C/ 120F	SC 120F.3.1.2	2 P 214	L 34	# 108	C/ 120F	SC 120F.4.2	P 222	L 4	# 30
Hidaka, Yas	suo	Credo Semic	onductor, Inc.		Brown, Mat	t	Huawei		
Comment T	ype TR	Comment Status D		TX EQ (bucket3)	Comment 7	уре т	Comment Status D		channel IL (bucket3)
C(-3) ha	as been discuss	ed and the editor's note sho	uld have been rer	noved long time ago.	The ed	tor's note writte	n in D1.0 indicates that the	channel maxim	num insertion loss requires
SuggestedF	Remedy				further	nvestigation. N	to proposals to change the	specification na	ave been submitted.
Remove	e editor's note o	n the pre-cursor tap c(-3).			Suggestear	<i>Remeay</i> a tha aditor's pa	to		
Proposed R PROPC Resolve	Response DSED ACCEPT e using the respo	Response Status W IN PRINCIPLE. onse to comment #134.			Proposed F PROP(Resolv	Response SED ACCEPT	Response Status W IN PRINCIPLE.		
C/ 120F	SC 120F.3.1.2	2 P 2 14	L 35	# 28					
Brown, Mat	t	Huawei			C/ 120F	SC 120F.4.3	P 223	L 5	# 31
Comment T	уре Т	Comment Status D		TX EQ (bucket3)	Brown, Mat	t	Huawei		
The edi if it is sh	tor's note writter nown to have no	n in D1.0 indicates that the t value. There have been no	ransmitter c(-3) ta proposals accept	ap should be removed ed to remove the tap.	Comment 7 The sp	<i>ype</i> T ecified value for	Comment Status D channel ERL is TBD.		channel ERL (bucket3)
SuggestedF	Remedy				Suggestedl	Remedy			
Remove	e the editor's not	te.			Provide	a value and up	date PICS.		
Proposed R PROPC Resolve	Response DSED ACCEPT e using the respo	Response Status W IN PRINCIPLE. onse to comment #134.			Proposed F PROPO Resolve	Response DSED ACCEPT a using the resp	Response Status W IN PRINCIPLE. onse to comment #123.		
C/ 120F	SC 120F.3.2.	3 P 218	L 44	# 29	C/ 120G	SC 120G.3.1	P 231	L 17	# 80
Brown, Mat	t	Huawei			Ghiasi, Ali		Ghiasi Qua	ntum/Inphi	
Comment T	уре Т	Comment Status D		RIT IL (bucket3)	Comment 7	ype TR	Comment Status D		EH/VEC (bucket3)
The edi	tor's note writter	n in D1.0 indicates that the II	_ for stressed inpu	ut test 2 (high loss)	Eye he	ght need to be	adjusted to account for the	50 mUI rectang	jular window
requires	s no confirmation ed	 No proposals to change the second seco	ne specified value	s have been	Suggestedl	Remedy			
Suggested	Remedy				See gh	asi_3ck_01_01	21 and reduce eye height v	vindow from 15	mV to 9.5 mV
Remove	e the editor's not	te.			Proposed F	lesponse	Response Status W		
Proposed R	esponse	Response Status W			PROPO	SED ACCEPT	IN PRINCIPLE.		
PROPC	SED ACCEPT	IN PRINCIPLE.			Resolve	e using the resp	onse to comment #146 and	d #40.	

C/ 120G SC 120G.3.1

C/ 120G SC 120G.3	3.1 P 231	L 17	# 5	C/ 120G	SC 120G.3.1	P 231	L 18	# 72		
Mellitz, Richard	Samtec			Healey, Ada	am	Broadcom Inc				
Comment Type TR	Comment Status D		EH/VEC (bucket3)	Comment T	ype T	Comment Status D		EH/VEC (bucket3)		
EH and VEC need b SuggestedRemedy Change Eye height, Change Vertical eye Presentation availab	e to computed for the histogram differential (min) to 10 mV closure (max) to 13 dB le	m window.		The eye a vertica height a eye spa measur a 3 dB i	height and ve al slice of the e nd vertical eye nning -50 to +5 ement results i ncrease in vert	rtical eye closure limits were by ye at the nominal sampling tir closure in 120G.5.2 has been 50 mUI around the nominal sa mplies that the change in the ical eye closure and a similar	based on (simul ne. The measu n modified to us mpling time. Co measurement r decrease in ey	ated) measurements of rement method for eye se a vertical slice of the omparison of nethod results in up to e height.		
Proposed Response PROPOSED ACCEF Resolve using the re	Response Status W PT IN PRINCIPLE. esponse to comment #146 and	#40.		SuggestedF In Table (max)" t In Table	Remedy 9 120G-1, chan 0 12 dB. 9 120G-3, chan	ge "Eye height, differential (m ge "Near-end eve height, diffe	in)" to 10 mV a	nd "Vertical eye closure		
C/ 120G SC 120G.3	3.1 <i>P</i> 231	L 17	# 61	differen	tial (min)" to 17	mV and "Near-end vertical e	ye closure (max	()" and "Far-end vertical		
Wu, Mau-Lin MediaTek Comment Type T Comment Status D EH/VEC (bucket3) Due to we adopted the new EH & VEC test methods in D1p4, the specifications of EH & VEC for "Table 120G-1 - Host output characteristics at TP1a" and "Table 120G-10 - Module stressed input parameters" shall be updated to reflect the impact by new method. SuggestedRemedy Propose te change EH from 15 mV to 8 mV in Table 120G 18, 120G 10.					eye closure (max)" to 10.5 dB. In Table 120G-7, change "Near-end eye height" and "Far-end eye height" to 17 mV and "Near-end vertical eye closure" and "Far-end vertical eye closure" to 10.5 dB. In Table 120G-10, change "Eye height" to 10 mV, "VEC (max)" to 12.5 dB, and "VEC (min)" to 12 dB. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Resplue using the response to comment #146 and #40					
Propose to change \ Propose to change \ Propose to change \ Detailed analysis is i Proposed Response PROPOSED ACCEF Resolve using the re	/EC from 9.0 dB to 12.0 dB in /EC (max) from 9.5 dB to 12.5 /EC (min) from 9.0 dB to 12.0 included in wu_3ck_01_0121.p <i>Response Status</i> W PT IN PRINCIPLE. esponse to comment #146 and	Table 120G-1. dB in Table 120 dB in Table 120 df #40.	G-10. G-10.	Cl 120G Ghiasi, Ali Comment T VEC ne SuggestedF See ghi Proposed R PROPO	SC 120G.3.1 ype TR ed to be adjust Remedy asi_3ck_01_01 esponse ISED ACCEPT	P 231 Ghiasi Quantu Comment Status D ted to account for the 50 mUI 21 and reduce eye height wir Response Status W IN PRINCIPLE.	<i>L</i> 19 um/Inphi rectangular win idow from 7.5 d	# <u>81</u> <i>EH/VEC (bucket3)</i> dow B to 14 dB		

C/ 120G SC 120G.3.1

C/ 120G SC 120G.3.1.5	P 233	L 17	# 62	C/ 120G	SC 120G.3.	1.5	P 233	L 17	# 33
Wu, Mau-Lin	MediaTek			Brown, Mat	t	Hu	uawei		
Comment Type T Com	ment Status D	EH/V	EC EO XTALK (bucket3)	Comment T	ype T	Comment Stat	us D	EH/V	/EC EO XTALK (bucket3
There are some TBDs for cross	talk calibration specs	for Host Output	t test.	The spe	ecified values	for the host output I	EH/VEC cros	sstalk paramet	ers (4x) are TBD.
According to the analysis explor	ed in wu_3ck_adhoc_	_02_010621.pc	If, the target swing at	Suggested	Remedy				
output voltage swing at TP1a, w	hich is 870 mV now,	shall be aligne	d among Host output,	Provide	values.				
Module output, Host input, & Mo	odule input specs.	0	0 1 7	Proposed F	esponse	Response Stati	us W		
SuggestedRemedy				PROPO	SED ACCEP	T IN PRINCIPI F.			
Propose the following paragrap	n to replace the origin	al one		Resolve	e using the res	ponse to comment	#14.		
Host output: 120G.3.1.4 (Page " with target differential peak-	233, L17) to-peak amplitude of §	900 mV and sle	ew time of 12 ps	C/ 120G	SC 120G.3.	1.5	P 233	L 17	# 84
between -2.7 V and +2.7 V."				Ghiasi. Ali		Gł	niasi Quantu	m/Inphi	
Proposed Response Respo	nse Status W			Comment T	vpe TR	Comment Stat	us D	EH/V	/EC EO XTALK (bucket3
PROPOSED ACCEPT IN PRIN	CIPLE.			Addres	sing the TBD i	n the paragraph			,
Resolve using the response to o	comment #14.			Suggested	Remedy				
C/ 120G SC 120G.3.1.5	P 233	L 17	# 124	A fast ASIC with 7.6 ps output rise time when passes through a mated board with just 5 dB loss produces 12 ps 20-80% rise time. I suggest 24 ps for the slew from -400 mV to + 400					
Ran, Adee	Intel								
Comment Type TR Com	ment Status D	EH/V	EC EO XTALK (bucket3)	mV and	l with amplitud	e of 800 mV, the re	eason amplitu	ude is reduced	l is due assumption that
"The crosstalk generator is calib	orated at TP4 (without	the use of a re	eference receiver) with	mV am	plitude I don't	believe that is reaso	onable.		ne could go with 900
target differential peak-to-peak	amplitude of TBD mV	and slew time	of TBD ps between	Proposed F	esponse	Response Stati	us W		
				, PROPO	, SED ACCEP	T IN PRINCIPLE.			
This is the host output test; the specify the PtP amplitude and t calibration should use the maxin that table.	This is the host output test; the crosstalk generator represents the module output. We specify the PtP amplitude and transition time for modules at TP4 in Table 120G–3. The calibration should use the maximum amplitude and minimum transition time values from that table.				Resolve using the response to comment #14.				
SuggestedRemedy									
Change the quoted sentence to	:								
"The crosstalk generator is calit targets equal to the Differential (min, 20% to 80%) in Table 120	prated at TP4 (without peak-to-peak output v G-3".	the use of a revoltage (max) a	eference receiver) with nd Transition time						

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #14.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 120G SC 120G.3.1.5 Page 3 of 11 2021-02-11 8:50:38 PM

	1200.0.1.	J / 255	L 17	" 00	C/ 120G	SC 120G.	3.2 P 2	34	L 11	# 77
Healey, Ad	dam	Broadcom In	с.		Ghiasi, Ali		Ghias	si Quantum/	/Inphi	
Comment 7	Туре Т	Comment Status D	EH/VI	EC EO XTALK (bucket3)	Comment 7	ype ER	Comment Status	D		EH/VE
The tar	rget differential p	eak-to-peak amplitude and s	slew time of the o	crosstalk generator, as	Given t	hat now we h	ave AUI-S/L near end V	/EC need to	be defined	
observ	red at TP4, are TI	BD.			Suggested	Remedy				
Suggested Since t	<i>Remedy</i> the crosstalk gen	erator is used to represent r	near-end aggress	sion from the the	The eye ghiasi_	e opening wit 3ck_01_0121	h 50 mUI rectangular wi	indow for Al	UI-S is VEC=1	2.5 dB, see
module module Change "The cr	e transmitter outp e output (as obse e: rosstalk generato	nuts, the largest amplitude a rved at TP4) should be used or is calibrated at TP4 (witho	nd smallest trans d to represent wo ut the use of a re	sition time allowed for a prst-case aggression.	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #146 and #40.					
target of TBD V	differential peak-t	o-peak amplitude of TBD m	v and slew time	of TBD ps between -	C/ 120G	SC 120G.:	3.2 P 2	34	L 11	# 75
To:					Ghiasi, Ali		Ghias	si Quantum/	/Inphi	
"The ci and tra	rosstalk generato	or is calibrated so that the dil	ferential peak-to	-peak output voltage	Comment T	ype TR	Comment Status	D		EH/VE(
practic	al."				Given t	hat now we h	ave AUI-S/L near end e	eye would be	e AUI-S min e	ye opening
Proposed F	Response	Response Status W			Suggested	Remedy				
PROP(Resolv	OSED ACCEPT	IN PRINCIPLE.			The eye ghiasi_	e opening wit 3ck_01_0121	h 50 mUI rectangular wi	indow for Al	UI-S is VEO=2	20 mV, see
	00 4000 0 0	P 224	/ 10	" []	Dranaad					
C/ 120G	SC 120G 3.2	F 7.34	/ 11/	# 145	Proposed F	esponse	Response Status	w		
C/ 120G	SC 120G.3.2	r 234 Nvidia	210	# 145	Proposed P PROPC	esponse DSED ACCE	Response Status PT IN PRINCIPLE.	w		
C/ 120G Dawe, Pier	SC 120G.3.2 rs Type TR	r 234 Nvidia Comment Status D	210	# 145	Proposed P PROPO Resolve	SED ACCE	Response Status PT IN PRINCIPLE. sponse to comment #1	w 46 and #40.		
C/ 120G Dawe, Pier Comment 7 For a re	rs <i>Type</i> TR reasonably clean	۲ 234 Nvidia Comment Status D module (or test equipment i	n a host stressed	# 145 EH/VEC (bucket3)	PROPO Resolve Cl 120G	SED ACCE susing the re SC 120G.	Response Status PT IN PRINCIPLE. esponse to comment #1 3.2 P 2:	W 46 and #40. 34	L 13	# 76
C/ 120G Dawe, Pier Comment T For a re swing h	rs <i>Type</i> TR reasonably clean has to be aggress	۲ 234 Nvidia <i>Comment Status</i> D module (or test equipment i sively reduced to deliver onl	n a host stressed y 24 mV at near	# 145 EH/VEC (bucket3) d eye test), the driver end, short setting.	Proposed P PROPO Resolve Cl 120G Ghiasi, Ali	SC 120G.	Response Status PT IN PRINCIPLE. esponse to comment #1 3.2 P 2: Ghias	w 46 and #40. 34 si Quantum/	<i>L</i> 13 (Inphi	# 76
Cl 120G Dawe, Pier Comment 7 For a re swing h 120E h	SC 120G.3.2 rs <i>Type</i> TR reasonably clean has to be aggress has 70 mV.	Nvidia Comment Status D module (or test equipment i sively reduced to deliver onl	n a host stressed y 24 mV at near	# 145 EH/VEC (bucket3) d eye test), the driver end, short setting.	Cl 120G Ghiasi, Ali Comment 7	SED ACCEI SED ACCEI e using the re SC 120G.	Response Status PT IN PRINCIPLE. esponse to comment #1- 3.2 P 2: Ghias Comment Status	w 46 and #40. 34 si Quantum/ D	<i>L</i> 13 (Inphi	# [<u>76</u> EH/VE0
Cl 120G Dawe, Pier Comment 7 For a ru swing h 120E h Suggested	rs Type TR reasonably clean has to be aggress has 70 mV. IRemedy	Vidia Nvidia Comment Status D module (or test equipment i sively reduced to deliver only	n a host stressed y 24 mV at near	# [145 EH/VEC (bucket3) d eye test), the driver end, short setting.	Cl 120G Ghiasi, Ali Comment 1 Given t	SED ACCEI SED ACCEI e using the re SC 120G.: ype TR hat now we h	Response Status PT IN PRINCIPLE. Presponse to comment #1 3.2 P 2: Ghias Comment Status ave AUI-S/L far end eye	W 46 and #40. 34 si Quantum/ D e would be /	<i>L</i> 13 /Inphi AUI-S min eye	# 76 EH/VE0
Cl 120G Dawe, Pier Comment T For a re swing h 120E h Suggested Eye he same	SC 120G.3.2 rs <i>Type</i> TR easonably clean has to be aggress has 70 mV. <i>IRemedy</i> eight limits should	Nvidia Comment Status D module (or test equipment i sively reduced to deliver only	n a host stressed y 24 mV at near d long modes, n	# 145 EH/VEC (bucket3) d eye test), the driver end, short setting. ear and far - not all the	Cl 120G Ghiasi, Ali Comment 7 Given t Suggestedh	Esponse DSED ACCEI a using the re SC 120G. Type TR hat now we h Remedy	Response Status PT IN PRINCIPLE. esponse to comment #1 3.2 P 2 Ghias Comment Status ave AUI-S/L far end eye	W 46 and #40. 34 si Quantum/ D e would be /	L 13 /Inphi AUI-S min eye	# 76 EH/VE0 e opening
C/ 120G Dawe, Pier Comment 7 For a re swing h 120E h Suggested Eye he same. Chang	SC 120G.3.2 rs <i>Type</i> TR easonably clean has to be aggress has 70 mV. <i>Remedy</i> eight limits should the NEEH from	Nvidia Comment Status D module (or test equipment i sively reduced to deliver only be set sensibly for short an 24 mV to 40 mV.	n a host stressed y 24 mV at near d long modes, n	# 145 <i>EH/VEC (bucket3)</i> d eye test), the driver end, short setting. ear and far - not all the	Cl 120G Ghiasi, Ali Comment 7 Given t Suggestedf The eye ghiasi	SED ACCEI susing the re SC 120G. <i>Type</i> TR hat now we h Remedy sopening wit 3ck_01_0121	Response Status PT IN PRINCIPLE. esponse to comment #1 3.2 P 2 Ghias <i>Comment Status</i> ave AUI-S/L far end eye h 50 mUI rectangular wi	W 46 and #40. 34 si Quantum/ D e would be / indow for Al	<i>L</i> 13 /Inphi AUI-S min eye UI-L is VEO=1	# <u>76</u> <i>EH/VE</i> (e opening 1 mV, see
Cl 120G Dawe, Pier Comment 7 For a r swing h 120E h Suggested Eye he same. Chang Proposed H	SC 120G.3.2 rs Type TR easonably clean has to be aggress has 70 mV. <i>Remedy</i> eight limits should e the NEEH from <i>Response</i>	Nvidia <i>Comment Status</i> D module (or test equipment i sively reduced to deliver only be set sensibly for short and 24 mV to 40 mV. <i>Response Status</i> W	n a host stressed y 24 mV at near d long modes, n	# 145 <i>EH/VEC (bucket3)</i> d eye test), the driver end, short setting. ear and far - not all the	Cl 120G Ghiasi, Ali Comment 7 Given t Suggested The eye ghiasi_ Proposed F	SED ACCEI a using the re SC 120G.: Type TR hat now we h Remedy a opening wit 3ck_01_0121 Response	Response Status PT IN PRINCIPLE. sponse to comment #1- 3.2 P 2: Ghias <i>Comment Status</i> ave AUI-S/L far end eye h 50 mUI rectangular wi	W 46 and #40. 34 si Quantum/ D e would be / indow for Al	/Inphi AUI-S min eye UI-L is VEO=1	# <u>76</u> <i>EH/VEC</i> e opening 1 mV, see

C/ 120G SC 120G.3.2 EH/VEC (bucket3)

EH/VEC (bucket3)

EH/VEC (bucket3)

C/ 120G SC 120G.3.2	P 234	L 14	# 78	C/ 120G SC 120G.3.2.2 P 235 L 33 # 36					
Ghiasi, Ali	Ghiasi Quant	um/Inphi		Brown, Matt Huawei					
Comment Type TR	Comment Status D		EH/VEC (bucket3)	Comment Type T Comment Status D TP4 EO XTALK (bucket3)					
Given that now we have	e AUI-S/L far end VEC need	to be defined		The specified values for the module output EH/VEC crosstalk parameters (2x) are TBD.					
SuggestedRemedy				SuggestedRemedy					
The eye opening with 5 ghiasi_3ck_01_0121	0 mUI rectangular window fo	r AUI-L is VEC	=14.5 dB, see	Provide values.					
Proposed Response PROPOSED ACCEPT Resolve using the resp	Response Status W IN PRINCIPLE. onse to comment #146 and #	#40.		PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #17.					
	D 224	/ 47	# 04	C/ 120G SC 120G.3.2.2 P 235 L 33 # 69					
C/ 120G 3C 120G.3.2	<i>г</i> 234	L 17	# 34	Healey, Adam Broadcom Inc.					
Brown, Matt	Huawei			Comment Type T Comment Status D TP4 EO XTALK (bucket3)					
In Table 120G-3, the sp	comment Status D becified value for ERL at mod	lule output (TP	4) is TBD.	The target differential peak-to-peak amplitude and transition time, as observed at TP1a, are TBD.					
SuggestedRemedy				SuggestedRemedy					
Provide a value and up	date PICS.			Since the crosstalk generator is used to represent near-end aggression from the the host					
Proposed Response	Response Status W			transmitter outputs, the largest amplitude and smallest transition time allowed for a host output (as observed at TP1a) should be used to represent worst-case aggression.					
Resolve using the resp	onse to comment #125.			Change: "The crosstalk generator is calibrated at TP1a (without the use of a reference receiver) with					
C/ 120G SC 120G.3.2	P 234	L 17	# 79	target differential peak-to-peak amplitude of TBD mV and target transition time of TBD ps." To:					
Ghiasi, Ali	Ghiasi Quant	um/Inphi		"The crosstalk generator is calibrated so that the differential peak-to-peak output voltage					
Comment Type TR	Comment Status D	·	TP4 ERL (bucket3)	and transition time, as measured at TP1a, are a close to the limits in Table 120G-1 as practical."					
ERL IS TBD				Proposed Response Response Status W					
SuggestedRemedy Replace TBD with 8.5 c	B and see ghiasi_3ck_01_0	121		PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #17.					
Proposed Response	Response Status W								
PROPOSED ACCEPT Resolve using the resp	IN PRINCIPLE. onse to comment #125.								

C/ 120G SC 120G.3.2.2

C/ 120G	SC 120G.3.2.2	2 P 235	L 33	# 63	C/ 120G	SC 120	G.3.2.2	P	235	L 34	# 86
Wu, Mau-L	in	MediaTek			Ghiasi, Ali			Ghi	asi Quantu	ım/Inphi	
Comment T	<i>уре</i> т	Comment Status D		TP4 EO XTALK (bucket3)	Comment 7	ype T	र	Comment Statu	s D		TP4 EO XTALK (bucket3)
There a	are some TBDs fo	or crosstalk calibration spec	s for Host Ou	tput test.	Addres	sing the T	BD in th	ne paragraph			
TP4 sh	ing to the analysis	s explored in wu_3ck_adno h that of Module output spe	c_02_010621 c. which is 90	.pdf, the target swing at 0 mV. Similarly, the	Suggested	Remedy					
output	voltage swing at 7	TP1a, which is 870 mV now	, shall be alig	ned among Host output,	A fast ASIC with 7.6 ps output rise time when passes through a mated board with just 5 dB						
Module	output, Host inpu		loss pro	oduces 12 av have lo	ps 20-8 wer tha	30% rise time, the	full swing	is about 2x. E	But given that module		
Suggested	Remedy			350 m\	and with	amplitu	ide of 700 mV, the	e reason ar	mplitude is rec	duced is due assumption	
Propos Module	e the following pa output: 120G.3.2		that sig 900 m\	nal will ha / amplitude	ve pre-e e I don'i	emphasis on for the the second seco	his measur asonable.	ement otherw	ise one could go with		
" with 19 ps."	n target differentia	al peak-to-peak amplitude of	r 870 mV and	target transition time of	Proposed F	Response		Response Status	s W		
Proposed F	Response	Response Status W			PROP	DSED ACC		N PRINCIPLE.			
PROPO	DSED ACCEPT II	N PRINCIPLE.			Resolv	e using the	e respoi	nse to comment #	±17.		
Resolve	e using the respo	nse to comment #17.			C/ 120G	SC 120	G.3.3.2	. 1 P	238	L 54	# 64
C/ 120G	SC 120G.3.2.2	2 P 235	L 34	# 127	Wu, Mau-L	in		Mee	diaTek		
Ran, Adee		Intel			Comment 7	⁻ уре т		Comment Statu	s D	Т	P4a SIT XTALK (bucket3)
Comment 7	vpe TR	Comment Status D		TP4 FO XTALK (bucket3)	There a	are some 1	BDs fo	r crosstalk calibra	ation specs	for Host Outp	out test.
(addres	sina TBD)				Accord TP4 sh	ing to the a all be aligr	analysis ned with	s explored in wu_3 that of Module o	3CK_adhoc	_02_010621.p which is 900	mV Similarly the
"The cr	osstalk generator	r is calibrated at TP1a (with	out the use of	a reference receiver) with	output	voltage sw	ing at T	P1a, which is 87	0 mV now,	shall be aligned	ed among Host output,
target o	lifferential peak-to	o-peak amplitude of TBD m	V and target t	ransition time of TBD ps"	Module	output, H	ost inpu	it, & Module input	specs.		
This is	the module outpu	ut test; the crosstalk generat	tor represents	the host output. We	Suggested	Remedy					
specify	the PtP amplitud	le and transition time for hos	sts at TP1a in	Table 120G–1. The	Propos	e the follow	wing pa	ragraph to replac	e the origin	al one	
calibrat	ion snouid use th ile.	ie maximum amplitude and	minimum trar	isition time values from	" with	target am	olitude	of 870 mV peak-1	o-peak diff	erential and 2	0% to 80% target
Suggested	Remedy				transitio	on time of	19 ps a	s measured at TF	°1a"		0
Change	the guoted sent	ence to:			Proposed F	Response		Response Status	s W		
enange	quetes con				PROP	DSED ACC		N PRINCIPLE.			
"The cr targets (min, 20	osstalk generator equal to the Diffe 0% to 80%) in Ta	r is calibrated at TP1a (with erential peak-to-peak output ble 120G-1".	out the use of voltage (max	a reference receiver) with) and Transition time	Resolv	e using the	e respoi	nse to comment #	ŧ17.		
Proposed F	Response	Response Status W									

PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #17.

> C/ 120G SC 120G.3.3.2.1

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TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 120G	SC 120G.3.	3.2.1 <i>P</i> 238	L 54	# 37
Brown, Mat	t	Huawei		
Comment T	ype T	Comment Status D		TP4a SIT XTALK (bucket3)
The spe	ecified values f	for the host stressed input of	crosstalk parame	eters (2x) are TBD.
SuggestedF	Remedy			
Provide	values.			
Proposed R	lesponse	Response Status W		
PROPC Resolve	SED ACCEP	T IN PRINCIPLE.		
Cl 120G	SC 120G.3.	3.2.1 <i>P</i> 238	L 54	# 87
Ghiasi, Ali		Ghiasi Qu	antum/Inphi	
Comment T	ype TR	Comment Status D		TP4a SIT XTALK (bucket3)
Address	sing the TBD i	n the paragraph		
SuggestedF	Remedy			
A fast A loss pro ps but v the sigr sugges	vould be difficuted with 7.6 p bound be difficuted be difficuted by the second be been been been been been been been	20-80% rise time when pa 20-80% rise time. I sugges: ult to generate such fast ris e-emphasis enabled getting 0 mV	sses through a l t 12 ps rise time e time through r g more than 800	and possibly as fast as 10 nated board. Given that mV could be difficult.
Proposed R	lesponse	Response Status W		
PROPC Resolve	SED ACCEP	T IN PRINCIPLE. ponse to comment #17.		
C/ 120G	SC 120G.3.	3.2.1 P 238	L 54	# 19
Dudek, Mik	е	Marvell		
Comment T	ype TR	Comment Status D		TP4a SIT XTALK (bucket3)
The cro used fo	sstalk used in r the test for th	the calibration of the host s ne module output	stressed signal s	should match thecrosstalk
SuggestedF	Remedy			
Change are asy	e "The counter nchronous with	propagating crosstalk sign h target amplitude of TBD r time of TBD ps " to "The co	als during calibr nV peak-to-peal	ation of the stressed signal differential and 20% to

calibration of the stressed signal are asynchronous with target differential peak-to-peak amplitude of 870 mV and target transition time of 7.5 ps for the near end calibration and target transition time of 15 ps for the far-end calibration"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #17.

C/ 120G	SC 120G.3	3.3.2.1	P 23	88	L 54	#	128	
Ran, Adee			Intel					
Comment Ty	pe TR	Comm	ent Status	D		TP4a SIT XT	ALK (bucket3)

(addressing TBD)

"The counter propagating crosstalk signals during calibration of the stressed signal are asynchronous with target amplitude of TBD mV peak-to-peak differential and 20% to 80% target transition time of TBD ps"

This is the host stressed input test; the actual counter-propagating signals are from the host's own transmitter. For calibration purposes we can assume that the host uses the maximum amplitude and minimum transition time. If the host does not reach the limits, then it may benefit from less crosstalk during the actual test - but as long as it meets the host output specifications, it is acceptable.

We specify the PtP amplitude and transition time for hosts at TP1a in Table 120G–1. The calibration should use the maximum amplitude and minimum transition time values from that table.

SuggestedRemedy

Change the quoted sentence to:

"The counter-propagating crosstalk signals are asynchronous with respect to the input signal and are calibrated at TP1a (without the use of a reference receiver) with targets equal to the Differential peak-to-peak output voltage (max) and Transition time (min, 20% to 80%) in Table 120G-1".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #17.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 120G SC 120G.3.3.2.1 Page 7 of 11 2021-02-11 8:50:38 PM

C/ 120G SC 120G.3.3.2.1 P 238 L 54 # 70	C/ 120G SC 120G.3.4.1 P 240 L 46 # 88
Healey, Adam Broadcom Inc.	Ghiasi, Ali Ghiasi Quantum/Inphi
Comment Type T Comment Status D TP4a SIT XTALK (bucket3) The target differential peak-to-peak amplitude and transition time, as observed at TP1a, are TBD.	Comment Type TR Comment Status D EH/VEC (bucket3) Table 120G-10 needs to be updated now that measurements are with 50 mUI window
Since the crosstalk generator is used as a proxy for the host transmitter(s) during stressed input signal calibration, the amplitude and transition times should be set to agree with the values measured at the output of the host under test (TP1a). Change: "The counter propagating crosstalk signals during calibration of the stressed signal are asynchronous with target amplitude of TBD mV peak-to-peak differential and 20% to 80% target transition time of TBD ps as measured at TP1a (without the use of a reference receiver)." To: "The counter propagating crosstalk signals are asynchronous during calibration of the stressed signal. The crosstalk generator is calibrated so that the differential peak-to-peak output voltage and transition time, as measured at TP1a, are as close as practical to the values measured at the output of the host under test (at TP1a) without the use of a reference receiver." <i>Proposed Response</i> Response Status W PROPOSED ACCEPT IN PRINCIPLE.	SuggestedRemedy See ghiasi_3ck_01_0121 and reduce eye height window from 15 mV to 9.5 mV See ghiasi_3ck_01_0121 and reduce eye height window from 7.5 dB to 14+/- 0.5 dB Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #146 and #40. Cl 120G SC 120G.3.4.1.1 P 242 L 2 # Dudek, Mike Marvell Comment Type TR Comment Status D P1 EH/VEC XTALK (bucket3) The crosstalk used in the calibration of the module stressed signal should match the crosstalk used for the test for the host output SuggestedRemedy Change to "a target amplitude of 900mV differential peak-to-peak and target slew time between -270mV and +270mV of 7.5ps"
Resolve using the response to comment #17. C/ 120G SC 120G.3.4 P 240 L 17 # 38	PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #14.
Brown, Matt Huawei Comment Type T Comment Status D TP1 ERL (bucket3) In table 120G-9, the specified value for module input ERL (min) is TBD. SuggestedRemedy Provide a value. Proposed Response Response Status W PROPOSED ACCEPT IN DRINCIPLE	C/ 120G SC 120G.3.4.1.1 P 242 L 2 # 65 Wu, Mau-Lin MediaTek Comment Type T Comment Status D P1 EH/VEC XTALK (bucket3) There are some TBDs for crosstalk calibration specs for Host Output test. According to the analysis explored in wu_3ck_adhoc_02_010621.pdf, the target swing at TP4 shall be aligned with that of Module output spec, which is 900 mV. Similarly, the output voltage swing at TP1a, which is 870 mV now, shall be aligned among Host output, Module output, Host input & Module input spece
Resolve using the response to comment #125.	SuggestedRemedy Propose the following paragraph to replace the original one Module input: 120G.3.4.1.1 (Page 242, L2) " with target amplitude of 900 mV peak-to-peak differential and target slew time between - 2.7 V and +2.7 V of 12 ps as measured at TP4" Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #14.

C/ 120G SC 120G.3.4.1.1 Page 8 of 11 2021-02-11 8:50:38 PM

C/ 120G	SC 120G.3.4.1.	Р	242	L 2	#	71	
Healey, Ad	am	Bro	adcom Inc.				_

Comment Type T Comment Status D P1 EH/VEC XTALK (bucket3) The target differential peak-to-peak amplitude and slew time of the crosstalk generator, as

observed at TP4, are TBD.

SuggestedRemedy

Since the crosstalk generator is used as a proxy for the module transmitter(s) during stressed input signal calibration, the amplitude and transition times should be set to agree with the values measured at the output of the module under test (TP4).

Change:

"The counter propagating crosstalk signals during calibration of the stressed signal are asynchronous with target amplitude of TBD mV peak-to-peak differential and target slew time between -TBD mV and TBD mV of TBD ps as measured at TP4 (without the use of a reference equalizer)."

To:

"The counter propagating crosstalk signals are asynchronous during calibration of the stressed signal. The crosstalk generator is calibrated so that the differential peak-to-peak output voltage and transition time, as measured at TP4, are as close as practical to the values measured at the output of the module under test (at TP4) without the use of a reference receiver."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #14.

Cl 120G	SC 120G.3.4.	1.1 P 242	L 2	# 129
Ran, Adee		Intel		
Comment Typ	pe TR	Comment Status D	P1 E	EH/VEC XTALK (bucket3)

(addressing TBD)

"The counter propagating crosstalk signals during calibration of the stressed signal are asynchronous with target amplitude of TBD mV peak-to-peak differential and target slew time between –TBD mV and TBD mV of TBD ps as measured at TP4"

This is the module stressed input test; the actual counter-propagating signals are from the module's own transmitter. For calibration purposes we can assume that the module uses the maximum amplitude and minimum transition time. If the module does not reach the limits, then it may benefit from less crosstalk during the actual test - but as long as it meets the module output specifications, it is acceptable.

We specify the PtP amplitude and transition time for modules at TP4 in Table 120G–3. The calibration should use the maximum amplitude and minimum transition time values from that table.

SuggestedRemedy

Change the quoted sentence to:

"The counter-propagating crosstalk signals are asynchronous with respect to the input signal and are calibrated at TP4 (without the use of a reference receiver) with targets equal to the Differential peak-to-peak output voltage (max) and Transition time (min, 20% to 80%) in Table 120G-3".

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the response to comment #14.

C/ 120G	SC 120G.3.4.1.	1 P 242	L 2	#	39
Brown, Matt		Huawei			
Comment Ty	pe T	Comment Status D		P1 EH/VEC X1	ALK (bucket3)

The specified values for the module stressed input crosstalk parameters (4x) are TBD.

SuggestedRemedy

Provide values.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the response to comment #14.

C/ 120G	SC 120G.3.4	.1.1	P 242	L 3	# 89	C/ 162B	SC 1	62B.1.3.1	P 2	62	L 36	# 130	
Ghiasi, Ali			Ghiasi Quantu	m/Inphi		Ran, Adee			Intel				
Comment 7	ype TR	Commen	nt Status D	D	1 EH/VEC XTALK (bucket3)	Comment T	уре	TR	Comment Status	D		MTF FOMILD (bucket3)	
Addres	sing the TBD in	the paragra	ph			(addres	sing TE	BD)					
Suggested	Remedy					FOMIL	D shall	De less th	ian (TBD) dB				
A fast A loss pro PCB m 350 mV	ASIC with 7.6 ps oduces 12 ps 20 ay have lower th / and with ampli	output rise)-80% rise tii nan HCB los tude of 700	time when passes me, the full swing s, then I suggest mV, the reason ar	through a s about 2x. 20 ps for th nplitude is r	mated board with just 5 dB But given that module e slew from -350 mV to + educed is due assumption	The imp not bee The spe	portanc n prese ecificati	e of this pa ented. ERL	arameter for quality likely covers what be deleted without	of test f FOMILE loss of t	ixtures in the Doriginally inter echnical comp	context of this project has ended to cover. pleteness.	
that signal will have pre-emphasis on for this measurement otherwise one could go with 900 mV amplitude I don't believe that is reasonable						SuggestedRemedy							
200 mm amplitude i dont believe that is reasonable.						Delete	the quo	ted senter	nce.				
PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #14.							Respons DSED A	se ACCEPT II	Response Status	w			
C/ 162B	SC 162B.1.3	.1	P 262	L 36	# 104	#111.	e using	the respon	nse to comment				
Champion,	Bruce		TE Connectivit	у		C/ 162B	SC 1	62B.1.3.1	P 2	62	L 36	# 107	
Comment T	<i>уре</i> т	Commen	nt Status D		MTF FOMILD (bucket3)	DiMinico. C	hristop	her	MC C	ommuni	ications		
FOM_II	LD is listed at TI	BD.				Comment T	vpe	TR	Comment Status	D		MTF FOMILD (bucket3)	
iuggestedRemedy						Provide value for mated test fixture FOMILD TBD.							
TBD to	be changed to	0.18 dB				SuaaestedF	Remed	/					
Proposed F PROPC Resolve	Response DSED ACCEPT e using commer	Response IN PRINCIP nt #111.	e Status W PLE.										
C/ 162B	SC 162B.1.3	.1	P 262	L 36	# 41	See din Update	ninico_: PICS	3ck_adhoo	_01a_121620				
Brown, Mat	t		Huawei			Proposed R	Respons	se	Response Status	w			
Comment TypeTComment StatusDMTF FOMILD (bucket3)The specified value for MTF FOM_ILD upper limit is TBD.						PROPOSED ACCEPT IN PRINCIPLE. Resolve using the response to comment #111.							
Suggested	Remedy					C/ 162B	SC 1	62B.1.3.1	P 2	62	L 36	# 97	
Provide	e a value.					Haser, Alex	¢		Mole>	(
Proposed F PROPC	Response DSED ACCEPT	Response Status W IN PRINCIPLE.	e Status W PLE.			<i>Comment T</i> Fill in T	<i>ype</i> BD for	TR MTF FOM	<i>Comment Status</i> _ILD limit	D		MTF FOMILD (bucket3)	
Resolve	e using the resp	onse to com	1ment #111.			SuggestedRemedy							
						Fill in a value of 0.18 dBrms based on haser_3ck_adhoc_01c_062420.pdf slide 7							
						Proposed Response Response Status W							
						PROPOR) SED A e using	ACCEPT IN the respon	N PRINCIPLE.	11.			
TYPE: TR/t COMMENT	echnical require STATUS: D/dis ER: Clause, Su	ed ER/editor spatched A/	rial required GR/g accepted R/reject	eneral requ ed RESF	ired T/technical E/editorial G/g PONSE STATUS: O/open W/w	general ritten C/closed	Z/with	drawn		C/ 16 SC 16	2B 2B.1.3.1	Page 10 of 11 2021-02-11 8:50:3	

C/ 163B	SC 163B.2	P 290) L 23	# 82
Ghiasi, Ali		Ghiasi	Quantum/Inphi	
Comment 7 Examp	<i>Type</i> TR le TP0V should	Comment Status [be better defined)	P0v/TP5v example (bucket3)
Suggestedl See gh The DL followe ohms (per tab GHz.	Remedy iasi_3ck_02_01 JT trace is const d by 66.8 mm 9 via model) the to le 93-12. The e	21 ructed from 2 mm sec 2.5 Ohms strip line, fol otal loss of this model a quation for the loss =0	tion of PCB trace lowed by 2 mm s at 26.55 GHz is 2 .006+0.25*SQRT	e with 102 Ohms (via model), ection of PCB trace with 102 2.8 dB. The PCB model is (f)+0.057*f, where f is in
Proposed F PROPO Resolve	Response DSED REJECT. e using the resp	Response Status N	N 2.	
C/ 163B	SC 163B.2	P 29 1	L 18	# 44
Brown, Mat	tt	Huawe		
For the state vo Suggestedl Provide	example test fix oltage is TBD. <i>Remedy</i> e a value.	ture, the reference val	ue in Table 163E	3-1 for transmitter steady-
Proposed F PROPO Resolve	Response DSED ACCEPT e using the resp	Response Status N IN PRINCIPLE. onse to comment #132	N 2.	
C/ 163B	SC 163B.2	P 291	L 20	# 45
Brown, Mat	tt	Huawe		
Comment 7 For the is TBD.	<i>Type</i> T example test fiv	Comment Status I sture, the reference val) ue for transmitte	<i>P0v/TP5v example (bucket3)</i> r linear fit pulse peak voltage
Suggestedl	Remedy			
Provide	e a value.			
Proposed F PROPO Resolve	Response DSED ACCEPT e using the resp	Response Status N IN PRINCIPLE. onse to comment #132	N 2.	

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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