CI 30	SC 30.5.1.1.2	P 21	L	# 2	C/ 56	SC 56.1.1.1	P 34	L 20	# 4
BOURGA	RT, Fabrice	Orange			BOURG/	ART, Fabrice	Orange		
Comment	Type E	Comment Status A		EZ	Commen	t Type E	Comment Status A		EZ
No ex Bidi to	planation is given the -BR extension	on the change of naming co n.	onvention movir	g from BX for 1Gb/s	Poss supp	ible typo in the se ort a bit rate of 10	entence "The 1000BASE-X P 10 Mb/s as defined in 66.2"	CS and PMA sul	blayers are used to
Suggested	dRemedy				Suggeste	edRemedy			
Add fo	or newcomers to t	he IEEE world a note explair	ning the reason	since remains stable	may	be 100Mb/s shou	ld be made 1000Mb/s		
across	s the line rates in	the document			Respons	е	Response Status C		
Response	•	Response Status C			ACC	EPT IN PRINCIPI	_E.		
ACCE CI 157 "BB	PT IN PRINCIPL 7.1.3, add a new l Bidirectional 64P	E. ine before line "x" as follov /66B line coding"	vs:		Corre	ect the error as pe ssary changes ma	er remedy. Add an editor's no ade to Cl 56.1.1"	te saying "reviev	v and correct as
	Bidir Cotioniar 04E				C/ 56	SC 56.1.1.2	P 34	L 28	# 5
CI 30	SC 30.5.1.1.2	P 21	L15	# 3	BOURG/	ART, Fabrice	Orange		
BOURGA	RT, Fabrice	Orange			Commen	t Type E	Comment Status R		EZ
Comment From	<i>Type</i> E the definitions no	Comment Status A clue is given on the purpose	e of BR40+ vs E	EZ R40 before table 158-10	Adde this v	ed value of the co vork?	pper references is unsure, h	ere unless for a l	bug fixing not related to
Suggested	dRemedy				Suggeste	edRemedy			
Purpo	se should prefera	bly be explained sooner thar	n it is now not to	o onfuse the reader	Rem	ove from this text	?		
Response		Response Status C			Respons	e	Response Status C		
ACCE	PT IN PRINCIPL	E.			REJE	ECT.			
Propo 20 (20	se to explain BR4 (40 km) or 40 (40 km	0+ in Cl 157.1.3. Change "x m)"	refers to the PI	HY reach; 10 (10 km),	This	is reformatting of	CI 56.1.1		
into		"'			C/ 56	SC Table 56	-1 P37	L 6	# 7
"x refe	ers to the PHY rea	ach; 10 (10 km), 20 (20 km),	40 (40 km), or	40+ (legacy 40km)."	BOURG/	ART, Fabrice	Orange		
CI 30	SC 30.5.1.1.2	P 21	L15	# 1	Commen	t Type T	Comment Status R		Ež
BOURGA	RT, Fabrice	Orange			Since rules	e distances are m , it would be safer	ade uncertain because of ve to refer to optical budgets	ry diverse passiv	e plant engineering
Comment	Type E	Comment Status R	<i>.</i>	EZ	Suaaeste	dRemedv			
In the are re	definition the wor	ding is "supporting a dsitanc engineering rules, unless hai	e of at least nn	km". Since distances	Repla	ace the column w	ith distances by optical budg	et classes enable	ed by the modules
it wou	ld be safer to refe	r to actual optical budget en	abled by modul	e pairings	spec	ified	, , , , , , , , , , , , , , , , , , , ,		,
Suggested	dRemedy				Respons	e	Response Status C		
Refer	to optical budget	values later described in tab	les 158-16, 159	-15 and 160-15	REJE	ECT.			
Response		Response Status C			Table	e 56-1 follows 802	2.3 convention by stating the	nominal distance	e rather than the loss.
REJE This fo	CT. ollows 802.3 aMA	UType legacy, it registers .3	cp BiDi PHY int	o Cl 30.					
			-						

Cl 56	SC Table 56-	1 P 37	L 6	# 6		Cl 158	SC 1		P 49	L 32	# 44	
BOURGA	RT, Fabrice	Orange				Frank, Ef	fenberger		Futurewei Te	chnologies		
Comment	Туре Т	Comment Status A			LB	Comment	Туре	т	Comment Status A			
4 moo	dule types have be	een defined to cover distance	es up to 40, two	of them tagged "40"		in fig	158-1, it s	says FE	C is optional for BR40 and BI	R40+. This is dif	ferent than table 157	′-2
relate	d OPEX costs if li	nk engineering is required.	in cause invento	ry problems with		Suggeste	dRemedy	/				
Suggeste	dRemedy					Chan	ge to mar	ndatory	here, or make it optional back	c in 157		
Based develo distar	d on the experience oped for PONs, it neces/budgets could ermore this could	e and best practices that op is believed that thanks to a 1 d be covered with only two m solve some issues documen	to-electronic ma 5dB dynamic th nodule types 0-1 ited in the next c	nufacturers have e full range of 5dB & 10 - 2x dB. omments		Response ACCE In Tat	e EPT IN PF ble 157–2	RINCIPL 2, colum	Response Status C LE. n 74, change all to "O".			
Response	9	Response Status C				C/ 158	SC 6	.1	P 54	L 21	# 46	
ACCE	, EPT IN PRINCIPL	E.				Frank, Eff	fenberger		Futurewei Te	chnologies		
Refer	to #29					Comment	Туре	т	Comment Status A			
C/ 157	SC 1.3	P39	/ 47	# 39		In tab	le 158-6,	we shou	uld adjust the Tx values to ad	apt to the agree	d link loss values	
Erank Ef	fenberger	Futurewei Te	chnologies	<i>"</i> 00		Suggeste	dRemedy	/				
Comment In the	t <i>Type</i> T definition of "x", t	Comment Status A he option of "40+" is missing				Increa Increa Increa	ase BR20 ase BR20 ase BR40	and BF and BF min po	R40+ min power to 0.6 dB. R40+ max power to 5.6 dB. (T wer to -4.4 dB, and the max p	His gives a 5dB bower to 0.6 dB.	range)	
Suggeste Add "	<i>dRemedy</i> 40+" as one of the	e options.				Shift a the m	all other o in OMA w	optical va vill also	alues as appropriate (e.g., if r increase by 2dB)	nin ave power ir	creases by 2dB, the	'n
Response	9	Response Status C				And t	abla 158-	7 should	d be made to match			
ACCE	EPT.					Pochonec		7 SHOUL				
Refer	to #3					ACCE	, DT IN DE					
Cl 157	SC 1.4	P 42	L 33	# 40		Refer	to #29.		LL.			
Frank, Ef	fenberger	Futurewei Te	chnologies			Guide	eline is to	adjust T	Tx power to accomadate the p	oower budget ch	ange, keep Rx the	
Comment	Туре Т	Comment Status A				same	•					
The F the 25	RS clause for 25G 5G two fiber PMDs	is listed as C74. This is wro s	ong. We should	use the clause give b	ру							
Suggeste	dRemedy											
Chan	ge clause number	to 108. Also, I do beleive th	nat this is manda	tory for all distances.								
Response	è	Response Status C										
ACCE Table	EPT IN PRINCIPL 157-3, remove co	E. blumn "74", make all entries i	in column "108"	as "M"								

C/ 158 SC 6.1

	F 30	L14	# 47	C/ 158	SC 11	P65	L 4	# 45
Frank, Effenberger	Futurewei Teo	chnologies		Frank, Effe	enberger	Futurewei T	echnologies	
Comment Type T	Comment Status A			Comment	Туре Т	Comment Status A		
Adjust receiver to	match the modifed Tx and Fiber c	hannel changes		BR10	max loss is 6.2	2 dB. It would be more widely	applicable if it w	vas 9 dB. Since 6.2 is
SuggestedRemedy				airead	y marketed, we	e would propose to define a n	ew BR10+.	
BR20 max power BR40 and 40+ mi BR40 max power BR40+ max power	is 5.6 dB. (a 20 dB range) in power is -22.4 dB. is -9.4 dB. er is -2.4 dB. (a 20 dB range).			BR20 should minim	max loss is 13 I be possible to um link loss of	dB. It would be more widely make the receiver tolerate s 0 dB.	applicable if it wa ufficient dynamic	as 15 dB. Additionally, i range to allow a
ALso adjust all ot	her values to follow these power ad	djustments.		BR40- Theref	⊢ max loss is 2 fore, the minim	3 dB, and we can try to get a um loss should be 8 dB	similar dynamic	range as BR20.
Response	Response Status C			Suggested	lRemedy			
ACCEPT IN PRIN	NCIPLE.			Chang	e table entries	as indicated.		
Refer to #29. Adjust "Average r	receive power (max)" to fit the upda	ated power budge	ət.	This ta care a	able should the bout the bit rat	n be largely replicated in clau e.	uses 159 and 160). The fiber does not
C/ 158 SC 7	P 58	L15	# 41	Response		Response Status C		
Frank, Effenberger	Futurewei Teo	chnologies		ACCE	PT IN PRINCII	PLE.		
Comment Type T	Comment Status R			Refer	to #29.			
Footnotes c, d, ar	nd e don't make sense for our case	9.		C/ 158	SC 11.1	P 65	L 54	# 42
SuggestedRemedy				Frank. Effe	enberaer	Futurewei T	echnologies	
Remove those for	otnotes.			Comment	Type T	Comment Status A		
Response	Response Status C			None	of our pmds us	e 1550 nm.		
REJECT.				Suaaesteo	Remedy			
This table is illust	rative.			Delete	1550 column,	and delete footnote c		
				Response		Response Status C		
				ACCE	PT.			
				C/ 158	SC 11.3	P66	L 24	# 43
				<i>Cl</i> 158 Frank, Effe	SC 11.3 enberger	Р 66 Futurewei T	L 24 echnologies	# 43
				<i>Cl</i> 158 Frank, Effe <i>Comment</i>	SC 11.3 enberger Type T	P 66 Futurewei T <i>Comment Status</i> A	L 24 echnologies	# 43
				Cl 158 Frank, Effe Comment THis s dumb.	SC 11.3 enberger Type T ection uses ha	P66 Futurewei T <i>Comment Status</i> A If a page and a graph to show	L 24 Technologies v you how an atte	# 43
				Cl 158 Frank, Eff Comment THis s dumb. Suggested	SC 11.3 enberger Type T ection uses ha IRemedy	P66 Futurewei T <i>Comment Status</i> A If a page and a graph to show	<i>L</i> 24 Technologies v you how an atte	# 43
				Cl 158 Frank, Effe Comment THis s dumb. Suggested Just re	SC 11.3 enberger Type T ection uses ha IRemedy emove this sec	P66 Futurewei T <i>Comment Status</i> A If a page and a graph to show tion. It's not needed.	L 24 Technologies v you how an atte	# 43
				Cl 158 Frank, Effe Comment THis s dumb. Suggested Just re Response	SC 11.3 enberger Type T ection uses ha IRemedy emove this sec	P66 Futurewei T <i>Comment Status</i> A If a page and a graph to show tion. It's not needed. <i>Response Status</i> C	L 24 Technologies v you how an atte	# 43

 TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 C/
 158
 Page 3 of 11

 COMMENT STATUS: D/dispatched A/accepted R/rejected
 RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
 SC
 11.3
 11/13/2019 7:41:05 PM

 SORT ORDER: Clause, Subclause, page, line
 SC
 11.3
 11/13/2019 7:41:05 PM

C/ 158	SC 158.5.6	P41	L 53	# 16		C/ 158	SC 158.6.1	P 55	L12	# 19	
Wey, Jun	Shan	ZTE TX Inc.			_	Wey, Jun S	Shan	ZTE TX Inc.			
Comment Typos	<i>Type</i> ER in this sentence	Comment Status A : "PMDs compliant with this cla	ause shall inclu	ide the The	EZ	Comment 7 Table 1	<i>ype</i> TR 58-7. PMD valu	Comment Status R les for BR20 and BR40+ are t	he same		SV
PMD_ option	global_transmit_ al."	disable function which allows t	he optical tran	smitter to be disabled	.is	Suggested	Remedy	2000			
Suggested	lRemedy					CONEC	the values for t				
Remov	ve the repeated '	"the". Delete the "." between di	sabled and is.			Response	Ŧ	Response Status C			
Response ACCE	PT.	Response Status C				REJEC Remed BR20 a	y is not propose nd BR40+ Rx s	ed for the specific BR20 values ensitivity values show the link	s. difference.		
C/ 158	SC 158.6	P 53	L	# 17		C/ 158	SC 158.10	P 65	L 1	# 20	
Wey, Jun	Shan	ZTE TX Inc.				Wey, Jun S	Shan	ZTE TX Inc.			
Comment	Type TR	Comment Status A			LB	Comment T	ype TR	Comment Status A			LB
and m <i>Suggested</i> Descri	in loss for each t <i>IRemedy</i> be the loss budg	ransmission class jet for BR40+	·			To alig budget G.9806 This co	n with ITU-T G.S classes. draft spec: Cla mment also app	9806 specifications, consider a ss S (0-15dB), Class (10-25df plies to Table 159-15.	a 15dB dynami B)	c range for the loss	i
Response		Response Status C				Suggested	Remedy				
ACCE	PT IN PRINCIPL	.E.				Discus	sion needed				
Refer	to #29					Response		Response Status C			
<i>Cl</i> 158 Wey, Jun	<i>SC</i> 158.6.1 Shan	P 54 ZTE TX Inc.	L 21	# 18		ACCEF Refer to	PT IN PRINCIPL 5 #29	.E.			
Comment	Type TR	Comment Status R			sv	C/ 158	SC 158.11.2.	.1 <i>P</i> 66	L13	# 14	
Table	158-6. PMD valu	ies for BR20 and BR40+ are th	ie same			BOURGAF	T, Fabrice	Orange			
Suggestea	IRemedy					Comment 1	vpe T	Comment Status R			LB
Correc	t the values for I	BR20				A 2 dB short.	allowance for c	onnectors and splices indeper	ndanlty of dista	nce seems extreme	əly
Response	Э т	Response Status C				Suaaestedi	Remedv				
Reme BR20	dy is not propose and BR40+ Rx s	ed for the specific BR20 values ensitivity values show the link	difference.			Is it saf	e to speculate is across their fu	n such details about engineer Il footprint?	ings that even o	operators struggle t	(O
		-				Response		Response Status C			
						REJEC No spe	T. cific remedy is p	proposed. See comment resol	lution #29 on lo	oss budget.	

CI	158	
SC	158.11.2.1	

C/ 158 SC Table 15	8-16 P65	L 5	# 12		Cl 158	SC Table 15	58-10	P 58	L 9	# 11
BOURGART, Fabrice	Orange				BOURGAI	RT, Fabrice		Orange		
Comment Type T	Comment Status A			EZ	Comment	Type T	Comment	Status A		SV
Note a) gives figures a	t 1310, while the window is a	t 1270nm			Chann	el insertion loss	with footnote	d & e do not m	atch what can b	e found in other tables
SuggestedRemedy					at the	relevant wavele	ngtns.			
use attenuation coverir	ng the 1270nm window				Suggested	Remeay	159 17 linoia l	~~~		
Response	Response Status C				10*.5 -	+ 2 = 7 dB > 6.2	dB	055		
ACCEPT IN PRINCIPL	E.				Response		Response	Status C		
In Note a, change "Cha losses include"	annel insertion loss at 1310 r	im includes" to '	Channel insertion		ACCE	PT IN PRINCIP	LE.			
Delete superscript "a" f	rom 1270 column header.				Domo	ve row "Addition	al incortion los	a allowed" from	m Tabla 150 10	Apply the same shanes
Also apply this to Table	e 159–15.				to Tab	le 159-10, 160-	10.	ss allowed from	11 Table 156-10.	Apply the same change
C/ 158 SC Table 15	8-10 <i>P</i> 58	L 9	# 27			-				
Khotimsky, Denis	Verizon				Chang link po	je Table title froi wer budget".	m "10GBASE-	BRx link power	r budget" into "10	GBASE-BRx Illustrative
Comment Type TR	Comment Status A			LB		iner budget i				
Presently specified buc assumptions listed in the fiber distance increase contribute to the insertion	dget classes barely hold ever ne corresponding tables (Tab comes at least with the prop on loss. I would suggest rede	n under the fiber 0 158-10, 159-10 portional number efining the powe	attenuation 0, 160-10). Normally of splices, which er classes.	,	Page ("10GB "Illustr	57, line 42, char ASE-BRx illustr ative".	nge CI title "10 ative link powe	GBASE-BRx lii er budgets". Lir	nk power budget: ne 44, change "E	s (informative)" into xample" into
Same comment applie: 158/159/160-8, 158/15	s to Tables 158/159/160-5, ⁻ 59/160-9, 159/160-10	158/159/160-6,	158/159/160-7,							
SuggestedRemedy										
Propose to specify bud 0(min)-9 dB(max), 0(min)-15 dB(max), and 10(min)-23 dB(max).	lget loss as the follwing three d	e classes:								
Apply the above chang 158/159/160-8, 158/15	es to Tables 158/159/160-5, 59/160-9, 159/160-10	158/159/160-6	, 158/159/160-7,							
Response	Response Status C									
ACCEPT IN PRINCIPL Refer to #29	Е.									

C/ 158 SC Table 158-10

C/ 158	SC	Table 158	-10	P 58	L 9	# 29		C/ 158	SC 1	Table 158	B-10	P 58	L 9	# 25	
Dawes,	Peter			Vodafone			_	Rafel, Albe	ert			ВТ			
Commer	nt Type	TR	Commen	t Status A			LB	Comment	Туре	TR	Comm	ent Status A			LB
Cha Curr Sam 160	nnel inse ent valu e comm (Table 1	ertion loss s es of 6.3 dl nent applies 60-10)	specs should 3, 13 dB, 18 5 to 25G loss	d be updated by dB, and 23 dB s in Clause 159 (providing the m should be updat Table 159-10) a	nin and max values. ted. and 50G loss in Cla	use	Table Chann temper allows short li compli	158-10 el Inser rature ra back to nks. Th ance	on Page tion Loss ange ass back tes e specific	58 Clean specifica umption fo sting and a cation of n	version, channel i tion using BOTH r or specification. A avoiding the use o ninimum Channel	nsertion loss. Pr ninimum and ma 0.0 dB value for f an optical atten Insertion Loss a	ropose values for aximum. Industrial r minimum insertio luator in practice o dds a test case for	n loss n r
Suggest	edReme	edy						Suggested	Romodi	V					
Prop valu Prop 23 d Appl	ose to s e and th ose to s B. y the ab	specify chai e other for specify 3 cla bove change	mel insertio maximum va asses as cha es to Clause	n loss as two rov alue. annel insertion Ic s 159 and 160.	vs in the table: bss: 0(min)-9 dE	one row for minimu 3(max), 0-15 dB, an	m d 10-	Propos propos maxim achiev Chang For 23	se addir sed of 0. um Cha ed by na e 13 dB	ng a row i .0 dB. Ch annel Inse arrowing b into 15 o x channe	in Table w hange the ertion Loss the transr dB for max Linsertion	ith a minimum Ch value of 6.3 dB in s. The maximum (nit power range us < channel insertion	annel Insertion L Draft to a new v Channel insertion sed for 6.3 dB. h loss, its min is h loss, its min is	Loss with a value alue of 9.0 dB for n loss of 9 dB can 0 dB.	
Respons	e		Response	Status C				Remov	/e 18 dE	3 class.	rinscriton	1033, 113 11111 Value			
ACCEPT IN PRINCIPLE. Consnsus was reached in Kona meeting. Following changes on loss budgets will be made to Clauses 158, 159, 160.					ade	<i>Response</i> ACCEI Refer t	PT IN P to #29	RINCIPL	<i>Respor</i> E.	nse Status C					
BR2 BR4	0 min 00 0 min 50	dB, max 15 dB, max 18	dB dB					C/ 158	SC 1	Table 158	8-17	P 65	L 49	# 13	
BR4	0+ min ⁻	10dB, max	23dB					BOURGAF	RT, Fab	rice		Orange			
								Comment	Туре	т	Comm	ent Status A			EZ
								Why n instead	ot give t d of 0.4	the atten or 0.5 wh	uation at b nich are si	ooth values applica gnificantly differer	able to the two w t	vavelength windows	s used
								Suggested	Remed	У					
								figures	must b	e made o	consistent	across the tables	158-5, 158-10 a	and 158-17	
								Response ACCEI Values are ref In Tabl in .3cp	PT IN P 0.4 and erred to le 158-1	RINCIPL d 0.5 are 17, delete	Respor E. found in f column 1	nse Status C iber standards. Co 550, and clear the	omments are inv o note related to	ited to clarify whicl 1550, as 1550nm	h std is not

C/ 158	SC Table 158-	5 P 53	L 45	# 8	C/ 158	SC Table 15	8-8 <i>P</i> 56	L17	# 10
BOURGA	RT, Fabrice	Orange			BOURGA	RT, Fabrice	Orange		
Comment "Minim in the	<i>Type</i> T num range" values section.	Comment Status R don't seem practical given	the figures and	L assumptions given later	Comment No un	<i>Type</i> E it is given for the	Comment Status A "Maximum receive power (fo	or damage)"	SV
Suggested	Remedy				Shoul	hithe "dBm" ?			
Either lineic l dynam specifi	assuptions need t oss of fibre (0.4 or nic of fibre loss bet c external conditio	o be changed or minimum (0.5 according to table 158) ween 0m and 40km exceed ins (e.g. attenuators?).	ange values. Fo 17) at the consi Is 16dB can it be	or instance given the dered wavelengths, the e achieved wihout	Response ACCE	PT.	Response Status C		
Response		Response Status C			C/ 159	SC 6.1	P 76	L12	# 48
REJE	CT.				Frank, Eff	enberger	Futurewei Te	echnologies	
There	are other requirem	nents to be considered. This	minimum rang	e is just one factor.	Comment	Туре Т	Comment Status A		
C/ 158	SC Table 158-	5 <i>P</i> 53	L 45	# 9	We sh Adjus	ould adjust the t the max powers	ransmitter powers to match t to maintain a more reasona	he agreed link lo ble Tx control ra	oss values. nge
BOURGA	RT. Fabrice	Orange			Suggested	lRemedy			
Consid the Tx	dering the up and of max with modulat	down link chracteristics, the ion of the corresponding de	damage thresh vice.	L old seems lower than	Grand BR20 BR40 BR40	max power shou max power shou + max power sho	ld be -1 dBm. ld be +2 dBm. uld be left at +6 (a special c:	ase, because tha	at's getting rather high).
Back t are rec for BR	o back testing sho quired given the cu 40 & 40+)	uld be made possible or tea urrent figures and testing is	sting conditions mentioned with	indicate that attenators a 2m patchcord (e.g.	Hesponse ACCE Refer	PT IN PRINCIPL to #29. This is fo	Response Status C E. r 25G spec.		
Response REJE0 There	CT. is no specific rem	Response Status C edy. Please review the new	draft and bring	contributions on this.					
C/ 158	SC Table 158-	6 P 54	L 20	# 37					
Luo, Yuan	qiu	Futurewei			-				
Comment In Tab 10GB/	<i>Type</i> TR le 158-6, row "Side ASEBR40+-D valu	<i>Comment Status</i> A e Mode Suppression Ratio es are empty	(min)", both 10G	SV BASEBR20-D and	/				
Suggested	Remedy								
Propos	se to set these two	values as 30 dB.							
Response		Response Status C							
ACCE Merge	PT IN PRINCIPLE SMSR in the table	e into one value, 30 dB.							

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/ 159 SC 6.1 Page 7 of 11 11/13/2019 7:41:05 PM

C/ 159	SC 6.1	P 78	L 8	# 34		C/ 159	SC 6.1	P113	L 8	# 33
Frank, Effe	enberger	Futurewei Tech	nnologies			Frank, Eff	enberger	Futurewei T	echnologies	
Comment	Туре Т	Comment Status A			WL	Comment	Туре Т	Comment Status A		WL
To opti wavele	imize the wavele ength. The dispe	engths for BR20 and higher, we ersion impacts can be found in	e should use a Liu_3cp_1_19	more standard 09.		To op The d	imize the wave spersion impa	elengths for BR20 and higher, acts can be found in Liu_3cp_1	we should use s _1909.	standard wavelengths.
Suggested	Remedy					Suggestee	lRemedy			
THe up but suc EMLs,	ostream waveler ch chirp comes f so this seems to	igth should be 1260 to 1280 nr or free from DMLs. DML's are b be a no brainer. And, by shif	 This require cheaper and h ting to a shorte 	es a chirped transmi igher power than r wavelength, the	itter,	THe d disper enable	ownstream wa sion, this banc es uncooled op	avelength should be specified a d would require a chirp-free Tx peration (potentially).	1300-1320 nm. , which is not too	Given the distance and bad. The width also
guard	band between up	o and down becomes 20nm, w	hich is much m	ore forgiving.		Response		Response Status C		
If acce	pted, this would	affect tables 159-6, 7, 8, and 9	9; and tables 16	60-6, 7, 8, and 9.		ACCE Refer	PT IN PRINCI to #34	PLE.		
Response		Response Status C								
ACCE		E.				C/ 159	SC 6.1	P113	L 8	# 30
DS: 13	raw poli #2 in Ko 314+/-8nm	na meeting. Consensus was a	achieved to mai	ke change as follow	/S:	Frank, Eff	enberger	Futurewei T	echnologies	
US: 12	288+/-8nm					Comment	Туре Т	Comment Status D		WL
Editor follow	will make chang this consensus.	es in tables 159-6, 7, 8, and 9;	and tables 160)-6, 7, 8, and 9 to		To op The d	imize the wave spersion impa	elengths for BR20 and higher, tots can be found in Liu_3cp_1	we should use s 1_1909.	standard wavelengths.
C/ 159	SC 6.1	P 78	L 8	# 31		Suggestee	lRemedy			
Frank, Effe	enberger	Futurewei Tech	nologies			THe d	ownstream wa	velength should be specified	1300-1320 nm.	Given the distance and
Comment	Type T	Comment Status D	literegiee		WI	disper	sion, this band	d would require a chirp-free Tx	, which is not too	o bad. The width also
To opt	imize the wavele	engths for BR20 and higher, we	e should use a	more standard		Proposed	Recoorce	Boononoo Statua 7		
wavele	ength. The dispe	ersion impacts can be found in	Liu_3cp_1_19	09.		REIE	л <i>езронзе</i> ^т			
Suggested	Remedy						51.			
THe up but suc	ostream waveler ch chirp comes f	igth should be 1260 to 1280 nr or free from DMLs. DML's are	m. This require cheaper and h	es a chirped transmi igher power than	itter,	This c This is	omment was V a duplicate co	WITHDRAWN by the commen omment.	iter.	
EMLs, guard l	so this seems to band between up	b be a no brainer. And, by shif b and down becomes 20nm, w	ting to a shorte hich is much m	r wavelength, the ore forgiving.		C/ 159	SC 6.3	P115	L15	# 49
If acce	pted, this would	affect tables 159-6, 7, 8, and 9	9; and tables 16	60-6, 7, 8, and 9.		Frank, Eff	enberger	Futurewei T	echnologies	
Proposed I	Response	Response Status Z				Chan	le the max rec	ieve nowers to match the Tx a	and link loss valu	165
REJEC	CT.					Currenter				
This co This is	omment was WI a duplicate com	THDRAWN by the commenter. ment.				Suggested BR20 BR40 BR40	Max power sh Max power sh Max power sh Hax power s	ould be -1 dBm. ould be -8 dBm. houdl be -2 dBm.		
						Response		Response Status C		
						ACCE Refer	PT IN PRINCI to #29. This is	PLE. for Rx power adjustment.		

TYPE: TR/technical required ER/editorial required GR/gener	al required T/technical E/editorial G/general	C/ 159	Page 8 of 11
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed Z/withdrawn	SC 6.3	11/13/2019 7:41:05 PM
SORT ORDER: Clause, Subclause, page, line			

Cl 159	SC 159.6	6 P113	L12	# 22	
Wey, Jun	Shan	ZTE TX Inc.			
Comment Table BR20 Why s	<i>Type</i> TR 159-6 transmitter h uch a high c	Comment Status A has a dynamic range of 14dB, whi lynamic range for this class?	le the other clas	ses are at 9dB, 4d	<i>LB</i> dB.
<i>Suggested</i> Discus	<i>Remedy</i> sion needed	Ŀ			
Response ACCE Refer	PT IN PRIN to #29	Response Status C CIPLE.			
C/ 159	SC 159.6	6 P114	L12	# 23	
Wey, Jun	Shan	ZTE TX Inc.			
Table BR20 Why s Suggested Discus	159-7 transmitter h uch a high c <i>IRemedy</i> ssion needed	has a dynamic range of 14dB, whi lynamic range for this class? d	le the other clas	ses are at 9dB, 4d	dB.
Response		Response Status C			
ACCE Refer	PT IN PRIN to #29	CIPLE.			
C/ 159	SC 159.6	5.3 <i>P</i> 113	L1	# 21	
Wey, Jun	Shan	ZTE TX Inc.			
Comment Table Wavel downs	<i>Type</i> TR 159-6 ength plan for tream. This	Comment Status R or BR20/40/40+ only allows a 4nr will be challenging to meet with lo	n guard band be w cost optics	tween upstream a	WL Ind
Suggested	IRemedy				
Discus	sion needed	Ł			
Response REJE0	CT.	Response Status C			

No specific remedy is proposed by the commentor.

Cl 159	SC Table 15	9-10	P 81	L 4	# 28	
McCammon	i, Kent		AT&T			
Comment Ty	vpe TR	Comme	ent Status A			LB
Table 15 Loss sp assump back tes specifica	59-10 on Page becification usi tion for specific sting and avoid ation of minimu	81 Clean v ng BOTH m cation. A 0.0 ling the use um Channel	ersion, row 4. P inimum and max 0 dB value for m of an optical atte Insertion Loss a	ropose values for kimum. Industrial inimum insertion enuator in practic adds a test case f	Channel Insertion temperature range loss allows back to e on short links. The or compliance.	
SuggestedR	lemedy					
Propose propose maximu achieve	e adding a row d of 0.0 dB. C m Channel Ins d by narrowing	in Table wit hange the v ertion Loss the transm	h a minimum Ch alue of 6.3 dB in . The maximum it power range u	nannel Insertion L Draft to a new va Channel insertion sed for 6.3 dB.	oss with a value alue of 9.0 dB for loss of 9 dB might b	be
Response		Respons	se Status C			
ACCEP Refer to	T IN PRINCIPI #29	LE.				
Cl 159	SC Table 15	9-10	P 81	L 4	# 24	
Rafel, Alber	t		BT			
Comment Ty	vpe TR	Comme	ent Status A			LB

Table 159-10 on Page 81 Clean version, row 4. Propose values for Channel Insertion Loss specification using BOTH minimum and maximum. Industrial temperature range assumption for specification. A 0.0 dB value for minimum insertion loss allows back to back testing and avoiding the use of an optical attenuator in practice on short links. The specification of minimum Channel Insertion Loss adds a test case for compliance.

SuggestedRemedy

Propose adding a row in Table with a minimum Channel Insertion Loss with a value proposed of 0.0 dB. Change the value of 6.3 dB in Draft to a new value of 9.0 dB for maximum Channel Insertion Loss. The maximum Channel insertion loss of 9 dB can achieved by narrowing the transmit power range used for 6.3 dB. Change 13 dB into 15 dB for max channel insertion loss, its min is 0 dB. For 23 dB max channel insertion loss, its min value is 10 dB. Remove 18 dB class.

lesponse	Response Status	С
ACCEPT IN PRINCIPLE Refer to #29		

C/ 159 SC Table 159-10

C/ 159	SC Table 159	-5 P76	L 27	# 15		C/ 160	SC 9	P111	L1	# 35
BOURGAR	RT, Fabrice	Orange		-		Frank, Eff	enberger	Futurewei	Technologies	-
Comment Remar clause	<i>Type</i> T ks done for table s 159 and 160.	Comment Status A 158-5 about the dynamic	"2m - max length"	' are also valid for	LB	<i>Comment</i> Table wavel	<i>Type</i> T 160-14 should engths.	Comment Status D be made to follow the forma	t of table 159-14,	especially the
Suggested Realist	<i>Remedy</i> tic values based o	on possible damage and a	ictual dynamic sho	ould be given.		<i>Suggested</i> Simple	<i>dRemedy</i> est thing is to ju	st copy the 159 table to her	e. Or just do it by	reference.
<i>Response</i> ACCEI Refer t	PT IN PRINCIPLE to #29	Response Status C <u>=</u> .				Proposed REJE	<i>Response</i> CT.	Response Status Z		
Cl 160	SC 1.6	P 77	L 48	# 50		This c	omment was W	ITHDRAWN by the comme	nter.	
Frank, Effe	enberger	Futurewei	Fechnologies			This is	a duplicate co	mment		
Comment	Туре Т	Comment Status A				C/ 160	SC 9	P111	L1	# 32
Chang	e the Tx values to	o increase BR20 by 2dB, a	and make Tx contr	ol range reasonable.		Frank, Eff	enberger	Futurewei	Technologies	
Suggested BR20 I BR40+	<i>Remedy</i> min power should - max power shou	l be -2.5. Max power shou Ild be 8.4 dBm (making ra	uld be 2.5 dBm. nge 3 dB, which is	s all we can afford)		<i>Comment</i> Table wavel	<i>Type</i> T 160-14 should engths.	Comment Status A be made to follow the forma	t of table 159-14,	especially the
<i>Response</i> ACCEI Refer t	PT IN PRINCIPLE to #29. This is for	<i>Response Status</i> C <u>-</u> 50G spec.				Suggested Simple Response	<i>dRemedy</i> est thing is to ju	st copy the 159 table to here	e. Or just do it by	reference.
C/ 160	SC 6.2	P 80	L12	# 51		ACCE	PT IN PRINCIP	PLE.		
Frank, Effe	enberger	Futurewei	Fechnologies			Delete	e Table 160-14,	change all references from	Table 160-14 to	Table 159-14.
Comment	Туре Т	Comment Status A				C/ 160	SC 160.6.3	P101	L35	# 38
Adjust	max powers to fil	the Tx and min loss.				Lewis, Da	vid	Lumentum		
Suggested BR20 I BR40+	<i>Remedy</i> max power should - max power shou	d be -2.5 dBm. Ild be 0.4 dBm				<i>Comment</i> In Tab inserti	<i>Type</i> T ble 160-10, Pow on loss plus All	Comment Status A rer budget (for maximum TD ocation for penalties (for ma	ECQ) values sho ximum TDECQ).	Suld add up to Channel
Response		Response Status C				Suggested	dRemedy			
ACCEPT IN PRINCIPLE. Refer to #29. This is for 50G Rx adjustment.			Chang 50GB	ge values of Pov ASE-BR10, -BF	wer budget (for maximum TI 220, -BR40 and -BR40+ resp	DECQ) to: 10.1, 1 pectively.	6.8, 21.8, and 26.8 for			
						Response ACCE		Response Status C		
						Check recalc	a "Allocation for ulate values for	penalties" values from relat "Power budget (for maximu	ed tables, apply th m TDECQ)".	nem to Table 160-10,
					Apply	the same chec	k and change to Tables 159	-10, 158-10.		
TYPE: TR/	technical required	d ER/editorial required G	R/general required	d T/technical E/edito	orial G/g	general		Cl	160	Page 10 of 11

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line SC 160.6.3 11/13/2019 7:41:05 PM

C/ 160	SC Table 1	60-10	P101	L 42	# 26	
Rafel, Albe	ert		вт			
Comment Table Chann tempe allows short I compl	Type TR 160-10 on Pag hel Insertion Los rature range as back to back to inks. The speci iance	Comme e 101 Clean ss specificat ssumption fo esting and a ification of m	ent Status A version, channel ion using BOTH or specification. A voiding the use o ninimum Channel	insertion loss. P minimum and max 0.0 dB value for f an optical attenu Insertion Loss ad	ropose values for kimum. Industrial minimum insertio lator in practice o ds a test case for	<i>LB</i> in loss in
Suggested Propos propos maxim achiev Chang For 23 Remo	IRemedy se adding a rov sed of 0.0 dB. (hum Channel In red by narrowin je 13 dB into 15 dB max chann ve 18 dB class.	v in Table wi Change the v Isertion Loss Ig the transm 5 dB for max nel insertion	ith a minimum Ch value of 6.3 dB in s. The maximum nit power range u c channel insertio loss, its min valu	annel Insertion Lo Draft to a new va Channel insertion sed for 6.3 dB. n loss, its min is 0 e is 10 dB.	oss with a value lue of 9.0 dB for loss of 9 dB can dB.	
<i>Response</i> ACCE Refer	PT IN PRINCIF to #29	Respon PLE.	se Status C			
C/ 160	SC Table 1	60-7	P 98	L 53	# 36	
Luo, Yuan	iqiu		Futurewei			
Comment In Tab BR20- Suggested Propo	<i>Type</i> TR le 160-7, row "(U value should <i>Remedy</i>	<i>Comm</i> Outer Optica I be about 50	ent Status A al Modulation Am dB lower than tha	plitude (OMAoute t of the 50GBASE	r)(min)", the 50GB -BR40-U value.	<i>SV</i> BASE-
	se to change th	ne OMAouter	r(min) value of 50	GBASE-BR20-U	from "3.4" into "-1	.5".

ACCEPT.

C/ 160 SC Table 160-7 Page 11 of 11 11/13/2019 7:41:05 PM