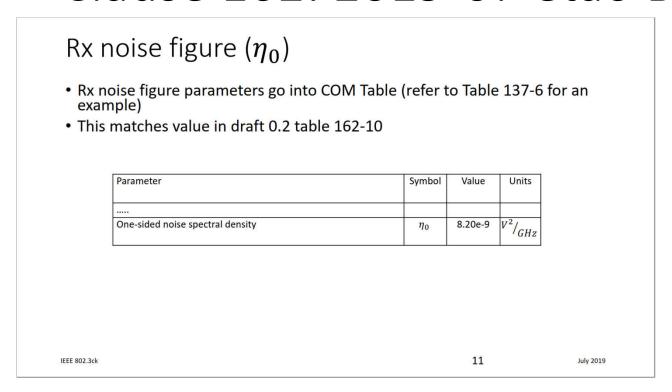
Comment discussion: eta0

Howard Heck

June 24,2020

Clause 162: 2019-07 eta0 Baseline



http://www.ieee802.org/3/ck/public/19 07/walker 3ck 01d 0719.pdf

EtaO value selected to balance channel needs and achievable Serdes Rx performance.

For channel performance analysis examples refer to heck_3ck_01b_0719 (KR)

lim_3ck_01_0519 & palkert_3ck_01_0719 (CR)

Clause 162: 2020-01 Update

Value in D1.2 is 1e-8V²/GHz.

C/ 162 SC 162.11.7 P153 L4 # [15

Mellitz, Richard Samtec

Comment Type TR Comment Status A

Eta_0 needs to include the effects of host NEXT noise. Thus cannot be the same as for KR COM.

SuggestedRemedy

Replace 8.2e-9 V^2/GHz with 9e-9 V^2/GHz as in slide 8 of mellitz_3ck_03_1119 ans slide 9 of lim_3ck_01_1119 in Table 162-15.

Response Status C

ACCEPT IN PRINCIPLE.

Based on the result of strawpolls #10 and #11 make the following change:

Replace 8.2e-9 V^2/GHz with 1E-8 V^2/GHz

Strawpoll #10

WRT comments #15 and #146, I support increasing the value of eta_0 at this time.

Yes: 15 No: 5

Strawpoll #11

WRT comments #15 and #146, I support changing eta_0 value to:

A: 9.0E-9 B: 1E-8 A: 6 B: 9

Cl 162 SC 162.11.7 P153 L6 # 146

Dawe, Piers Mellanox

Comment Type T Comment Status A

One-sided noise spectral density of 8.2e-9 V2^/GHz is extremely aggressive and optimistic, being half that for 50GBASE-CR, and was chosen to make particular backplane channels with issues pass COM. As high loss cable channels are smoother than backplanes, we should not be so desperate in this clause.

SuggestedRemedy

Change to 1e-8, which is 61% of 50GBASE-CR.

Response Status C

ACCEPT IN PRINCIPLE.

Resolve using the response to comment #15.

http://www.ieee802.org/3/ck/public/20 01/minutes 3ck 0120.pdf

Clause 162: D1.2 Comments

69	Champion, Bruce	162	162.11.7	161	14	т	One-sided noise spectral density set at 1.0e-8 contrary to lim_3ck_01a_1119 and mellitz_3ck_03a_1119 recommendations. This makes a large impact on cable assembly COM and the ability to achieve 2m copper reach	One-sided noise spectral density should be set to 9e-9 as recommended by lim_3ck_01a_1119 and mellitz_3ck_03a_1119, see presentation
78	Haser, Alex	162	162.11.7	161	14	TR	Current eta_0 value causes contributed cable data sets to fail 3 dB COM	Change eta_0 back to 8.37e-9 (see champion_3ck_adhoc_01_031120)
11161	Palkert, Tom	162	162.11.7	161	14	т	[Comment resubmitted from Draft 1.1. 162.11.7, P160, L27] One sided noise spectral density for passive copper cables was changed from 8.2x10-9 to 1x10-8. This went too far causing adverse impacts on COM results.	Change One-sided noise spectral density from to 1x10-8 to 1x10-9. (Supporting presentation)

C#	Proposed value	Referenced presentations
69	9e-9	lim_3ck_01a_1119 mellitz_3ck_03a_1119
78	8.37e-9	champion_3ck_adhoc_01_031120
1116	1e-9	

Annex 120F: Draft 1.2 comments

Draft 1.2

One-sided noise spectral density	ηο	8.2 × 10 ⁻⁹	V ² /GHz

Comments

