

802.3da D3.1 10 Mb/s Single Pair Multidrop Segment Enhancements 1st Sponsor recirculation ballot cor

CI 189 SC 189.3 P140 L7 # R1-28

Peker, Arkadiy microchip

Comment Type T Comment Status D Power

It is not clear how some parameters in this table were derived? For example, our calculation based on 4 Ohm cable DC loop resistance and 17 mated connectors (and compensation components) with 150mOhm resistance provides different values for Vmpd_min and Impse_min. Another issue with cable + connectors resistance for Type 0 and 1. Type 0: (Vmpse_min-Vmpd_min)/Impse_min=(21.6V-16V)/1.1A=5.09 Ohm
Type1: (Vmpse_min-Vmpd_min)/Impse_min=(45V-35.5V)/1.76A=5.39 Ohm Should be this values to be equal?

SuggestedRemedy

Provide Annex with example of mixing segments power calculation.

Proposed Response Response Status W

PROPOSED REJECT.
DEFER

The proposed change in the comment does not contain sufficient detail so that the CRG can understand the specific change being suggested by the commenter.

CI 188 SC 188.9.1.6 P124 L32 # R1-30

Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type T Comment Status D Power

Compliance with the specifications at any current up to 2A in either polarity from TC1 to TC2 negatively affects the form factor and implementation effort of all TCIs that are intended to be not powered. This is particularly critical for applications where power supply is on a separate pair of conductors

SuggestedRemedy

In 188.9.6 line 33 change "2A" to "0.2A"; Add new final sentence: for currents between 0.2A and 2A, TCIs shall meet the return loss requirements of 189.6.1 for N_unit=1

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

DEFER

In 188.9.1.6 line 33 change "2A" to "0.2A";

Add new final sentence: "For currents between 0.2A and 2A, TCIs shall meet the return loss requirements of 189.6.1 for N_unit=1."

(note N_unit is with underscore - editor to see text formatting in clause 189)

In PICS TCI7, change "2 A" to "0.2A" in Value/comment

Insert new PICS TCI8 after TCI7 and renumber.

Feature: Return loss when powering current is applied

Subclause: 188.9.1.6

Value: Meets return loss requirements in 189.6.1 for N_unit = 1 for currents between 0.2A and 2A."

Status: M

Support: Yes []

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CI 188 SC 188.6.1 P110 L41 # R1-39

Potterf, Jason Cisco Systems, Inc.

Comment Type T Comment Status D Isolation

Clause 188 has no isolation requirements for PHYs that do not implement an MPI. Clause 40.6.1.1 Electrical isolation provides precedence and useful language to address this.

SuggestedRemedy

Insert the following text as a new paragraph as the end of Section 188.6.1

A PHY with a TCI that is not an MPI shall provide electrical isolation between the port device circuits, including frame ground (if any) and all MDI leads. This electrical isolation shall meet the isolation requirements as specified in J.1.2.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

DEFER - Jason to write PICS option for whether the TCI is an MPI (similar to clause 189 NODATA), and comment response will include PICS for when the TCI is an MPI.

Insert the following text as a new paragraph at the end of Section 188.6.1:

A PHY with a TCI that is not an MPI shall provide electrical isolation (see J.1.2) between the port device circuits, including frame ground (if any) and all MDI leads.

Insert new PICS PMDE1 and PMDE2 on P132 L8 and renumber remaining PICS.

Item: PMDE1

Feature: Electrical isolation between port device circuits

Subclause: 188.6.1

Value/Comment: A TCI that is not an MPI provides electrical isolation between the port device circuits, including frame ground (if any) and all MDI leads, in compliance with J.1.2.

Status: M:NOPOWER

Support: Yes [], N/A []

Item: PMDE2

Feature: Electrical isolation between port device circuits

Subclause: 188.6.1

Value/Comment: A TCI that is an MPI provides electrical isolation according to 189.6.2

Status: M:NOPOWER

Support: Yes [], N/A []

CI 189 SC 189.6.2.1.1 P164 L11 # R1-40

Potterf, Jason Cisco Systems, Inc.

Comment Type T Comment Status D Isolation

The addition of MPI Groups creates some confusion regarding the isolation requirements for Isolated MPoE Systems. Please consider making it explicit that MPI Group membership does not imply exception from isolation.

SuggestedRemedy

Change the sentence beginning on line 9 to read:

A device incorporating at least one isolated MPD shall provide electrical power isolation between all MPIs on the device, including MPIs associated with either additional MPDs, MPIs within an MPI Group, or any MPSE.

Proposed Response Response Status W

PROPOSED ACCEPT.

DEFER.

CI 189 SC 189.6.2.2.1 P165 L15 # R1-41

Potterf, Jason Cisco Systems, Inc.

Comment Type T Comment Status D Isolation

The addition of MPI Groups creates some confusion regarding the isolation requirements for Grounded MPoE Systems. Please consider making it explicit that MPI Group membership does not imply exception from isolation for MPDs.

SuggestedRemedy

Change the sentence beginning on line 15 to read:

Note this includes MPIs associated with either additional MPDs, MPIs within an MPI Group, or any MPSE.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

DEFER

Replace, "Note this includes MPIs associated with either additional MPDs or any MPSE."

with, "This requirement includes MPIs associated with either additional MPDs or any MPSE, and is not affected by membership in an MPI Group."

CI 188 SC 188.11 P127 L1 # R1-61

Law, David Hewlett Packard Enterprise

Comment Type TR Comment Status D MII

On review of the PHY delay constraints defined in table 188-5 '10BASE-T1M delay constraints', it appears the CRS signal from a BEACON following immediately after a packet sent during the last transmit opportunity can be asserted before the RX_DV associated with the packet is de-asserted.

This is because the end of the last transmit opportunity packet, TCI input to CRS, is de-asserted at the local_nodeID = node is 640 ns minimum (Table 188-5). Although not specified, assuming a clock cycle for synchronisation, state change, and TX_ER output, and another for TX_ER sampled, which is 800 ns. Finally, TX_ER sampled to TCI output is 120 ns minimum (Table 188-5). As a result, the gap between the end of the last transmit opportunity packet to BAECOM observed by other nodes could be as short as 640 + 800 + 120 = 1560 ns.

There is no specification in Table 188-5 regarding TCI input to RX_DV de-asserted, only TCI input to RX_DV asserted, which is specified as 2.4 us. If it is assumed that the TCI input to RX_DV de-asserted is the same value of 2.4 us minimum, the CRS for the BAECOM would be asserted (1.56 us) before the RX_DV is de-asserted (2.4 us).

Since, however, RX_DV, which is used by the RS to 'frame' the packet for the MAC, only needs to be asserted a few bits before the SFD for correct operation, the RX_DV de-assert delay does not have to be the same as the RX_DV assert delay. But without it specified, it could, which appears to lead to nodes missing BEACONS.

SuggestedRemedy

Specify the TCI input to RX_DV de-asserted delay in Table 188-5.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

DEFER

Needs more than the suggested remedy.

Consider specifying in clause 148 a minimum delay from CRS deasserted to TX_ER asserted for the purposes of sending a beacon sufficient so that RX_DV from the packet is deasserted before the CRS is asserted for the beacon.

(RX_DV deassert time is the same as the RX_DV assert time per state diagram, this could be done without adding a line to Table 188-5)

(this would be require a 2.4 to 3usec delay from carrier sense deassert to TX_ER assert for a beacon).

(related to tying of RX_DV and CRS in 148.3)

Add row to table 188-5 after row for "RX_DV asserted"

Row contents as follows:

Event = TCI input to RX_DV deasserted

Minimum value = (TBD - to discuss)

Maximum value = 1.5

Unit of measure = us

Input timing reference = Last DME clock transition at the TCI

Output timing reference = Falling edge of RX_DV