



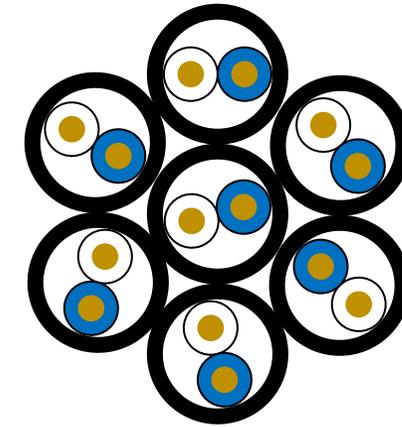
IEEE 800.3dg Alien Crosstalk

SPE LINK SEGMENT ANALYSIS

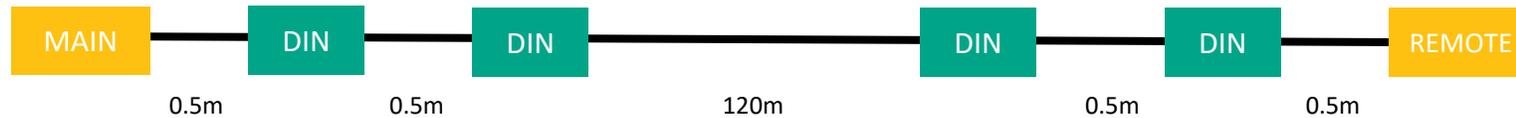
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Overview

- Support for past contributions
 - Same link segment as graber_3dg_01_03152023.pdf
 - 6 around 1 evaluation



6 disturbers
around
1 victim

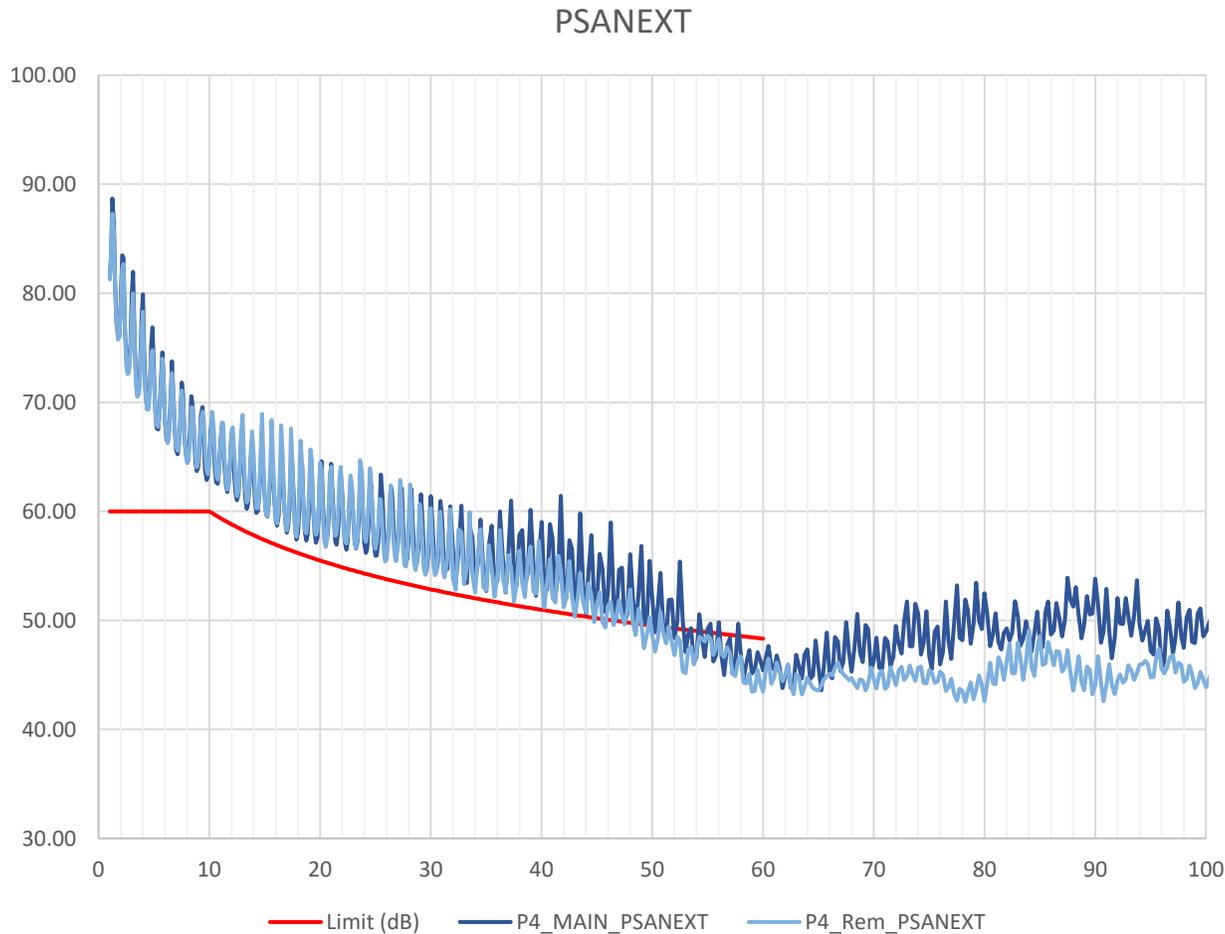


- Support for Fischer_3dg_01a_05172023.pdf
 - One limit, no dependency on overall link length

$$PSANEXT [dB] = \begin{cases} 60 & \text{for } f < 10 \text{ MHz} \\ 60 - 15 \times \log_{10} \left(\frac{f}{10} \right) & \text{for } 10 \text{ MHz} \leq f \leq 60 \text{ MHz} \end{cases}$$

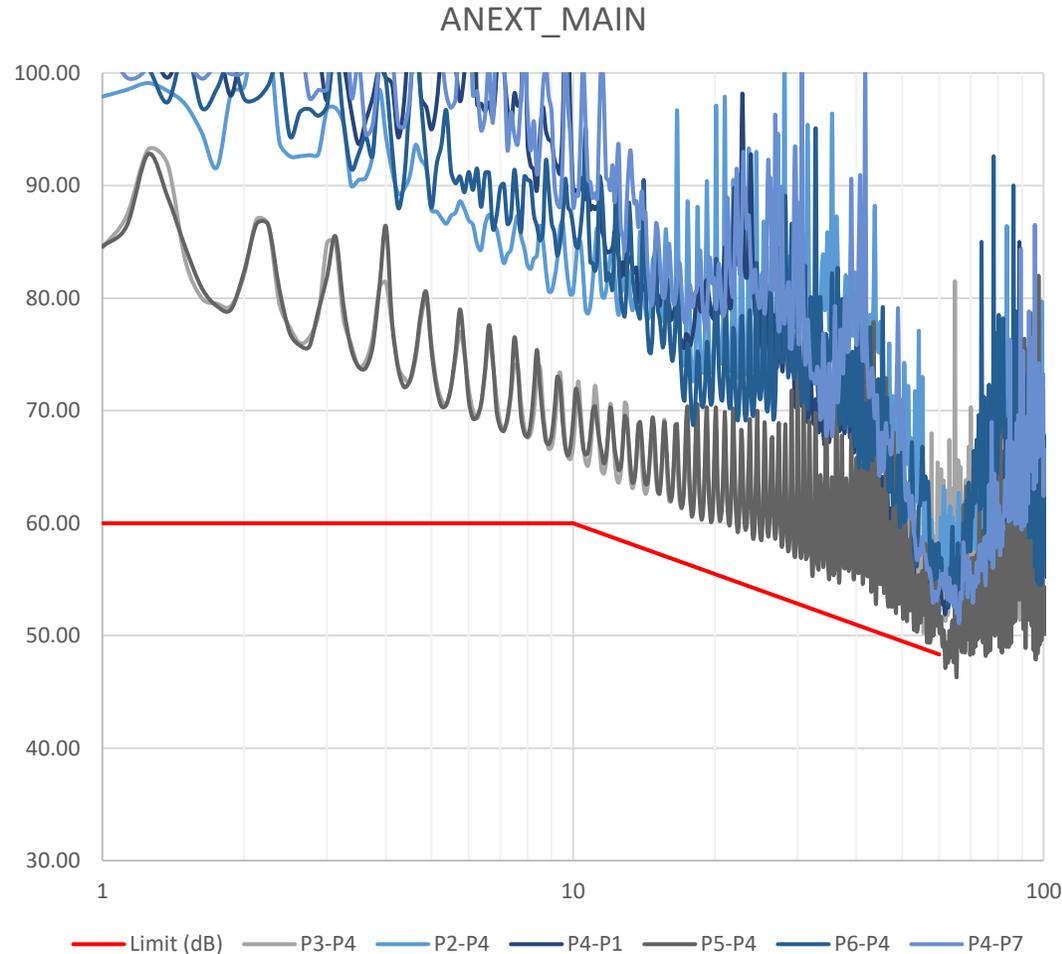
Picture of connectors
Goes here

PSANEXT Results



- Limit Connection Variability
 - Low frequency spike (~20MHz) in `graber_3dg_01_03152023.pdf` is removed.
 - More symmetrical (main vs remote) results.
 - Spike @60MHz is suspect.

ANEXT Results



- ANEXT Contribution per link

- P4 is victim link.
- P3 and P5 are adjacent disturbers to P4 and have highest impact.
- P1, P2 and P6, P7 are furthest away and have lowest impact.
- All disturbers contribute to peak at ~60MHz.
- Physical distance between anomalies are main factor.
 - Suspect 0.5m between connections is cause of spike and will move if distance changed.

Conclusions



- Support that we should have one PSANEXT limit

$$PSANEXT [dB] = \begin{cases} 60 & \text{for } f < 10 \text{ MHz} \\ 60 - 15 \times \log_{10}\left(\frac{f}{10}\right) & \text{for } 10 \text{ MHz} \leq f \leq 60 \text{ MHz} \end{cases}$$

- Variation in termination can influence ‘spurious’ spikes.
 - Symmetrical link should have similar PSANEXT curves.
- Distance between terminal blocks causes unavoidable spike.
 - Increase in distance (0.5m to 2m) will cause spike to occur at lower frequency (ffs)