

Comment

Background: IEEE Std 802.3at (POE+) allowed an alternate droop test (Sub-Clause 25.4.5) to be applied to Type 2 100BASE-TX. Type 2 Transmitters are allowed to meet this requirement or the previous 350uH Open Circuit Inductance requirement.

This comment proposes to allow this same alternate droop test to be available to all 100BASE-TX transmitters. The specification modification will increase design flexibility by supporting the use of advanced manufacturing techniques and processes in magnetics which will provide cost avoidance, improved consistency, improved DPPM, improved EMI and potentially simpler PHY design.

To incorporate this change, comments have been submitted against the following sub clauses:

25.4.5, 25.4.5.1 Figure 25-1 and Figure 25-2, 25.4.7, 25.6.3.1, 25.6.4.2, and 25.6.4.4

Suggested Remedy

Clause 25.6.4.2

Add the following additional rows to the table

PD8	Receiver worst-case droop transformer	25.4.7	M	Differential voltage signals translated into one of the PMD_UNITDATA.indicate messages with a bit error ratio less than 10 ⁻⁹ after link reset completion
PD9	Transmitter worst-case droop transformer	25.4.5	M	Meet OCL requirements of 9.1.7 or requirements in 25.4.5.1
PD10	Equivalent system time-constant	25.4.5.1	M	Greater than 2.4µs when calculated using measurement points A and C in Figure 25-2