
Rosenberger

IEEE 1000BASE-T1 Reference Channel Balance Measurement Results

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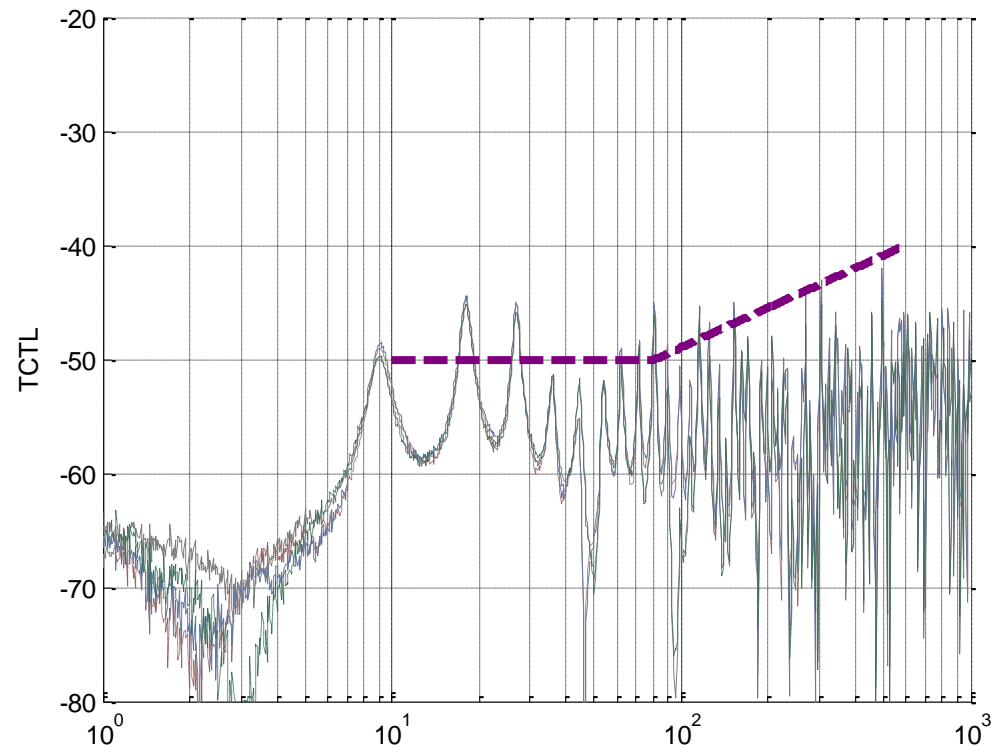
- Measurement setup
- Test results
- Conclusion

- Measurement setup
 - Reference channel 15 m with 4 inline connectors (5 x 3 m)
 - 10 mm height above groundplane
 - $Z_{c_0} = 200 \Omega$
 - Jacketed UTP cable
 - MTD connectors

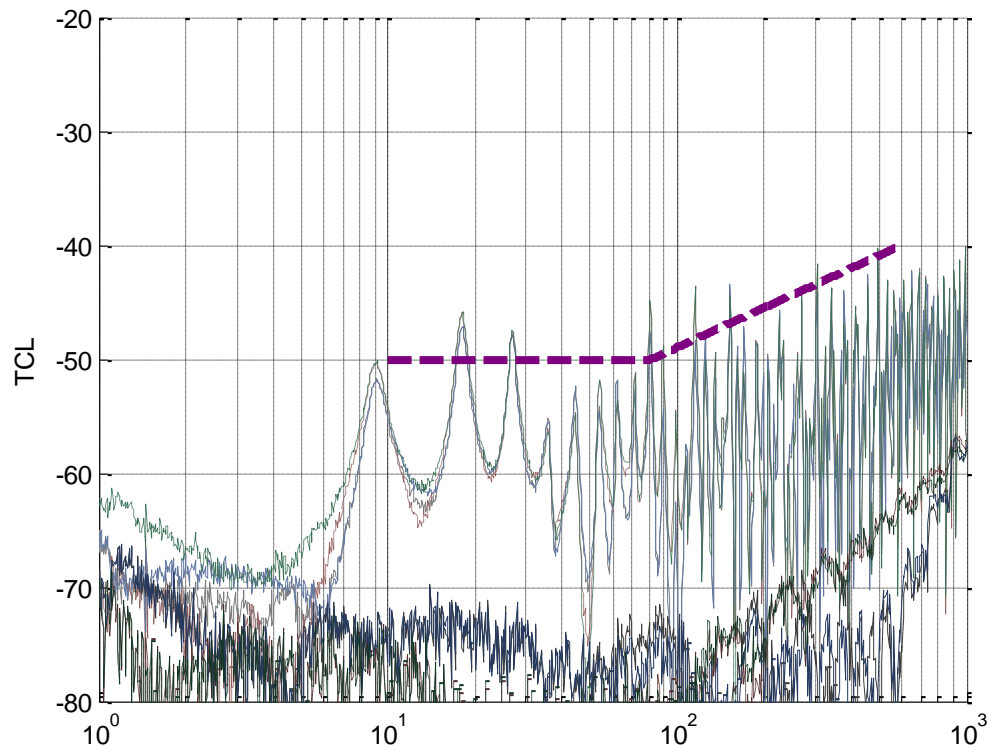


- Reference channel 15 m with 4 inline connectors (5 x 3 m)
- Medium balance cable

- 2 port measurement
- Sdc21, sdc12, scd21, scd12

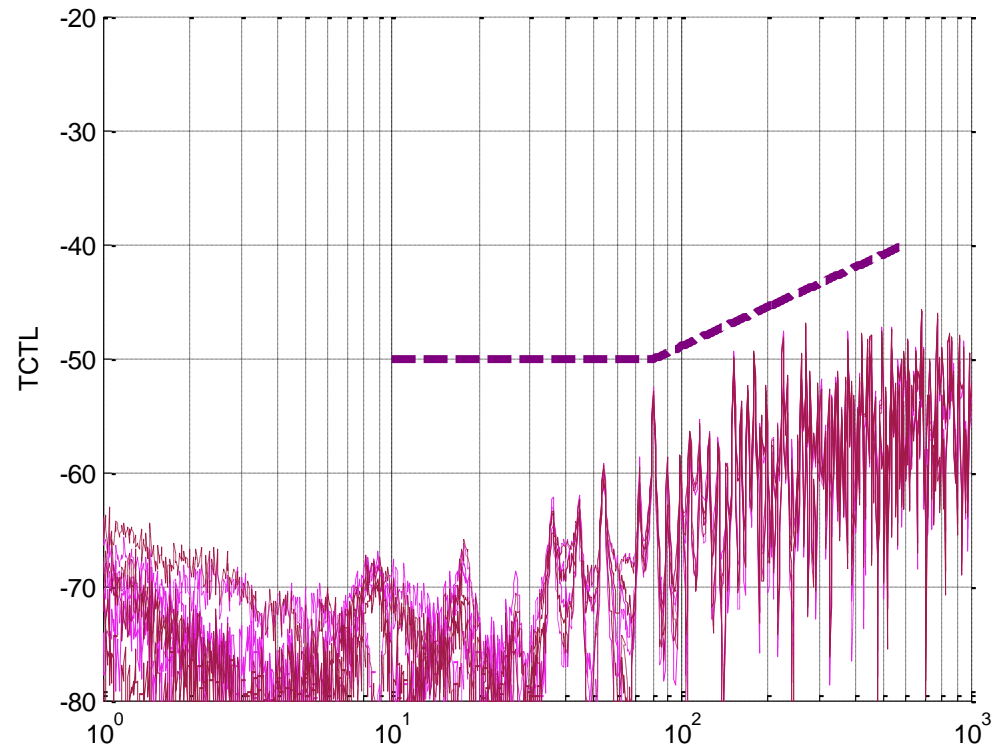


- Reference channel 15 m with 4 inline connectors (5 x 3 m)
- Medium balance cable
- 1 port measurement
- Sdc11, sdc22, scd11, scd22
- Balance “noise” level of the setup shown (open fixture scd11)



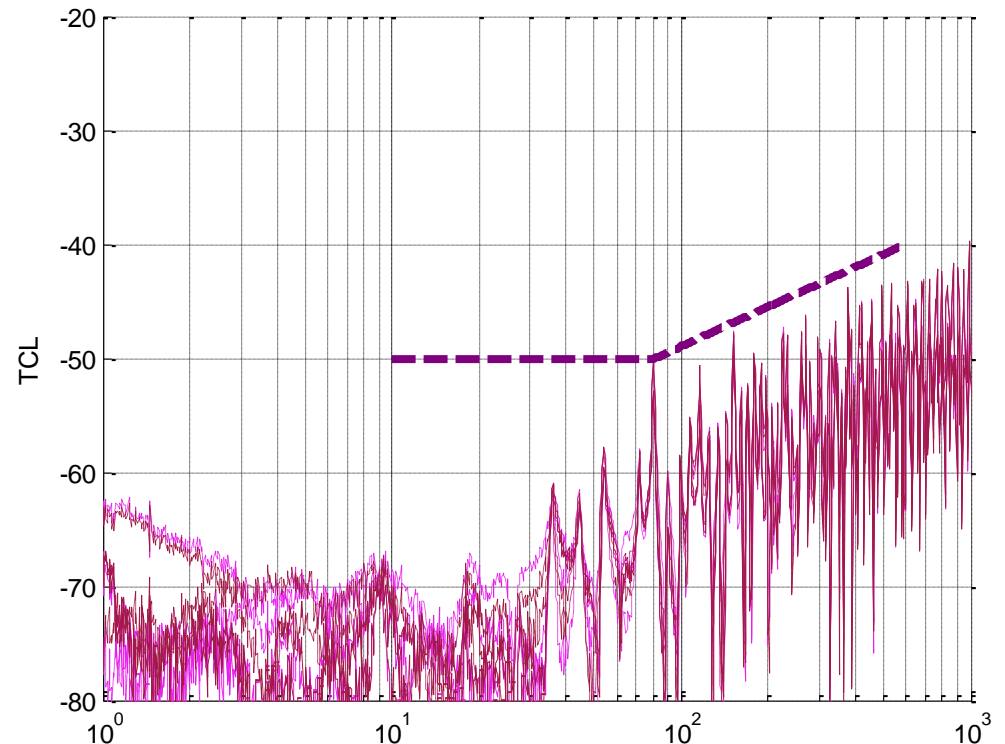
- Reference channel 15 m with 4 inline connectors (5 x 3 m)
- High balance cable

- 2 port measurement
- Sdc21, sdc12, scd21, scd12



- Reference channel 15 m with 4 inline connectors (5 x 3 m)
- High balance cable

- 1 port measurement
- Sdc11, sdc22, scd11, scd22



- The mode conversion channel limit was tested in 1 port and 2 port measurement setup
- Even with high balance cables there would be no margin if the mode conversion limit is applied not only to TCTL/LTCL as assumed but also to TCL/LCL