Reducing Ton and Toff maximum values

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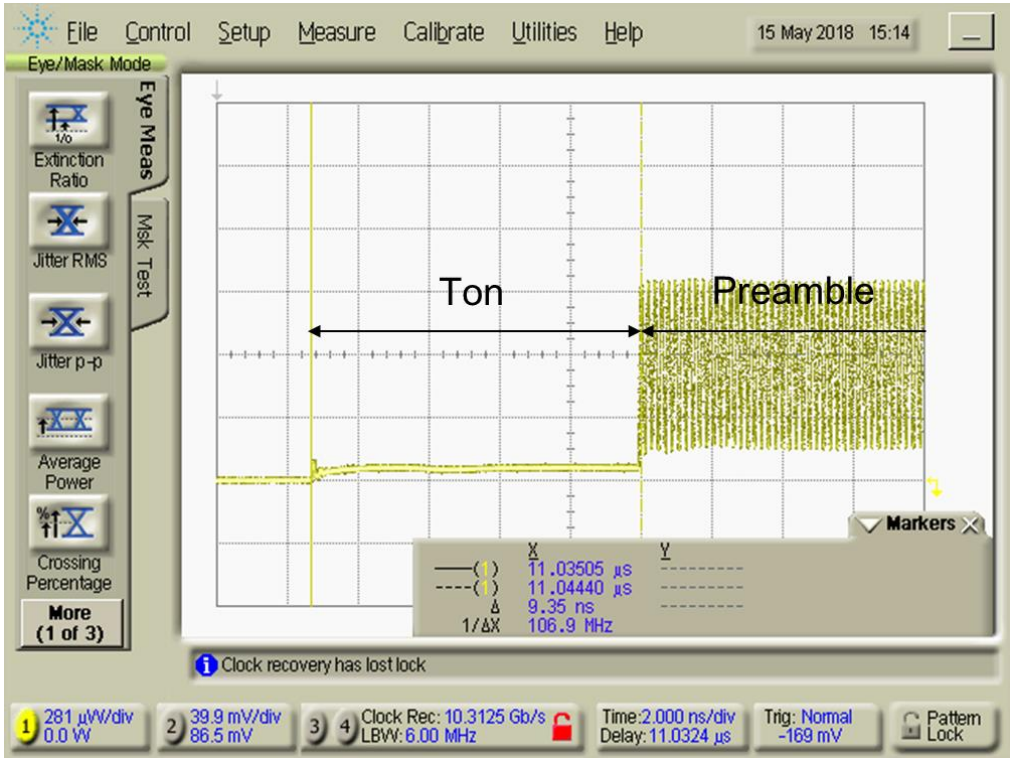
10G EPON T_{on} and T_{off}

- 10G EPON T_{on}(max) = T_{off} (max) = 512 ns
- These are old values from GE EPON days. Components on the market can easily outperform these values.
- Therefore we can "modernize" these maximum values without affecting laser cost.

DML turn on time.

For example, Hanyub Lee: experimental result of 10G burst mode DFB laser. Ton ~ 10 ns.



ITU-T XGS-PON Tx enable and Tx disable

- 10G EPON T_{on} and T_{off} correspond to ITU-T XGS-PON Tx enable and Tx disable
- Tx enable and Tx disable maximum values are 128.6 ns.

From ITU-T G.9807, Table B.III.2 (XGS-PON)

	Tx enable	**Tx disable**
Worst-case in bit times (nsec)	1 280 (128.6)	1 280 (128.6)
Objective in bit times (nsec)	256 (25.7)	256 (25.7)

- Components on the market can easily meet 128.6 ns.

Proposal to reduce T_{on}(max) and T_{off} (max)

- Align 25/50G EPON T_{on}(max) and T_{off} (max) with ITU-T XGS-PON worst case Tx enable and Tx disable: 128.6 ns (or 128 ns)
- Rationale:
  - Increase convergence of PMD layer specifications
  - Slightly improved discovery times
  - Encourage vendors to target better performance from the beginning instead of after iterations
  - No effect on laser costs or time-to-market

Motion

In section 141.7.14 “Laser on/off timing measurement”, change T_{on} and T_{off} maximum values from 512 ns to 128 ns.

Moved: Ed Harstead

Seconded:

Technical (≥75% to PASS)

For: Against: Abstain: