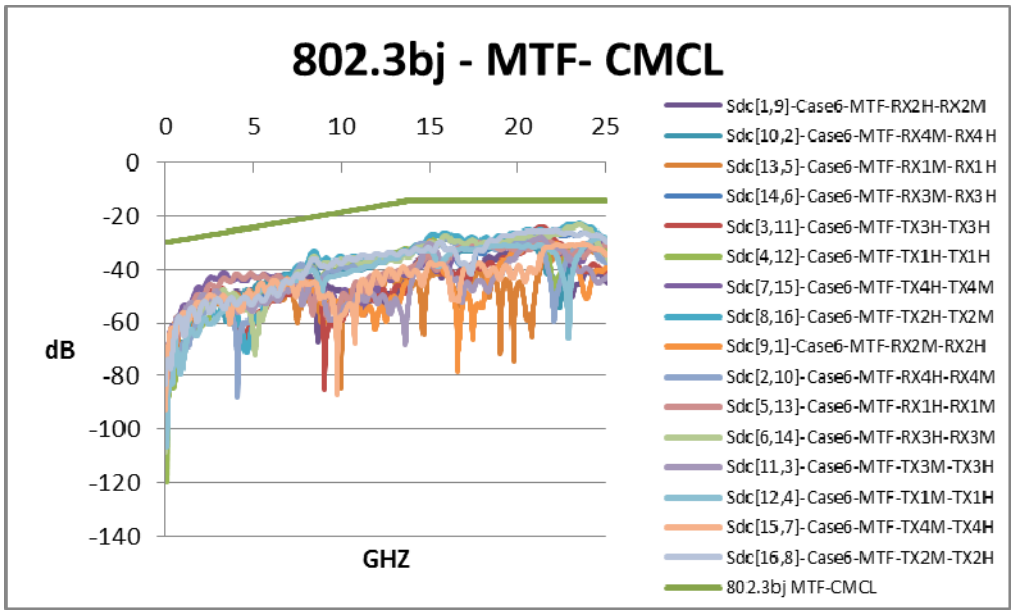


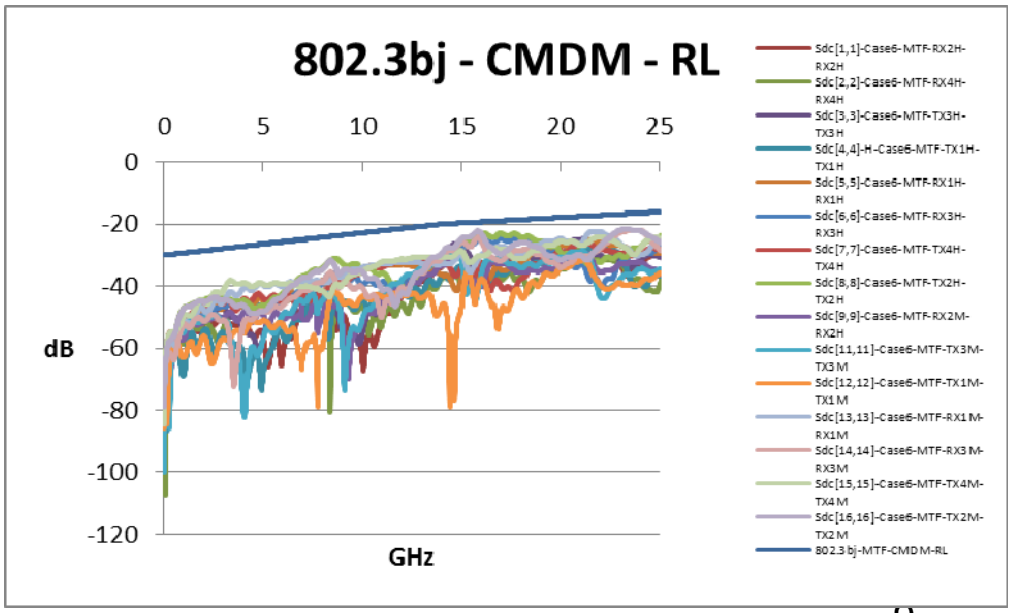


Mated test fixture specifications – CL-RL

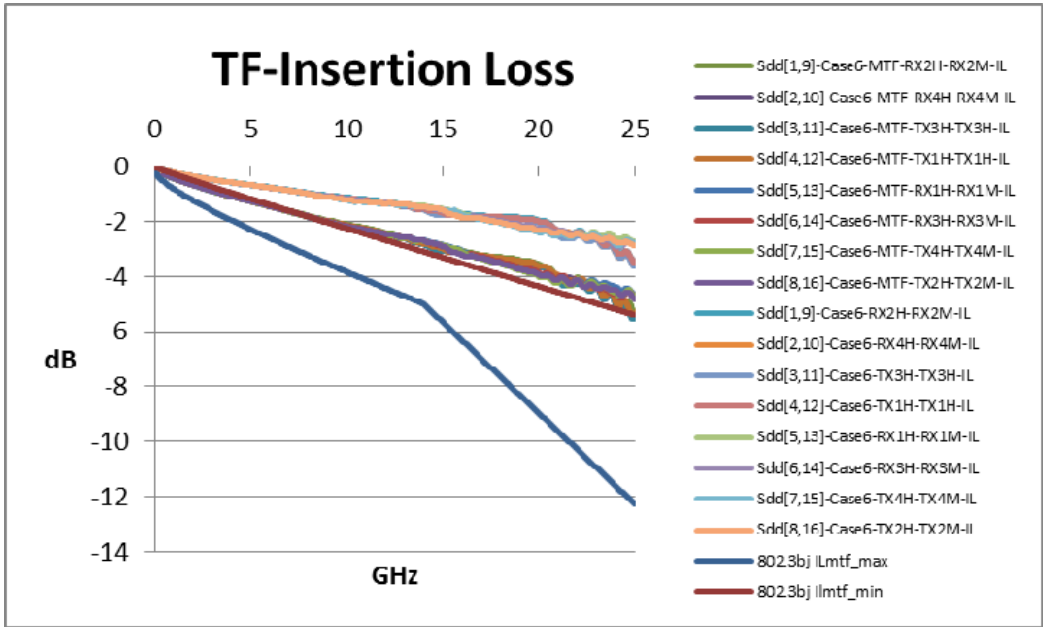


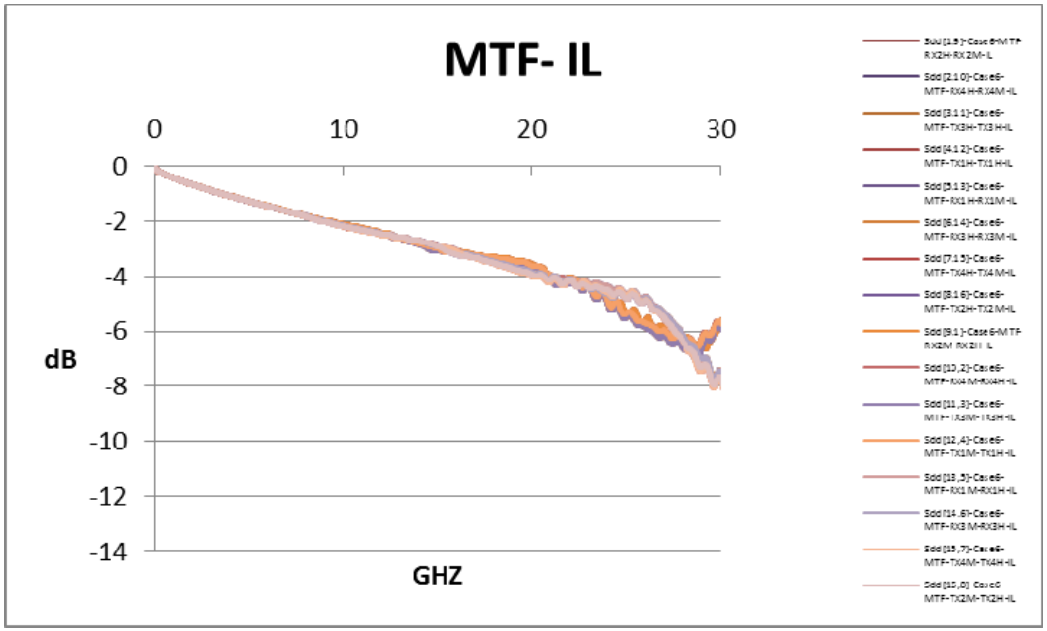




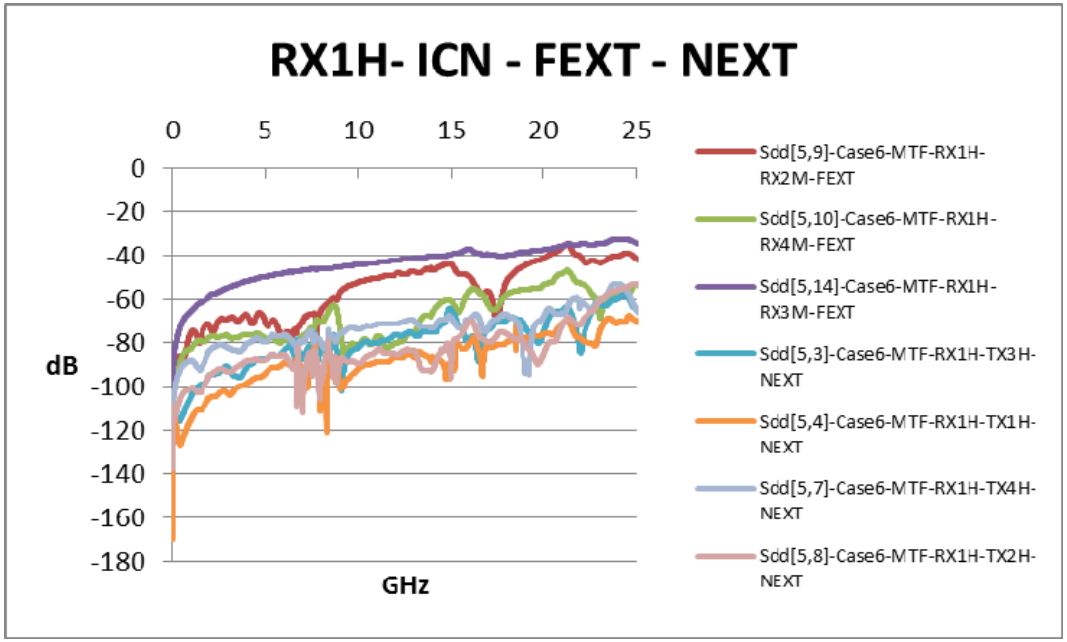


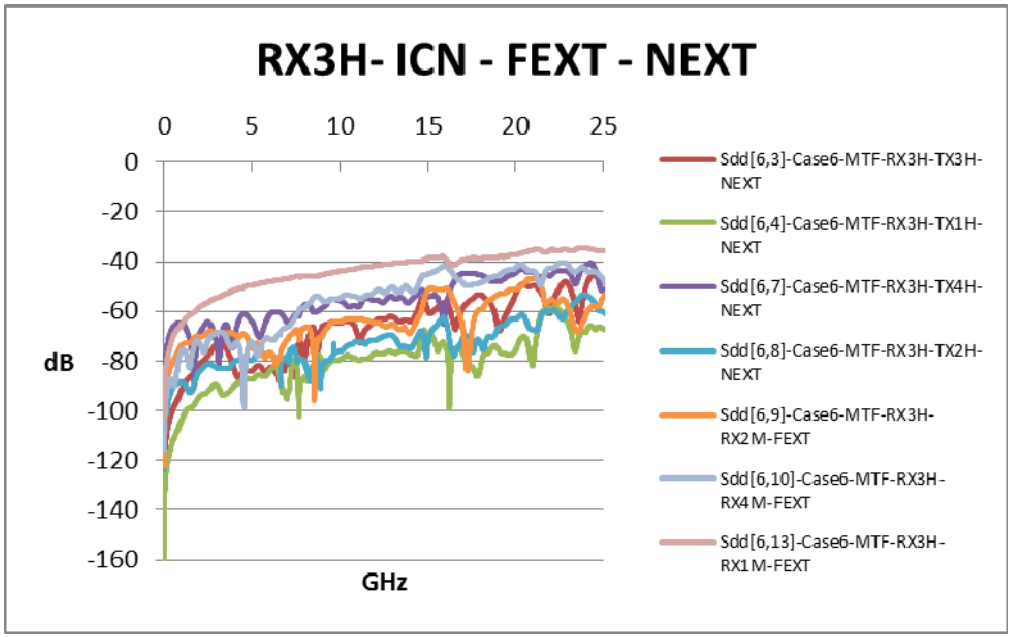
Mated test fixture specifications – IL to 30 GHz

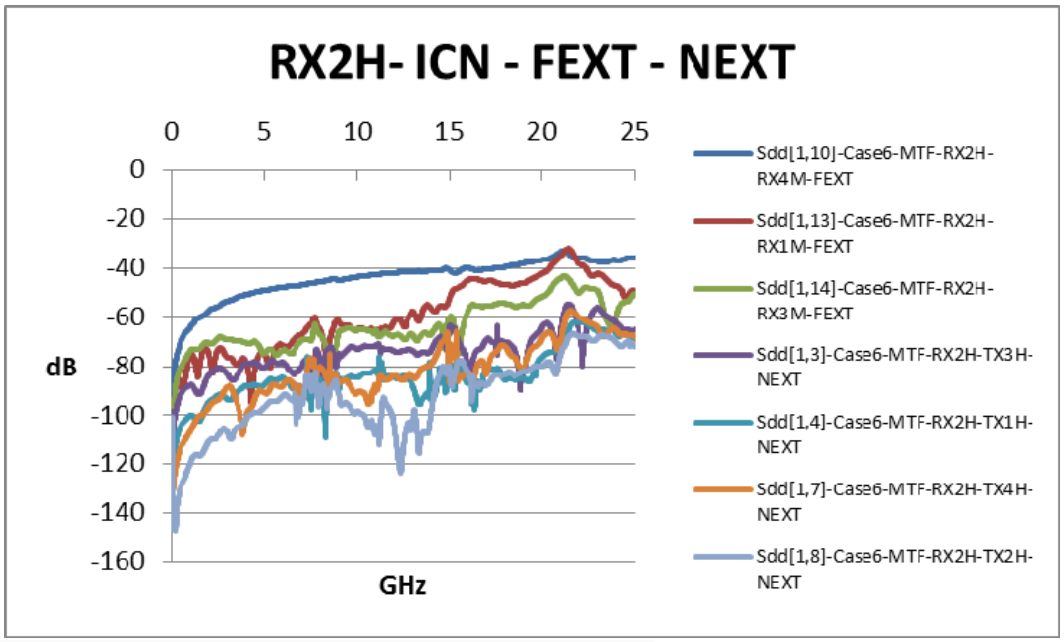


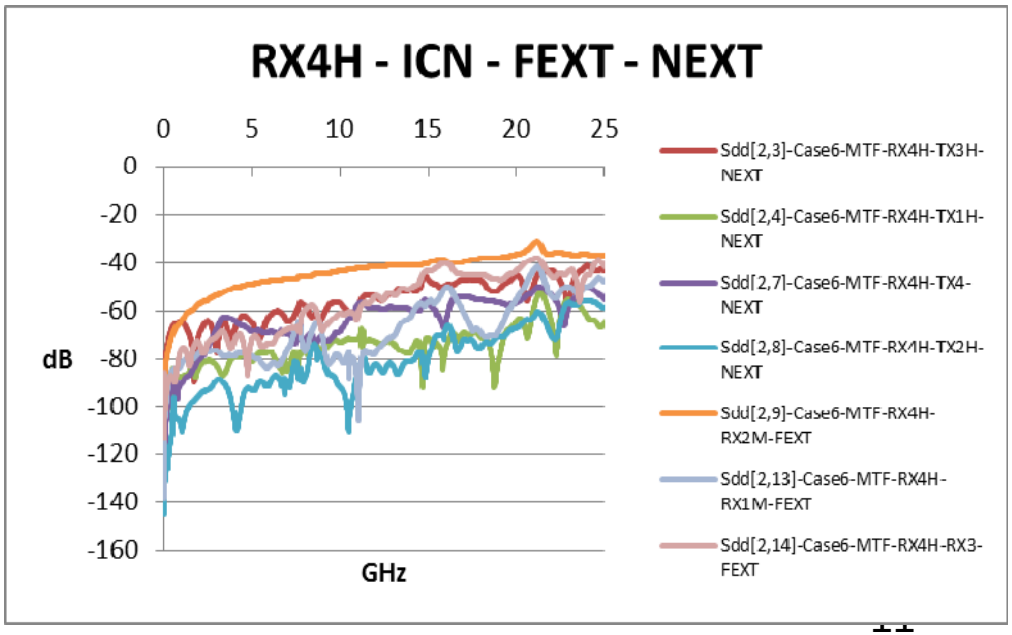


Mated test fixture specifications – Crosstalk

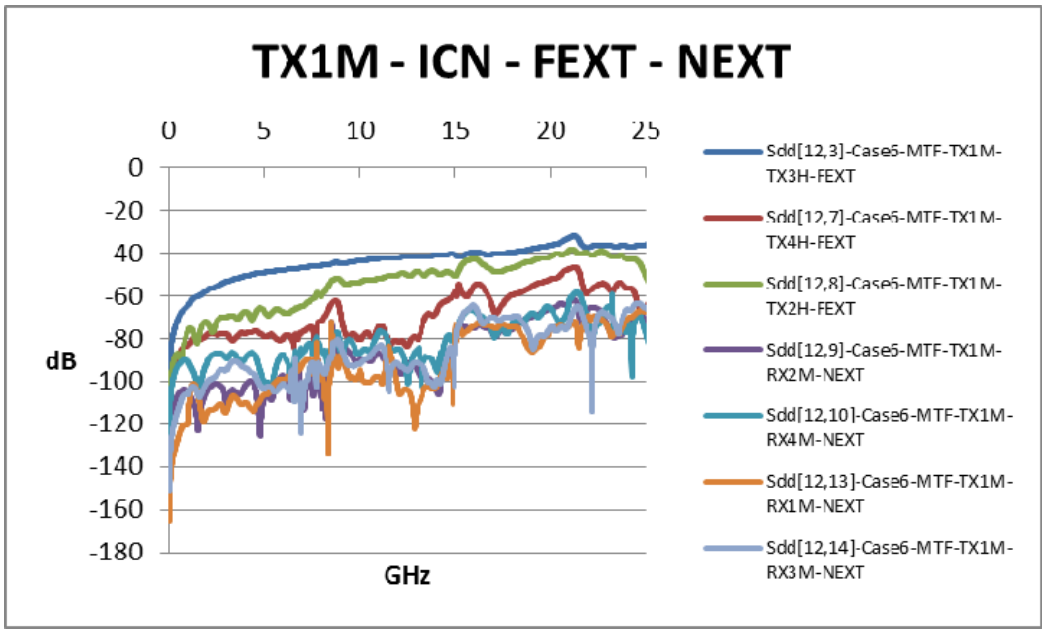


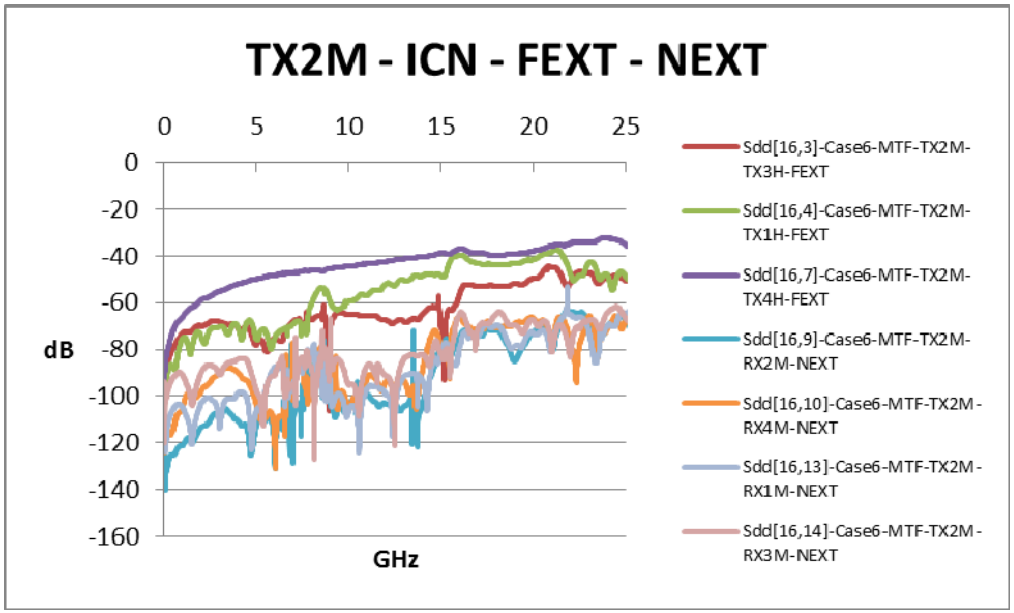


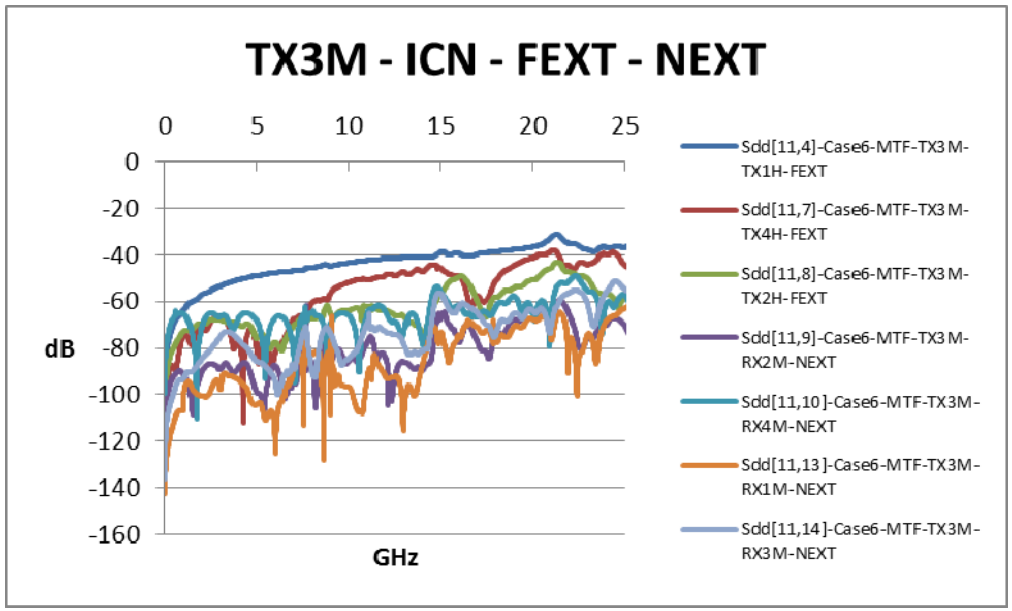


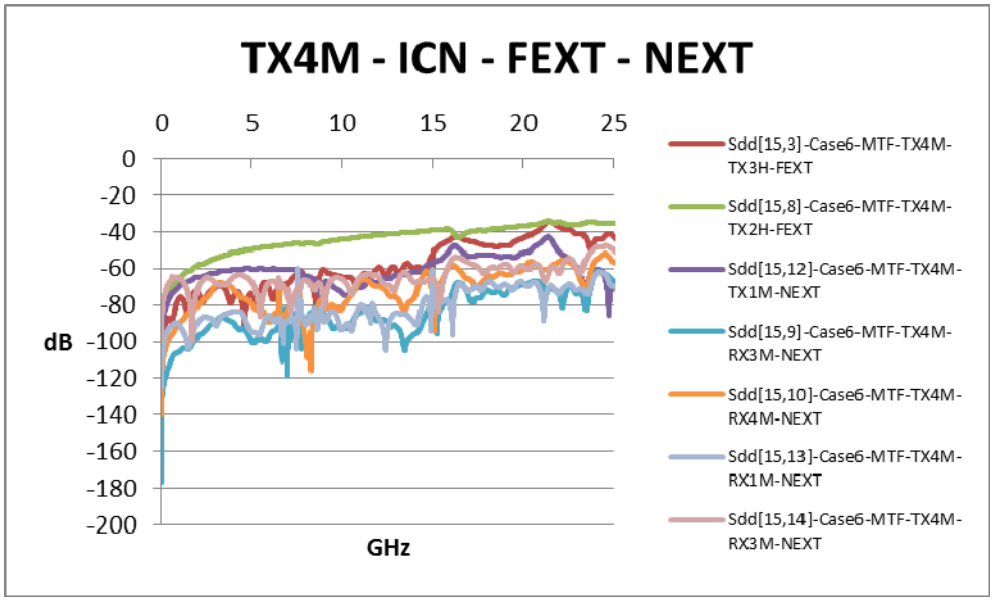


Mated test fixture specifications - Crosstalk









Mated test fixture specifications - ICN

Table 92–15—Mated test fixtures integrated crosstalk noise

Parameter	100GBASE-CR4	Units
MDNEXT integrated crosstalk noise voltage	less than 1.8	mV
MDFEXT integrated crosstalk noise voltage	less than 4.8	mV

	RX1	RX2	RX3	RX4
MDNEXT ICN (mV)	0.11	0.10	0.73	0.81
MDFEXT ICN (mV)	2.91	2.80	2.95	3.01

	TX1	TX2	TX3	TX4
MDNEXT ICN (mV)	0.07	0.07	0.30	0.30
MDFEXT ICN (mV)	2.90	2.94	2.99	2.84

Conclusions

- **Achievability of 802.3bj mated test fixture specifications demonstrated.**