Using peakpower for max spec – 1550 Serial –

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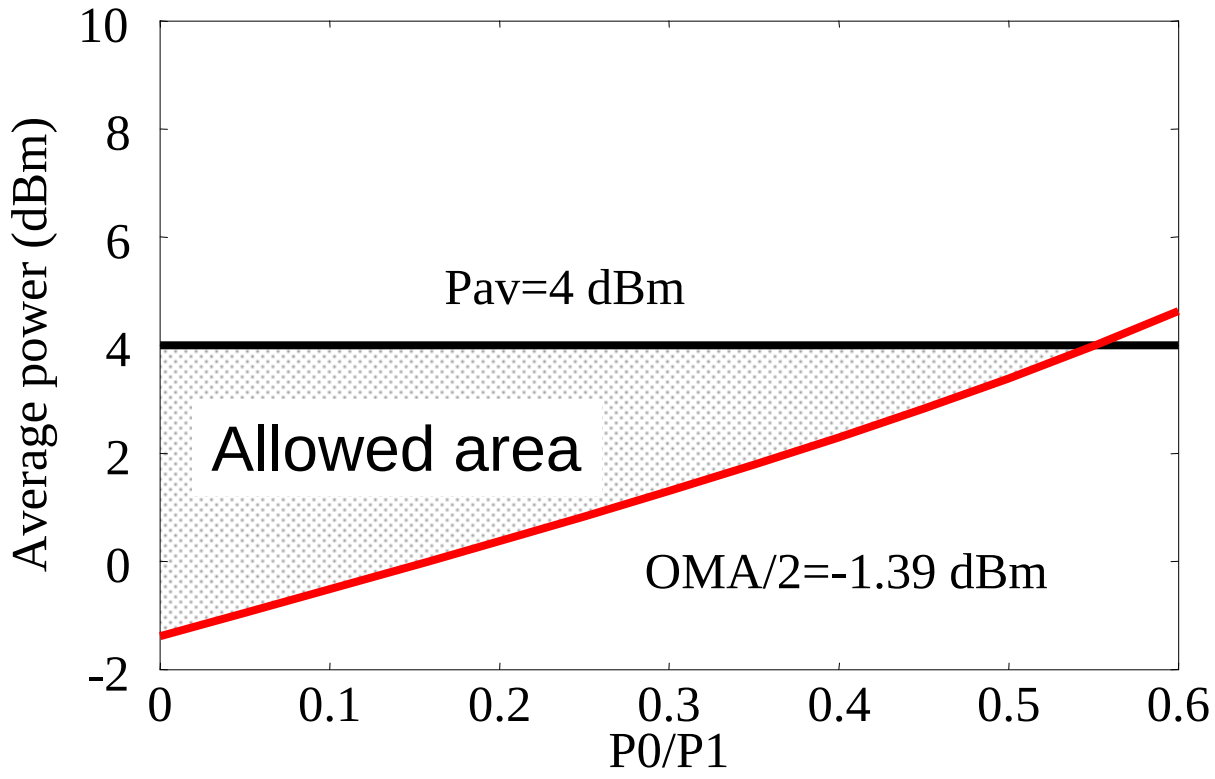
1550 nm TX power level: current status



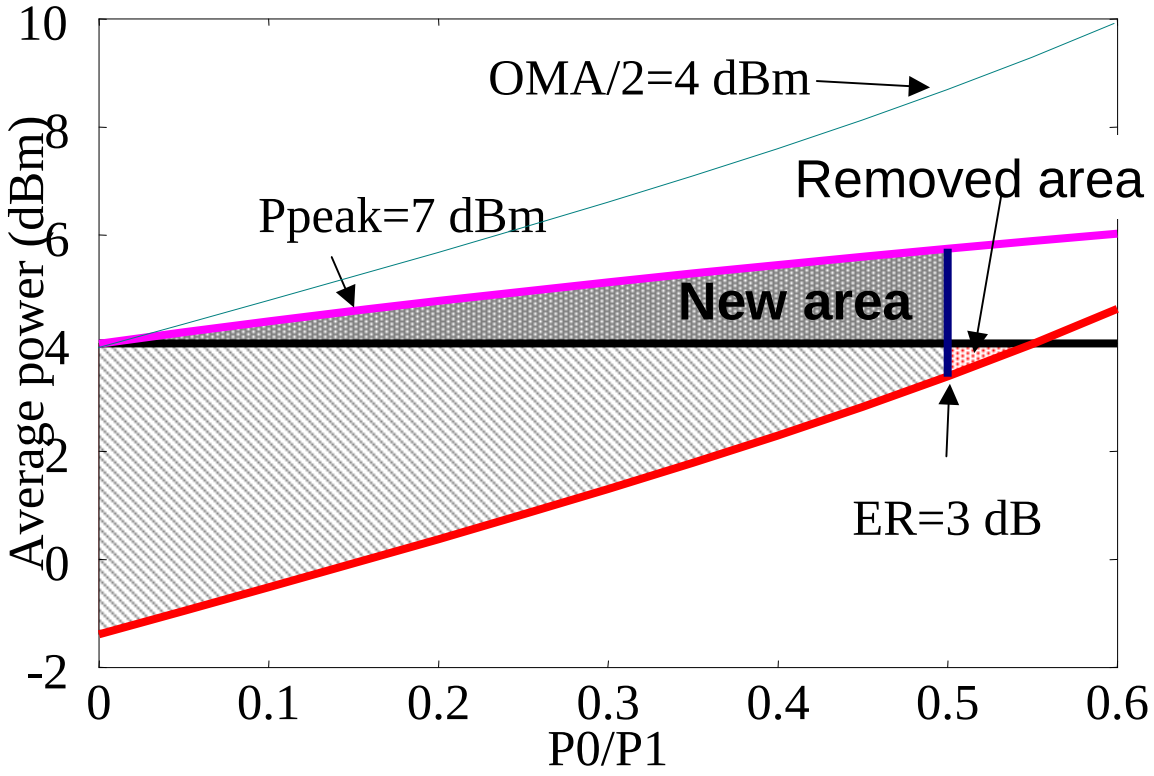
Max power limit 1550 nm

- Eye safety is no problem (10 dBm)
- Max power is limited by receiver overload and damage level

Overload limits

- We checked a number of TIAs on the market:
  - Either limited by peak amplitude or OMA, not by average power
  - Good margin to the current overload level
- For PIN-detectors, peak power typically is damage and saturation parameter.

Proposed change



What can be gained

- Future sources will probably be able to generate more power.
- This power can be used for extended reach or compensating bad fiber
- The max power spec might be limiting for these next generation sources
- Minimal impact on current designs

Changes in draft

- Table 52-13-10
  - Peak power (max) 7 dBm
  - Footnote: peak power is defined as Pav+OMA/2
  - Extiontion ratio (min) 3 dB
- Table 52-14-10
  - Peak receive power 0 dBm
  - Maximum peak receive power for damage 7 dBm