Revised tables for 1550: power levels and channel insertion loss

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Power levels and pain balance

- Current spec (-20 dBm) for Rx sensitivity can force an expensive APD solution
  - Indicated in the hanson_1_0500 proposal as too optimistic
- A 2 dBm raise in the power levels would benefit the overall pain budget for the 1550 serial PMD
- This still allows for possible APD solution to make an extended reach transceiver

Proposed changes (1)

	new value	old value	relevant table
Tx max. power	+4 dBm	+2 dBm	52-12
Tx min. power	0 dBm	-2 dBm	52-12
Rx max. power (for damage)	+4 dBm	--	52-13
Rx max. power (for BER overload)	-3 dBm	-8 dBm	52-13
Rx sensitivity	-18 dBm	-20 dBm	52-13
Stressed Rx sensitivity	-13.41 dBm	-15.41 dBm	52-13

Channel insertion loss

- Assumption: 0.30 dB/km+1 dB connector loss
  - Gives a total 13 dB channel insertion loss
- In reality, there are
  - 30 km links with 15 dB insertion loss
  - 50 km links with 11 dB insertion loss
- This is due to
  - Various grades of G.652 fiber (0.35 – 0.5 dB/km)
  - Different number of splices and connectors
- End-to-end channel insertion loss is more appropriate for 1550 links

Proposed changes (2)

1. Changes in 52.11:
   - Do not specify the loss as ”xx dB/km” for the 1550 serial PMD
   - Specify the maximum channel insertion loss to 13 dB including connectors for the 1550 serial PMD
2. Specify a minimum channel insertion loss explicitly. (A minimum channel insertion loss is implicit in the current spec)

Affects tables 52-16, 52-17