
802.3CG T1S PMA TEST MODE 3

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IIS

802.CG



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TX Test Mode 3 – PSD and Transmitter Distortion

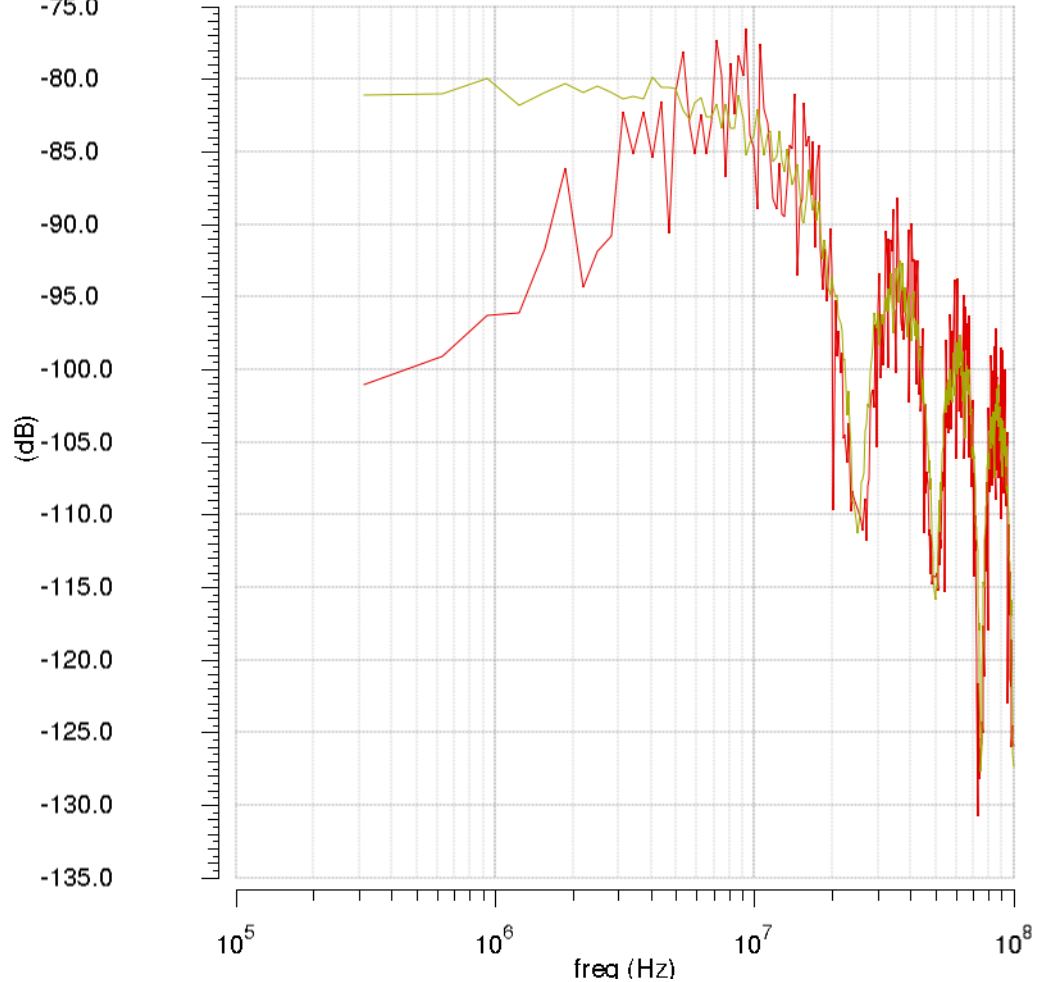
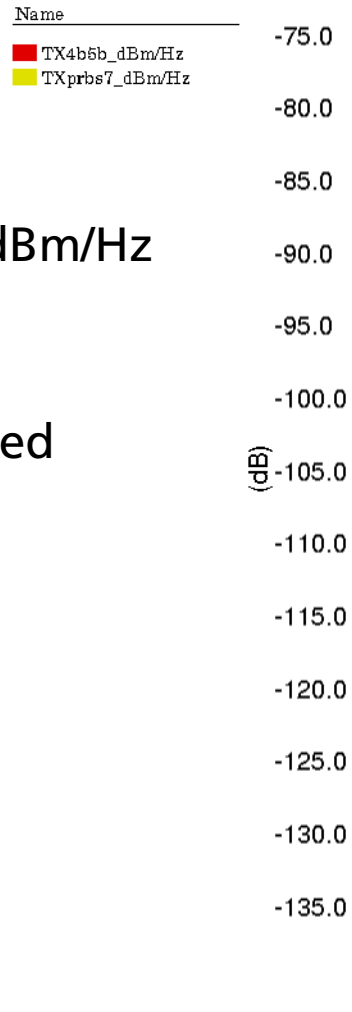
- Draft 1.0: Pattern TBD
- Comparing 4b5b and DME encoded data with test modes ...

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TX Test Mode 3 – PSD and Transmitter Distortion

- Transmit PSD in dBm/Hz

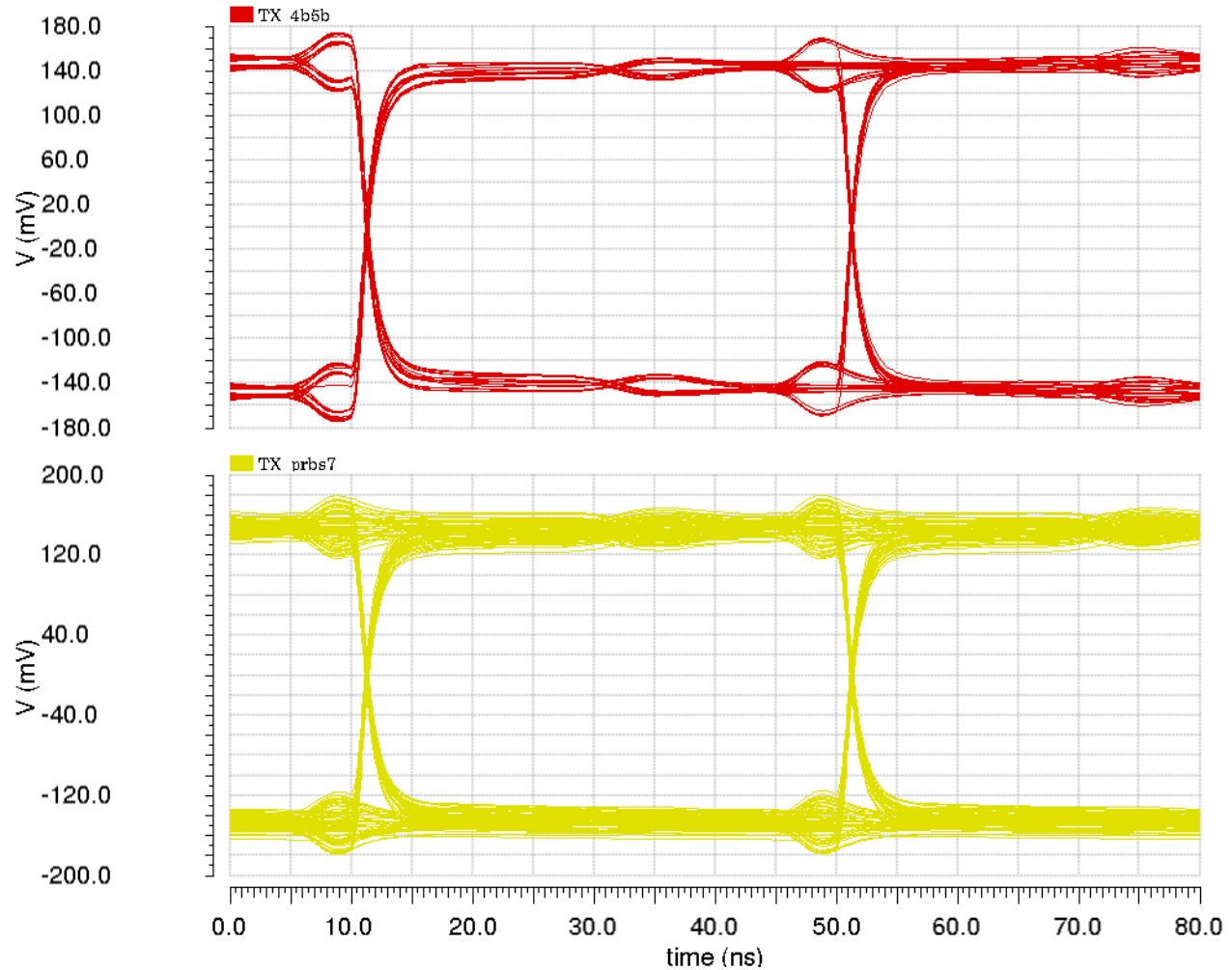
- 4b5b DME encoded
vs.
Plain PRBS7



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TX Test Mode 3 – PSD and Transmitter Distortion

■ 4b5b DME

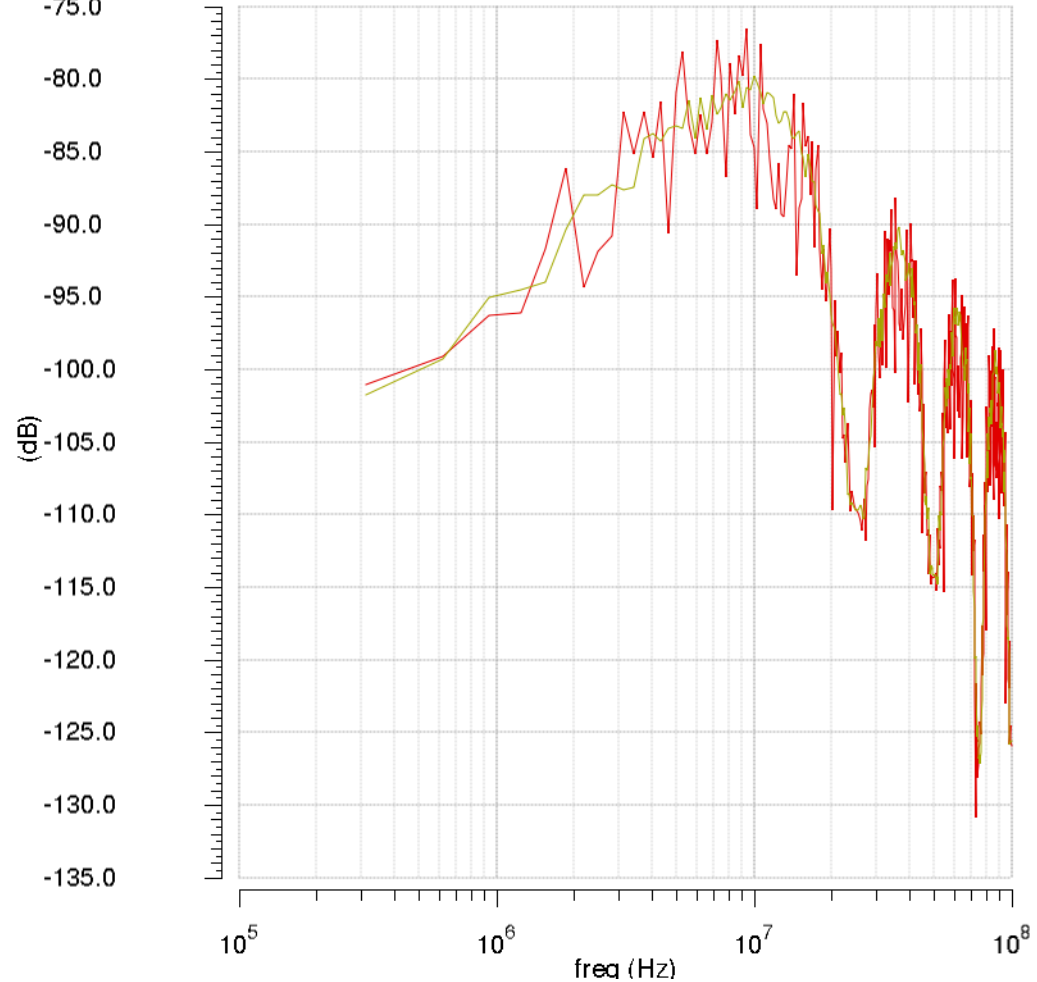
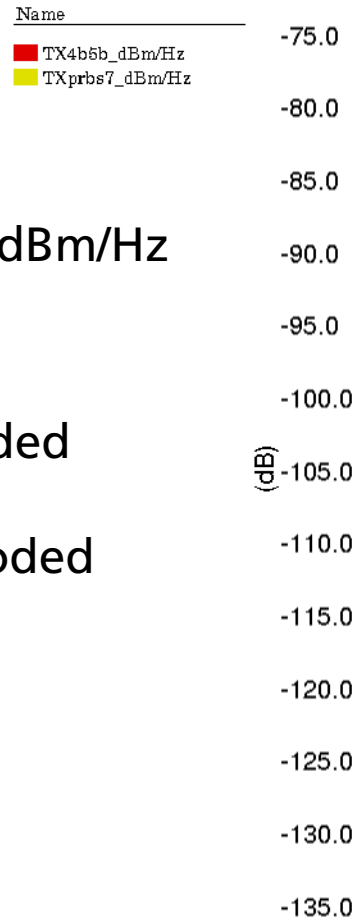


■ Plain PRBS7

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TX Test Mode 3 – PSD and Transmitter Distortion

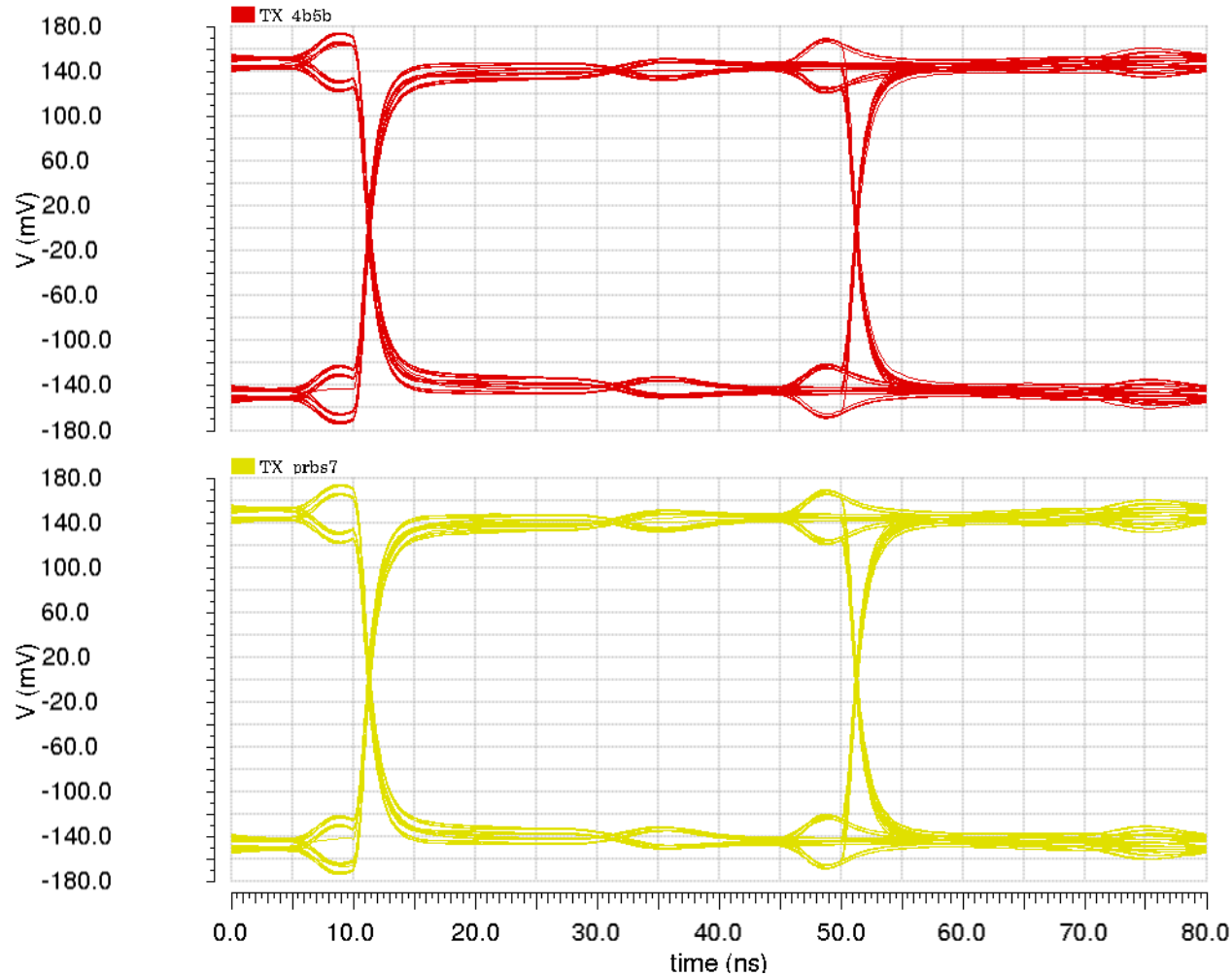
- Transmit PSD in dBm/Hz
- 4b5b DME encoded
vs.
PRBS7 DME encoded



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TX Test Mode 3 – PSD and Transmitter Distortion

■ 4b5b DME



■ PRBS7 DME

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TX Test Mode 3 – PSD and Transmitter Distortion

Conclusion

- PSD and Transmitter Eye Diagram
 - Match of test pattern and 4b5b is better, when Differential Manchester Encoding is applied
- PRBS7 is easy to implement and DME seems to dominate spectral and transient shape

- Proposal for 147.4.1 Test modes:
„When test mode 3 is enabled, the PHY shall transmit continually a DME-encoded PRBS7 sequence of +1 and -1“
- Alternatively:
„When test mode 3 is enabled, the PHY shall transmit continually a DME-encoded pseudo-random sequence of +1 and -1“