Cl **FM** *SC* **FM** *P* **13** *L* **18** # 43

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Should P802.3cx be listed now that it is in WG ballot?

SuggestedRemedy

Add an entry for 802.3cx

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **14** *L* **3** # 44

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Missing tabs for clauses in the Contents

SuggestedRemedy

Correct the template

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **16** *L* **5** # 45

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Missing tabs for multi-line entries in the Contents

SuggestedRemedy

Correct the template?

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **21** *L* **12** # 46

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Italic page number - I wonder why

SuggestedRemedy

Fix

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **24** *L* **32** # 11

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Missing tabs for annexes A and 135A in the Contents

SuggestedRemedy

Insert tabs, somehow

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **30** *L* **3** # 12

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Missing amendment number

SuggestedRemedy

Insert amendment number, or a placeholder

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **32** *L* **48** # 13

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

This editor's note would be more useful if it listed the amendments that are actually noted as running in parallel and affecting this draft, not just the concept. Apparently, only P802.3db affects this draft, but others might.

SuggestedRemedy

Change "(e.g., IEEE P802.3cn and IEEE P802.3cu)" to "(IEEE P802.3db; no impact is noted from IEEE P802.3dd, P802.3de, IEEE P802.3cs, or IEEE P802.3cx)"

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **32** *L* **48** # 14

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

This editor's note would be more useful if it listed the amendments that are actually noted as running in parallel and affecting this draft, not just the concept. Apparently, only P802.3db affects this draft, but others might.

SuggestedRemedy

Change "(e.g., IEEE P802.3cn and IEEE P802.3cu)" to "(IEEE P802.3db; no impact is noted from IEEE P802.3dd, P802.3de, IEEE P802.3cs, or IEEE P802.3cx)"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.21** *P* **42** *L* **11** # 15

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

P802.3db is making changes to this table, so the "Reserved" row is probably not correct

SuggestedRemedy

Show the row above and below the rows this project adds so the context can be reviewed. For preference, also include all rows added by preceding amendments so that clashes can be more easily spotted. Adjust the instructions at line 3 to mention the preceding amendment(s) that affect this table (802.3db?). Similarly for Table 45-27.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.169** *P* **61** *L* **52** # 7

Han, Ruibo China Mobile Communication Co., Ltd.

Comment Type **E** *Comment Status* **X**

What is the full word that the abbreviation "PRBS9Q" represents?

SuggestedRemedy

Add the full word for "PRBS9Q"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.171a** *P* **62** *L* **1** # 8

Han, Ruibo China Mobile Communication Co., Ltd.

Comment Type **E** *Comment Status* **X**

Insert 45.2.1.171a after 45.2.1.171

SuggestedRemedy

"Insert" might be "Replace"?

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.1** *P* **258** *L* **13** # 5

Mellitz, Richard Samtec

Comment Type **T** *Comment Status* **X**

The use of peak to peak is need to comprehend the actual CM histogram and comprehensive meaning for the rms measurement. Adjustment for crest factor would 'level the playing field' for histogram difference for the rms measurements.

SuggestedRemedy

Change
AC common-mode RMS voltage, v_cmi (max)

To
AC common-mode RMS voltage adjusted, v_cmia (max)
where
v_cmia = v_cmi/CFA
CFA= V_CMMP/(V_cmi*2*sqrt(2))

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.2** *P* **261** *L* **7** # 6

Mellitz, Richard Samtec

Comment Type **T** *Comment Status* **X**

The use of peak to peak is need to comprehend the actual CM histogram and comprehensive meaning for the rms measurement. Adjustment for crest factor would 'level the playing field' for histogram difference for the rms measurements.

SuggestedRemedy

Change
AC common-mode RMS voltage, v_cmi (max)

To
AC common-mode RMS voltage adjusted, v_cmia (max)
where
v_cmia = v_cmi/CFA
CFA= V_CMMP/(V_cmi*2*sqrt(2))

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.2** *P* **261** *L* **11** # 21

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

D2.2 comment 93: If the eye height limit is the same at near end as at far end, there is huge margin at near end and the implementer is encouraged to optimise for far end or beyond, only limited by the NE VEC spec, while we want modules to be set up consistently, for the full range from near to far. EH is naturally much larger at NE than FE for a well set up output and the spec should reflect that. Also, host designers know their own loss and lower-loss hosts can take advantage of a better signal that cost the module nothing. This applies to both the short and long modes.

SuggestedRemedy

Change the near end eye height so that it is 2.5 dB above long far end: if far can remain at 15 mV, near becomes 20 mV. Far end remains the one with less margin. This would align with OIF VSR.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.3.5.1** *P* **265** *L* **50** # 22

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

The optimum settings for the second precursor and postcursor are very weak or zero. It would be better to make stressed signals consistent across the industry and simplify the tuning challenge than to try to squeeze out the last drop of tuning.

SuggestedRemedy

Change to a 3-tap functional model with two precursors

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.3.5.1** *P* **266** *L* **15** # 23

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

As pointed out in D2.2 comment 148, the host stressed input signal is emulating a module so must obey the same rules. VEC and eye height must be in spec for both near end and far end. So ensuring this is part of the calibration process.

SuggestedRemedy

Similar to D2.1 comment 126 published in July: change "short or long mode far-end test" to "short or long mode far-end calibration or long mode near-end calibration"

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.3.5.2** *P* **267** *L* **15** # 24

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

The crosstalk signal amplitude should be calibrated with PRBS13Q. CEI 16.3.10.3.1 is quite clear about this: "The crosstalk signal is calibrated at TP4 or TP1a using a QPRBS13-CEI pattern, then the pattern is changed to QPRBS31-CEI for the test". Here, the value of 750 mV in Table 120G-8 is the same as in Table 120G-1, Host output, which is defined for PRBS13Q (see 120G.5.1 and 120E.3.1.2). As these crosstalk signals are emulating the host, they must match. Also, it is convenient to set up both the peak-to-peak voltage and the transition time of a signal on the same pattern, and PRBS13Q allows a transition time measurement and a cleaner peak-to-peak voltage measurement.

SuggestedRemedy

Move a few words:
The crosstalk signal transition time is calibrated with a PRBS13Q pattern. The crosstalk pattern is changed to PRBS31Q (see 120.5.11.2.2), scrambled idle (see 82.2.11 and 119.2.4.9), or another valid 100GBASE-R, 200GBASE-R, or 400GBASE-R signal for crosstalk amplitude calibration and stressed signal calibration (see step g).
to:
The crosstalk signal transition time and amplitude are calibrated with a PRBS13Q pattern. The crosstalk pattern is changed to PRBS31Q (see 120.5.11.2.2), scrambled idle (see 82.2.11 and 119.2.4.9), or another valid 100GBASE-R, 200GBASE-R, or 400GBASE-R signal for stressed signal calibration (see step g).
Similarly in 120G.3.4.3.2 for module stressed input crosstalk signal calibration.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.3.5.2** *P* **267** *L* **20** # 25

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

As pointed out in D2.2 comment 148, the host stressed input signal is emulating a module so must obey the same rules. VEC and eye height must be in spec for both near end and far end. So ensuring this is part of the calibration process.
This says "parameters in Table 120G–5 for far-end host channel type and the requested mode": but in one case, the near end needs a parameter from the table

SuggestedRemedy

As in D2.1 comment 129 published in July: change to "parameters in Table 120G–5 for host channel type and the requested module output mode"

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.3.5.2** *P* **267** *L* **21** # 26

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

Ref. D2.2 comment 148. The module output eye height and VEC have to comply at both near end and far end, so a module can be tuned to either end or somewhere in the middle. The host stressed input signal is tuned to far end, only. This is inconsistent and a serious flaw in the spec.

SuggestedRemedy

Tighten the equaliser limits for module output so that modules are tuned consistently across the industry.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.3.5.2** *P* **267** *L* **25** # 27

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

Ref. D2.2 comment 148. The signal needs to be checked with the near end channel so that its eye height is at least the target and its VEC is no more than VEC (max) in the table. If it fails, the signal must be adjusted to bring it into compliance. For short mode, near end VEC might be worse than far; however it may still be feasible to tune it to get 3 of 4 (near, far, VEC and EH) to the targets.

SuggestedRemedy

Road-test the procedure and revise the text per comment.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.4.3.2** *P* **271** *L* **4** # 28

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

D2.2 comment 133: In step a, say that, this pattern generator "transition time" is defined for neutral emphasis at the pattern generator output (so it's really rise time not transition time). Similarly in 120G.3.4.3.2.
This is now done for 120G.3.3.5.2 host stressed signal tolerance but not for 120G.3.4.3.2 module stressed signal tolerance.

SuggestedRemedy

Apply the same fix to 120G.3.4.3.2.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.4.3.2** *P* **271** *L* **25** # 29

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

This formula imposes a delay spec on the frequency-dependent attenuator, which is unnecessary because it and the pattern generator are supposed to have good return loss, and typically there will be coax cables of unspecified length between them (which may contribute a small part of the loss). The shape of the loss curve imposes the phase response we want.

SuggestedRemedy

Make it clear that extra or reduced delay is acceptable. One way would be to change "such that the scattering parameters approximate" to "such that the magnitude of the scattering parameters approximate".

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.4.3.2** *P* **271** *L* **33** # 31

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

"the reference receiver CTLE setting that minimizes VEC has gDC + gDC2 less than or equal to -10.5 dB" is not a CTLE limit, it's a requirement that the signal prefers a CTLE setting within a range. This is as it should be (a simple limit would allow an easy but inappropriate signal). But, if the reference receiver CTLE setting that minimizes VEC doesn't have gDC + gDC2 less than or equal to -10.5 dB, what is the reader supposed to do?

SuggestedRemedy

Please explain.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.4.3.2** *P* **271** *L* **33** # 30

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

We have a gDC + gDC2 max limit for the high loss module stressed input case to ensure that the module can equalise a very slow signal. Presumably there should be max/min limits for gDC + gDC2 for the low loss case to set the contract for faster signals.

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.3.4.3.2** *P* **272** *L* **25** # 32

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

The mated compliance boards should approximate Eq 162B-5, and the frequency-dependent attenuator should look like a clean PCB transmission line. The two in series will NOT look like another clean transmission line with no f^2 term because if that were attempted, the loss curve of the frequency-dependent attenuator would have to bend the wrong way. This is unrealistic and impractical.

SuggestedRemedy

Revise text and equation 120G-3 to make this clear. Show all three curves (Eq 162B-5 mated compliance boards, frequency-dependent attenuator and the combination) in Figure 120G-11.
L changes from 464 to 296 mm;
Eq 120G-3 becomes 0.981sqrt(f) + 0.2463f for the frequency-dependent attenuator;
The loss of the combination is 1.425sqrt(f) + 0.3588f + 0.001884f^2.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.4.1** *P* **273** *L* **15** # 33

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

This sentence "For correct operation, the actual differential-mode to differential-mode insertion loss could be higher or lower than that given by Equation (120G–4) due to the channel ILD, return loss, and crosstalk" is a necessary part of the story. It tells the host implementer that correct operation is his responsibility, and he needs to put more thought into it than simply meeting a recommended loss curve, and tells the module implementer that he has to cope with compliant hosts whose channels don't meet this recommendation.

SuggestedRemedy

Reinstate a sentence that says this - preferably one that is better understood. e.g "However, channels outside this range are not excluded, and better insertion loss may be necessary to allow for factors such as channel ILD, return loss, and crosstalk."

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.5.2** *P* **275** *L* **34** # 34

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

Ref D2.2 comments 98 and 99. The max (least -ve) gDC + gDC2 is -2 for TP1a, -2 for TP4 near end, -3 for TP4 far end and -10.5 for module stressed input high loss. There is about 10 dB loss difference between short near end and long far end, but 1 dB difference in max gDC + gDC2 which seems far too little. It looks like TP4 far end is out of step. We should not be encouraging modules to try to do a job the host receiver does better.

SuggestedRemedy

Impose a max gDC + gDC2 limit of -5 for TP4 long far end, e.g. with gDC, gDC2 ranges in the same style as TP1a.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.5.2** *P* **277** *L* **6** # 35

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

Ref D2.2 comment 101: this draft has a (de-)weighted rectangular eye mask spec with mask height = max(EHmin, EA/VECmax) and effective mask width ~2x0.03 to 2x0.035 UI, although it is described as a histogram 2x0.05 UI wide. This is too narrow; compare 120E with ESMW of 0.2 or 0.22 UI. It's half as wide as TDECQ with histograms extending to +/- 0.07 UI. This de-weighted histogram might work if there were a guarantee that no host or module would ever produce a fast, highly jittered eye, but -
we don't have that guarantee. That work needs to be done before making such a hole in the spec.
De-weighting the sides of the histogram with flat top and bottom, rather than chanmfering the corners, means that infringing the corners by a mile is counted the same as infringing by an inch, which is bad.
Most of the weight of samples is in the middle of the eye which is pointless; we know the corners will fail first so we should focus on measuring them, not the middle.
The effective BER criterion of the (de-)weighted mask seems to be around 1e-4, not 1e-5 as before.
The distribution of repeated measurements is very skewed.
We need an eye mask that's more eye shaped, so that a higher proportion of the samples near the boundary are measured at full weight and contribute properly to the measurement. Eye mask measurement with a 10-sided mask has been pre-programmed into scopes for about 20 years, we should use established tools and methods where they work well.

SuggestedRemedy

Change from a 4-cornered weighted mask with corners at t = ts+/-0.05, V = y +/-H/2 to a 10-cornered unweighted mask with corners at t = ts+/-1/16, ts+/-0.05, ts+/-3/32, V = y +/-H/2, k +/-H*0.4, y. y is near VCmid, VCupp or VClow (vertically floating, as in D2.2).
H is max(EHmin, Eye Amplitude * 10^(-VECmax/20)). Eye Amplitude is AVupp, AVmid or AVlow, as today.
This simple scalable method gives VEC results 0.5 to 1 dB more optimistic than the unweighted rectangular mask. It can remain as the EH and VEC limits are revised in the light of experience.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.5.2** *P* **277** *L* **6** # 36

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

D2.2 comment 95: the Gaussian weighting has the effect of destroying the histogram width, allowing bad fast eyes to pass, while giving the false impression that the histogram width still applies. With a weighting standard deviation of 0.02 UI, the eye height is measured at around +/-0.035 UI rather than the +/-0.05 UI in the previous draft - depending on eye shape. Compare 120E with ESMW of 0.2 or 0.22 UI, and TDECQ with histograms extending twice as wide, to +/-0.07 UI.
This weighting is equivalent to relaxing the VEC spec by 1.5 to 2 dB - but it depends on the eye shape, it weakens the spec most for the worst-shaped eyes, which is bad. It applies a worse BER criterion than the 1e-5 intended.

SuggestedRemedy

Remove the Gaussian weighting and set the eye height and VEC limits (which need revision anyway) appropriately. ghiasi_3ck_01_0721 which was not given the presentation time it deserved says that the minimum eye height in particular needs to be reduced for TP1 and TP4 far end.

Proposed Response *Response Status* **O**

Cl **120G** *SC* **120G.5.3** *P* **277** *L* **39** # 37

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

As D2.2 comment 69 says, "Setting Nv to 200 may overestimate the amplitude that the receiver will actually see since that amplitude will only be realized when Nv consecutive identical symbols are transmitted", which is extremely unlikely. Remember the SONET CID pattern has a run of "only" 60 UI or so.

SuggestedRemedy

Reduce Nv to a value that represents a reasonably rare event, not a blue moon.

Proposed Response *Response Status* **O**

Cl **161** *SC* **161.5.2.6.2** *P* **137** *L* **7** # 16

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

Something called "tx_scrambled" appears without explanation. According to the text it is 257 bits long (but what is it?), according to Fig 161-3 it's 2 RS symbols or 20 bits, according to Fig 161-4 it's 35x257 or 40x257 bits, according to Fig 161-5 it's 257 bits (but this figure is only illustrative and doesn't define what the bits are).

SuggestedRemedy

Provide the missing information and make changes to address the inconsistencies. If it is the result of 161.5.2.5 64B/66B to 256B/257B transcoder, say so in 161.5.2.5. Make the appropriate changes to figures 3 and 4.

Proposed Response *Response Status* **O**

Cl **161** *SC* **161.5.3.4** *P* **141** *L* **11** # 9

Han, Ruibo China Mobile Communication Co., Ltd.

Comment Type **E** *Comment Status* **X**

as in 119.2.5.4

SuggestedRemedy

It seems that there is no such clause "119.2.5.4".

Proposed Response *Response Status* **O**

Cl **161** *SC* **161.5.3.6** *P* **141** *L* **23** # 10

Han, Ruibo China Mobile Communication Co., Ltd.

Comment Type **E** *Comment Status* **X**

as in 91.5.3.5

SuggestedRemedy

It seems that there is no such clause "91.5.3.5"

Proposed Response *Response Status* **O**

Cl **162** *SC* **162.9.3** *P* **166** *L* **24** # 4

Mellitz, Richard Samtec

Comment Type **T** *Comment Status* **X**

The use of peak to peak is need to comprehend the actual CM histogram and comprehensive meaning for the rms measurement. Adjustment for crest factor would 'level the playing field' for histogram difference for the rms measurements.

SuggestedRemedy

Change
AC common-mode RMS voltage, v_cmi (max)

To
AC common-mode RMS voltage adjusted, v_cmia (max)
where
v_cmia = v_cmi/CFA
CFA= V_CMMP/(V_cmi*2*sqrt(2))

Proposed Response *Response Status* **O**

Cl **162** *SC* **162.9.3.1.2** *P* **169** *L* **1** # 17

Dawe, Piers Nvidia

Comment Type **T** *Comment Status* **X**

Table 162-10 says "Linear fit pulse peak ratio" and refers to this subclause whose title is "Steady-state voltage and linear fit pulse peak", and does not say what "pulse peak ratio" means. Nor does 162.9.3.1.1.

SuggestedRemedy

Change the title to "Steady-state voltage and linear fit pulse peak ratio". Define linear fit pulse peak ratio.

Proposed Response *Response Status* **O**

Cl **162** *SC* **162.9.4.3.3** *P* **176** *L* **21** # 18

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Q (the function)

SuggestedRemedy

should be upright, not italic

Proposed Response *Response Status* **O**

Cl **162** *SC* **162.11.6** *P* **185** *L* **28** # 19

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **X**

As in previous comments: this common mode return loss spec RLcc becomes useless at the frequency when the MCB loss is 1.8/2 dB, which is only 8.5 GHz. We need a common mode return loss spec to stop large common-mode voltages building up through multiple low-loss reflections. This proposal is more relaxed at low frequencies than previous proposals

SuggestedRemedy

Use a frequency-dependent mask 1.6 dB 0.5<= f <= 2 GHz, 1.4+0.1*f dB 2< f <= 30 GHz. f is in GHz. Similarly for Tx, Table 162-11, 162.9.3.6.

Proposed Response *Response Status* **O**

Cl **162** *SC* **162.11.7.1.1** *P* **188** *L* **9** # 20

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

t

SuggestedRemedy

tau

Proposed Response *Response Status* **O**

Cl **162A** *SC* **162A** *P* **284** *L* **9** # 38

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

I wondered why 162.9.3 was referring to an annex whose title seemed to be nothing to do with the subject...
The title of this annex is "TP0 and TP5 test point parameters and channel characteristics ..." yet it contains recommended transmitter and receiver characteristics, which aren't mentioned in 162A.1 Overview, "This annex provides information on..." either. I don't recognise "test point parameters" as including transmitter IC recommendations.

SuggestedRemedy

Revise the title and overview. e.g. change:
TP0 and TP5 test point parameters and channel characteristics for 100GBASE-CR1, 200GBASE-CR2, and 400GBASE-CR4
to:
Transmitter, receiver and channel recommendations at test points TP0 and TP5 for 100GBASE-CR1, 200GBASE-CR2, and 400GBASE-CR4

Proposed Response *Response Status* **O**

Cl **162C** *SC* **162C.1** *P* **303** *L* **14** # 39

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

The commonality between QSFP112 and QSFP-DD800 is obscured because the OSFP column is between them.

SuggestedRemedy

Move the OSFP information so that QSFP112 and QSFP-DD800 are in adjacent columns, as SFP112 and SFP-DD112 are

Proposed Response *Response Status* **O**

Cl **163** *SC* **163.9.2** *P* **203** *L* **43** # 2

Wu, Mau-Lin MediaTek Inc.

Comment Type **T** *Comment Status* **X**

The value of SCMR (min) as 16 dB is too large. One contribution, wu_3ck_01_1121, is submitted to provided detailed information.

SuggestedRemedy

Change 16 dB to 13 dB

Proposed Response *Response Status* **O**

Cl **163** *SC* **163.9.2.7** *P* **207** *L* **8** # 3

Mellitz, Richard Samtec

Comment Type **T** *Comment Status* **X**

SCMR seems to specified as if V_CMPP was periodic sine wave. If it were based on Gaussian CM noise then 16 dB (SCMR) would correspond to a rms of 6.3285 mV for clause 163.9.3 and 5.5185 mV for annex 120F.3.1. If based on a CM sine wave, 16 dB would correspond to 16.6422 mV rms which seems reasonable and consistent with older drafts. Thus it seems the 16 dB was based on a sine wave. The use of peak to peak is need to comprehend the actual CM histogram. Adjustment for crest factor would 'level the playing field' for histogram difference.

This comment impacts clause 163.9.3 and Annex 120F.3.1 but does change the section's text.

SuggestedRemedy

Change line:
The peak-to-peak AC common mode voltage is defined as the AC common-mode voltage (see 93.8.1.3) range measured at TP0v that includes all except 1e–4 of the measured distribution, from 0.00005 to 0.99995 of the cumulative distribution.
To:
The peak-to-peak AC common mode voltage is defined as the AC common-mode voltage (see 93.8.1.3) range measured at TP0v that includes all except 1e-4 of the measured distribution, from 0.00005 to 0.99995 of the cumulative distribution and is adjusted by a crest factor. The crest factor adjustment (CFA) is computed from the rms of the AC common mode voltage, V_cmi, and the peak-to-peak AC common mode voltage.

Proposed Response *Response Status* **O**

Cl **163** *SC* **163.9.2.7** *P* **207** *L* **11** # 1

Wu, Mau-Lin MediaTek Inc.

Comment Type **T** *Comment Status* **X**

The specification for SCMR (min) is defined in Table 163-5, instead of Table 163-11.

SuggestedRemedy

Change Table 163-11 to Table 163-5

Proposed Response *Response Status* **O**

Cl **163A** *SC* **163A** *P* **316** *L* **1** # 40

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

annex Annex

SuggestedRemedy

delete "annex"

Proposed Response *Response Status* **O**

Cl **163A** *SC* **163A.3.1.2** *P* **318** *L* **41** # 41

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Response to D2.2 comment 134 says "Change the text to "The reference ERL value is determined using the method in 93A.5...", yet the text says "The reference ERL value is determined from the reference PTDR response using the method in 93A.5"

SuggestedRemedy

As the PDTR response is not an input to 93A.5 as used for a reference ERL, but an intermediate step in a calculation - delete "from the reference PTDR response"

Proposed Response *Response Status* **O**

Cl **163A** *SC* **163A.3.1.3** *P* **319** *L* **24** # 42

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Eq 163A-5 is part of step b, and Eq 163A-4 is part of step c, which must follow b.

SuggestedRemedy

Swap equations 163A-5 and 4

Proposed Response *Response Status* **O**