

FORCE10™

“The Being of Channels”

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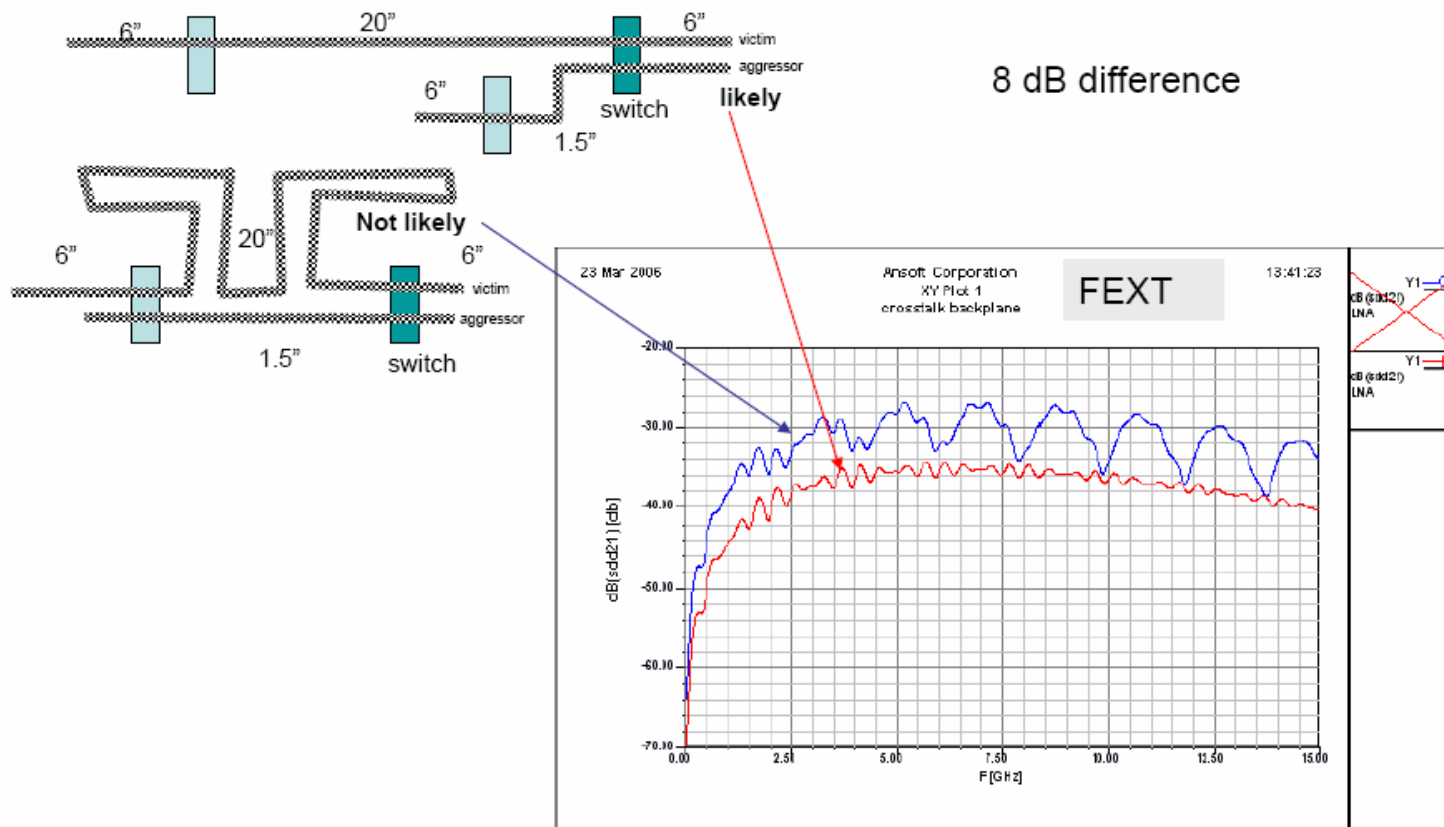
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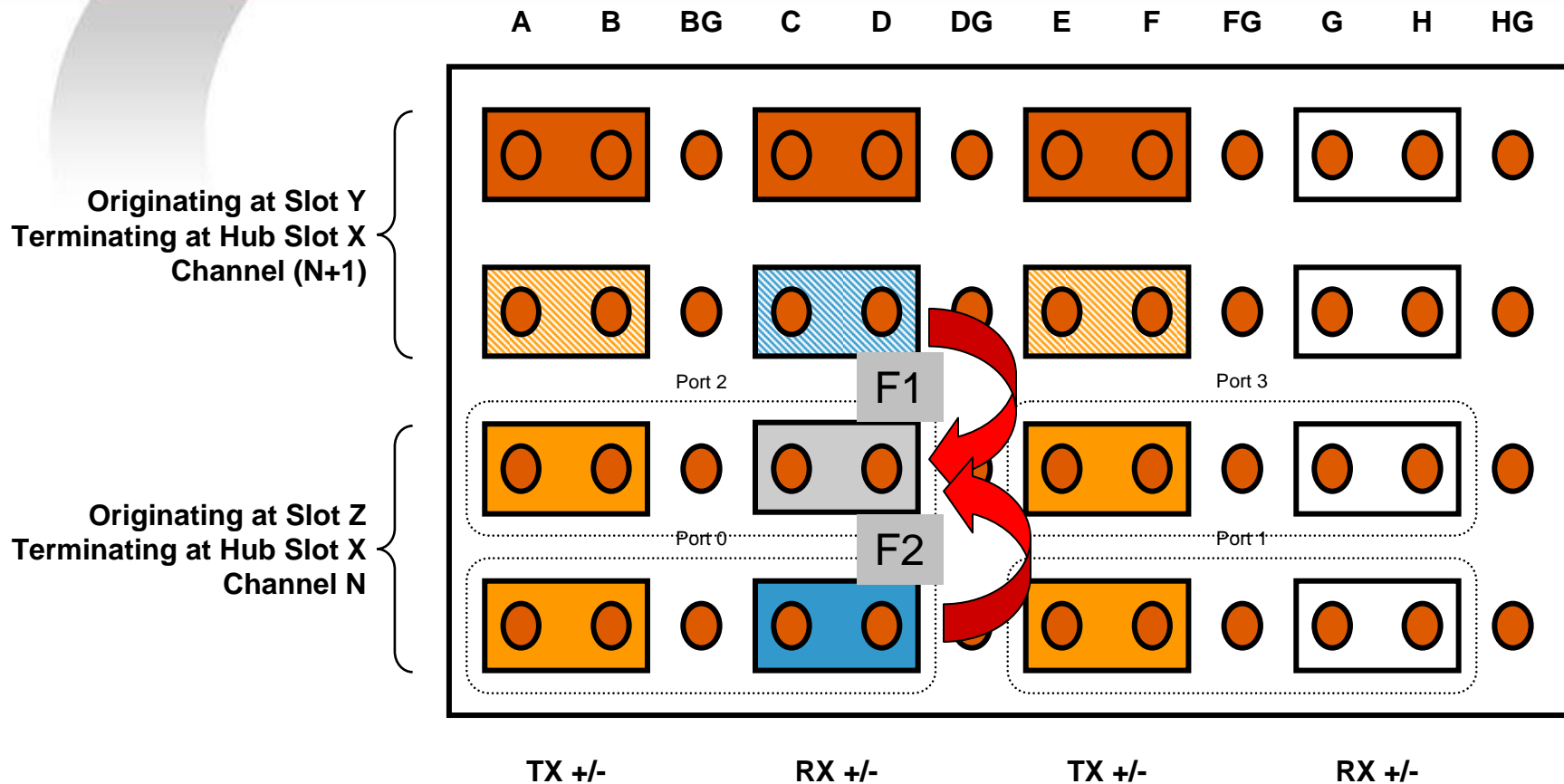


- Suveer Dhamejani, Tyco Electronics
 - Provided updated channel data
- Rich Mellitz, Intel
 - Partner in crime! 😊

Previous Data (dambrosia_r1_0406)

Synthesized comparison





ATCA “Channels” always based on 8 pair between line card and fabric. True for dual star or mesh.

F2 aggressor shares connector at Slot Z and Slot X

4 F1 aggressor shares connector at Slot X only

Z-PACK HM-Zd Test Platform

- Kaparel ATCA Full-Mesh Backplane
 - Nelco 4000-13SI
 - Uses QuadRoute technique
 - 1.1” trace length from Slot 10 to Slot 11
 - 1.5” trace length from Slot 10 to Slot 9

- SMA Line Cards
 - Nelco 4000-6
 - 2.5” trace length

FEXT Measurements made using Agilent 8720 Vector Network Analyzer

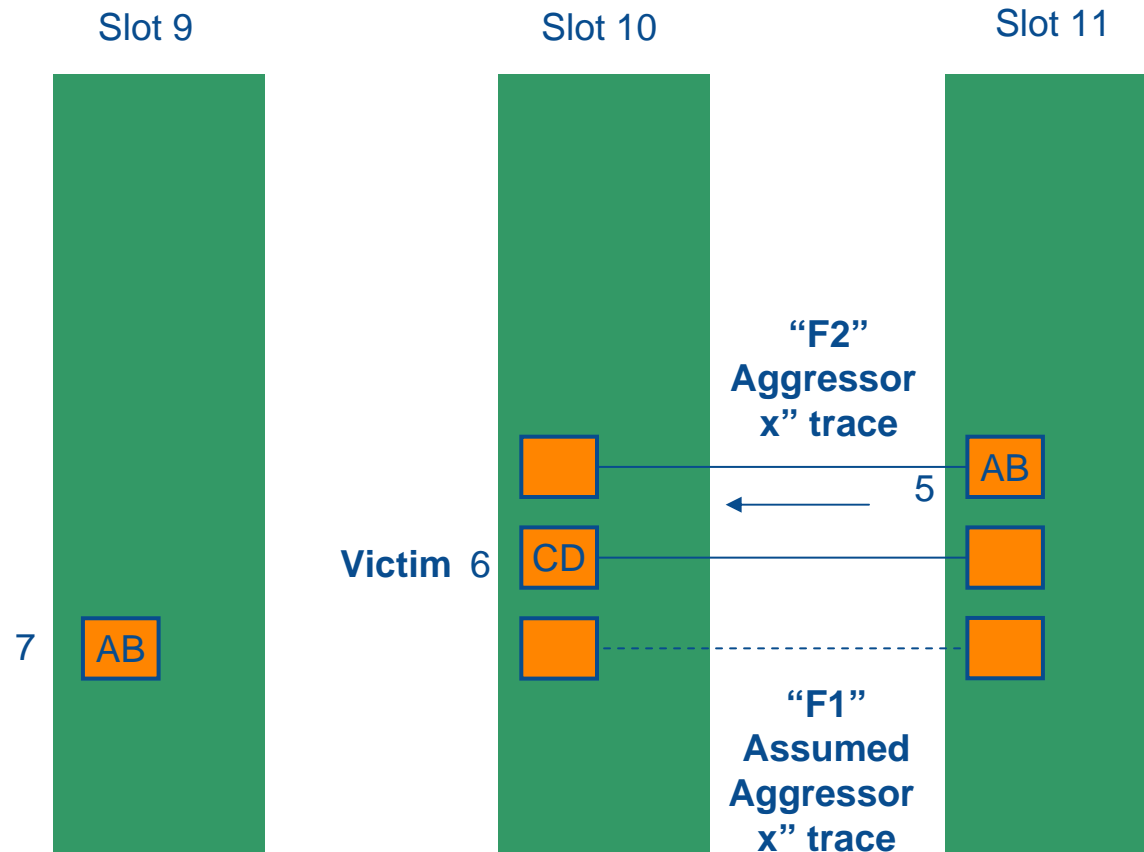
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5 May 3, 2006

Channel Ad Hoc, May 3, 2006

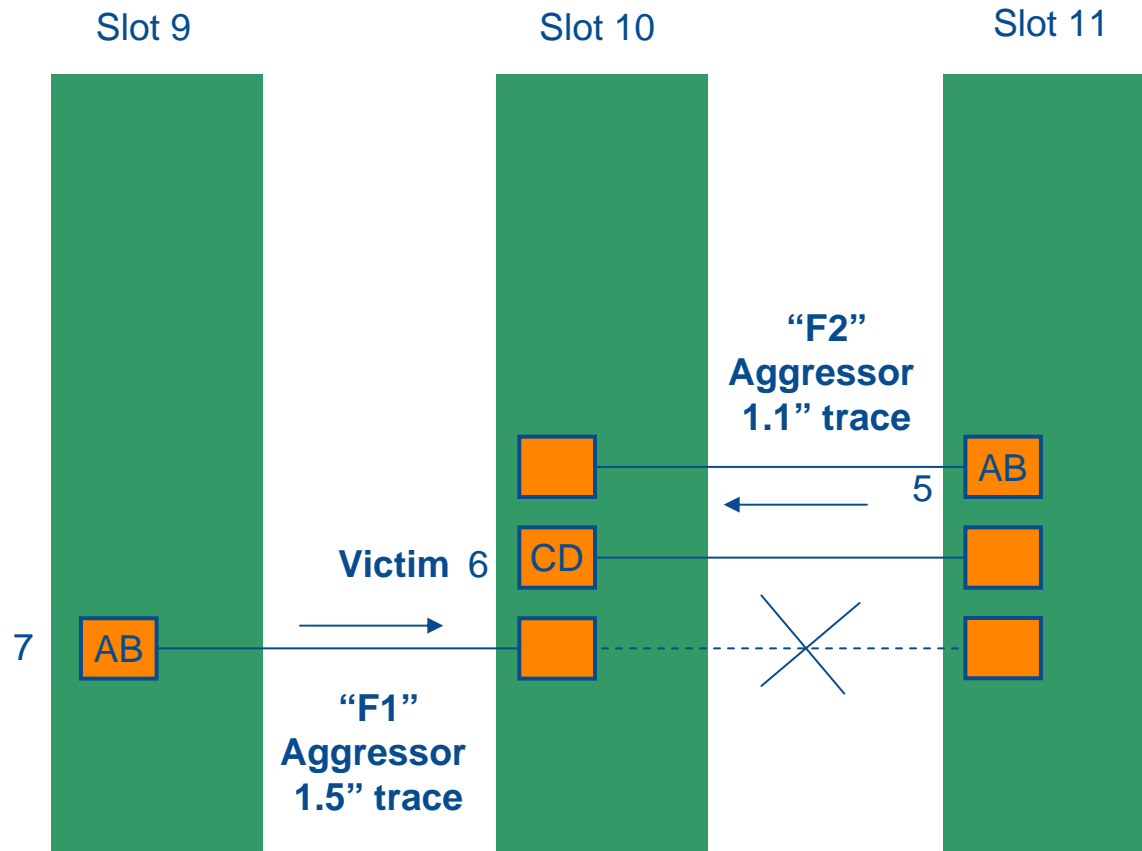
tyco / Electronics

Submitted FEXT Aggressors (dambrosia_01_0904)



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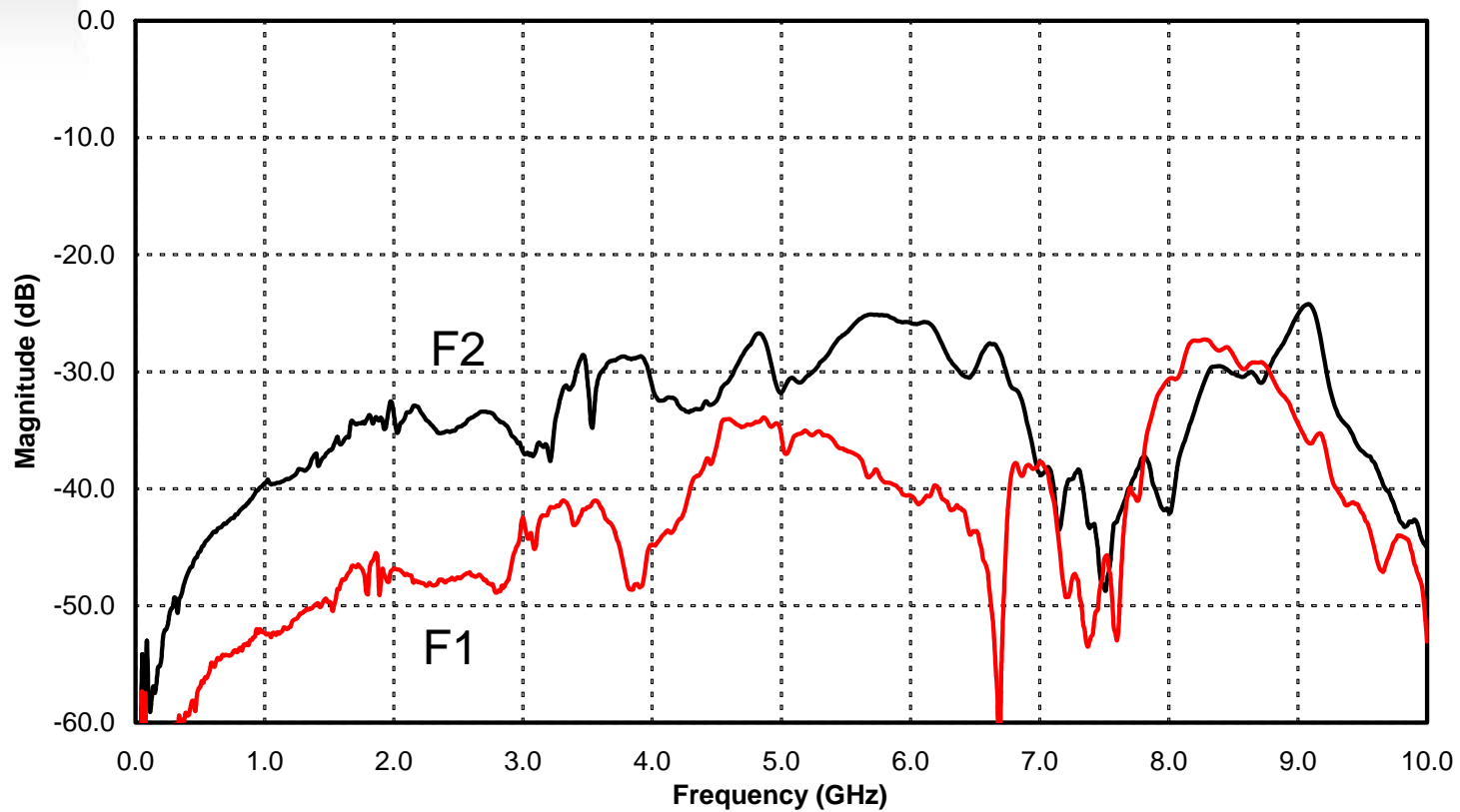
ATCA FEXT Aggressors



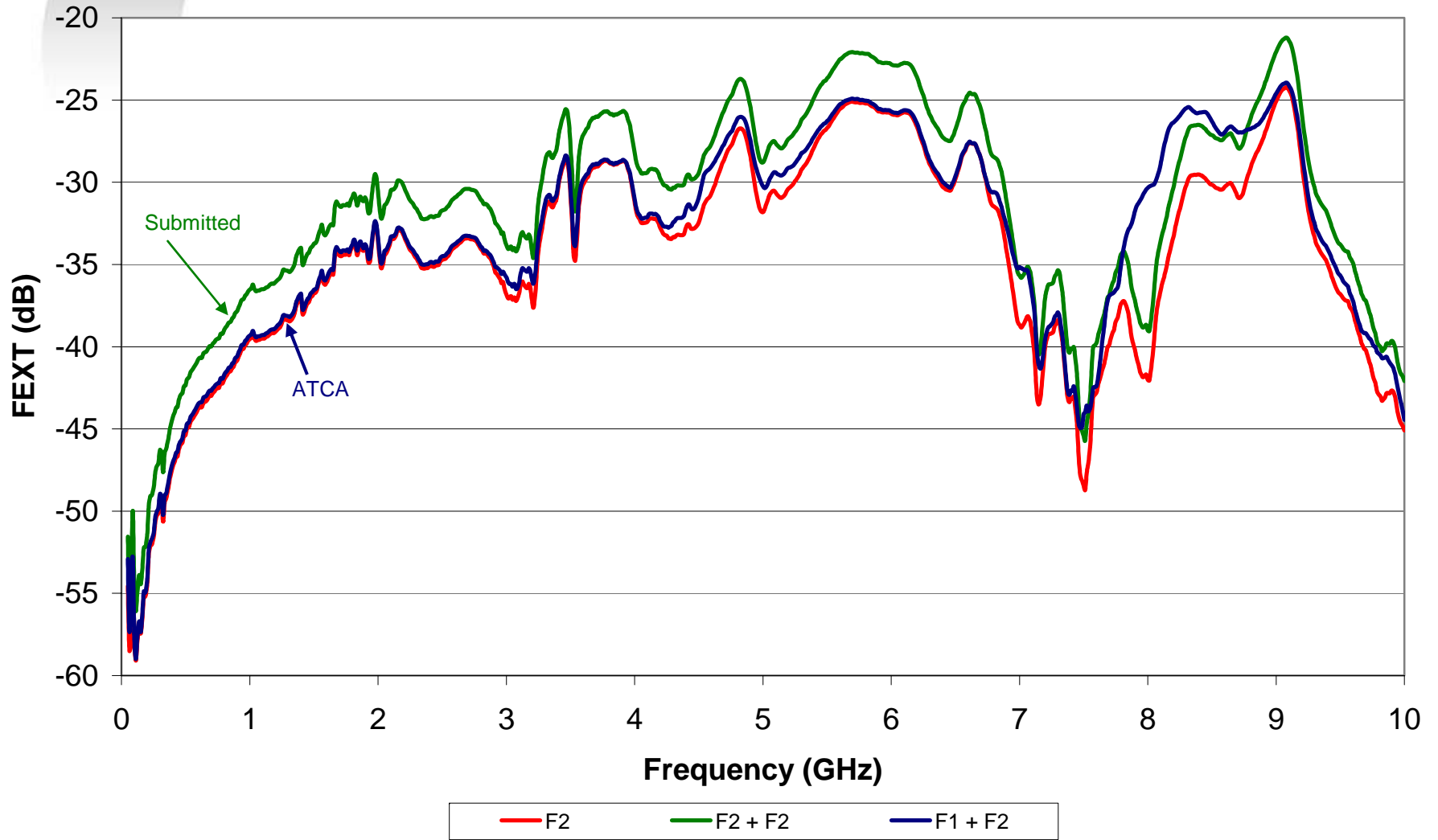
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FEXT Comparison

IEEE Different Slot FEXT Variance



MDFEXT



- Submitted ATCA channels
 - FEXT more worst case than real ATCA backplanes
 - Single FEXT aggressor will dominate MDFEXT
- Analyzed channels sensitive to implementation
 - Connector pinouts
 - System channel characteristics
 - Backplane architecture
- “Real” channels
 - Not Frankenstein concoctions and require critical crosstalk analysis.
 - May have value to test out the standard.
- Blindly applying crosstalk on “real” systems may result in erroneous conclusions.