C/ 145 SC 145 Stover, David	P Analog Devices	L s Inc.	# i-314	CI 33 S Thompson, Ge	C 33.5.1 offrey	P 0 Individual	L 0	# i-349
Comment Type G	Comment Status A		Editorial	Comment Type	ER	Comment Status R		Management
Punctuation usage in a period, others do no	equation variable definitions is in out.	nconsistent.	Some definitions end in			ld seem to be a requirement t to cl. 33 for additional require		. 145 devices but I find
SuggestedRemedy				SuggestedRem	ledy			
Consistently use or o	mit periods on equation variable	definitions, p	er style guidelines.			o cl. 145 (preferred) or put in s		
Response	Response Status C					nplete req'ts for a PSE (and P nd specify which ones.	D?) and you ha	ve to read all of cl. 33 to
ACCEPT.				Response		Response Status C		
C/ 30 SC 30	Р	L	# i-476	REJECT.				
Darshan, Yair				We have a	dded a sen	tence to the beginning of clau	se 33 that notes	s that requirements
Comment Type T Who is generating the	Comment Status R e SNMP MIBs based on clause 3	30?	Yair's Checklist		"PSE" in cl	ause 33 refer only to Type 1 a		
SuggestedRemedy Group to discuss.								
Response REJECT.	Response Status C							
This comment is out	of scope.							
2013 'IEEE Standard this time there has be	not relate to the IEEE P802.3bt d for Management Information Ba een no proposal to update the DT interested in doing so should fo	ise (MIB) Def FE Power via	initions for Ethernet.'. At MDI SNMP MIB in IEEE					

IEEE 802.3. It should be noted that the IEEE P802.3.2 YANG Data Model Definitions Task Force http://www.ieee802.org/3/cf/> is working on a YANG Data Model Definitions for

DTE Power via MDI.

Pa **0** Li **0**

Cl Patents SC Patents Crayford, Ian	P 3 Network Ger	L 46 neration L	# [i-316	of the IEE <https: st<br="">suggestion Patent Co</https:>
<i>Comment Type</i> GR *** Comment submitte attached ***	Comment Status R ed with the file 94180000003-	802.3bt - Crayfor	rd Ballot Comments.xl	IP
The use of PoE has b Entities), otherwise kr Two in particular, Chri group of companies ir Since 802.3bt increas utilize PoE in many ne What assurances hav property that relates to	ment regarding Intellectual Pr een the subject of multiple lit iown as "Patent Trolls". mar Systems and Network 1. In the Ethernet industry who sl es the available power, this w aw applications. In been made by companies of a 802.3bt (by at least Chrima of terms can be secured?	igations from NP , have litigated ag hip products that vill no doubt attra who believe they	gainst a significant implement PoE. ct new companies to have intellectual	Comment Typ Chair note section (a change ha required to SuggestedRei remove th Response REJECT.
SuggestedRemedy				REJECT.
Issue a much stronge infringement of Intelle	r warning indicating the use c ctual Property,	of 802,3bt may re	sult in alleged	The updat
Response REJECT.	Response Status W			C/ 1 Stewart, Heath
				Comment Typ
respect to the two hole	sting an LOA for the IEEE Pa ders of potentially essential p lders of potentially essential	atent claims nam	ned in this comment, a	as The existin This defin
project.				Existing d

The IEEE is not responsible for: (a) identifying Essential Patent Claims for which a license may be required; (b) determining the validity, essentiality, or interpretation of Patent Claims; or (c) determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance, if any, or in any licensing agreements are reasonable or non-discriminatory; or (d) determining whether an implementation is a Compliant Implementation. See subclause 6.2 'Policy' of the IEEE-SA Standards Board Bylaws <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6.2>.

Discussion or other communications regarding: (a) the status or substance of ongoing or threatened litigation; and (b) the essentiality, interpretation, or validity of Patent Claims; is prohibited during IEEE-SA standards-development meetings or other duly authorized IEEE-SA standards-development technical activities. See subclause 6.2 'Policy' of the IEEE-SA Standards Board Bylaws http://standards.ieee.org/develop/policies/bylaws/sect6- 7.html#6.2> and subclause 5.3.10.2 'Discussion of litigation, patents, and licensing' of the IEEE-SA Standards Board Operations Manual

<https://standards.ieee.org/develop/policies/opman/sect5.html#5.3.10.2>.

SORT ORDER: Page, Line

The text contained in the 'Notice and Disclaimer of Liability Concerning the Use of IEEE Standards Documents' in respect to patents is mandated by subclause 6.3.1 'Public notice' EE-SA Standards Board Operations Manual standards.ieee.org/develop/policies/opman/sect6.html#6.3.1> and as such ons for change to this text should be directed to the IEEE-SA Standards Board Committee Administrator at <patcom@ieee.org>.

C/ 1	SC 1.4.254	P 24	L 30	# <u>i-345</u>
Jones, Cha	d	Cisco System	ns, Inc.	
Comment 7	ype ER	Comment Status R		Definitions

tes... before the clause split, we found it necessary to change the definition of link (and the modification has evolved). With the clause split, our rationale for the has disappeared AND I'm not sure it in scope of the PAR (is the definition change to enable 4P operation or add 10G).

emedy

the editoral instructions for 1.4.254

Response Status C

ated definition is used to clarify 4P use cases with respect to midspans.

C/ 1	SC 1.4.313a	P 24	L 35	# i-260
Stewart,	Heath	Analog Devic	ces Inc.	
^		0		

Comment Type	TR	Comment Status A	Definitions

ting definition of pairset is PSE centric but is repeatedly referenced by the PD. nition should be made bi-modal.

definition for pairset:

Either of the two valid 4-conductor connections, Alternative A or Alternative B, as listed in IEEE 802.3. 145.2.4

SuggestedRemedy

Append:

The PSE Alternate A and Alternate B connections are referred to as Mode A and Mode B. respectively, at the PD.

Response Response Status C

ACCEPT IN PRINCIPLE.

Append:

The PSE Alternative A and Alternative B connections are referred to as Mode A and Mode B, respectively, at the PD.

TYPE: TR/technical required ER/editorial required GR/gene	ral required T/technical E/editorial G/general	Pa 24	Page 2 of 134
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	Li 35	9/15/2017 11:41:03 AM

. <u> </u>									
C/ 1 SC 1.4.338	P 24	L 39	# i-2			SC 1.4.417	P 25	L 5	# i-255
Anslow, Peter	Ciena Corpor	ration			Lukacs, Miklos		Silicon Labor	atories	
Comment Type E IEEE Std 802.3bu-2016 h	Comment Status A as modified 1.4.338.		E	ditorial	Comment Type words "por	e E ver level" ar	Comment Status R e missing		Editoria
SuggestedRemedy					SuggestedRer	nedy			
	0	``````````````````````````````````````		2016)	"A PĎ that Layer clas classificati	sification, su	ass 4 power level during Phy pports Multiple-Event Classi		ta Link Layer
ACCEPT IN PRINCIPLE.					Response		Response Status C		
Change the editing instrue	ction to "Change 1.4.338	(as modified by	IEEE Std 802.3bu-	2016)	REJECT.				
as follows:" 	P 24	L 41	# i-344		There is n	o need for th	e words "power level".		
Jones, Chad	Cisco Systen		# i-344			C 1.4.417	P 25	L 6	# i-261
Comment Type TR	Comment Status A		Defi	initions	Stewart, Heath		Analog Devic	es Inc.	
Chair notes the definitio	n of PSE needs to include	e 2.5-10G			Comment Type	E	Comment Status A		Definitions
SuggestedRemedy change: intended to provi to: intended to provide a sing 5GBASE-T, or 10GBASE	le 10BASE-T, 100BASE- T device				a verb. A PD that Classificat SuggestedRer	requests Cla ion and Data nedy	e does not quite work with the ass 4 during Physical Layer of a Link Layer classification (se "Data Link Layer"	lassification, su	upports Multiple-Event
•	Response Status C				Response		Response Status C		
ACCEPT IN PRINCIPLE.						N PRINCIPI	,		
Change to:					Replace w	ith.			
1.4.338 Power Sourcing E power to a single link sec balanced twisted-pair PH' PHYs, (see IEEE Std 802 provide a single 10BASE- 10GBASE-T device with a process these data. When IEEE Std 802.3, Clause 1 or 1000BASE-T1 device v to process these data. A to as a PoDL PSE.	tion. PSEs are defined for fs. When used with 2 or 4 .3, Clause 33 or Clause 1 T, 100BASE-TX, 1000BA a unified interface for both n used with single balance 04), DTE powering is inter vith a unified interface for	r use with two di 4 pair balanced (45), DTE power SE-T, 2.5GBAS the data it requed twisted-pair (ended to provide both the data it	fferent types of twisted-pair (BASE ring is intended to E-T, 5GBASE-T, o ires and the power BASE-T1) PHYs (s a single 100BASE requires and the po	-T) or to see -T1 ower	"A PD that	requests C	ass 4 during Physical Layer ports Data Link Layer classif		

Pa **25** Li **6**

2/ 1 SC 1.4.418aa P 25 L 15 # [i-256	Cl 25 SC 25 P 29 L 1 # i-24
ukacs, Miklos Silicon Laboratories	Yseboodt, Lennart Philips Lighting
Comment Type E Comment Status R Editor	Comment Type ER Comment Status A Editor
words "power level" are missing	In Clause 25 we use the construct "Type 2 or greater PD/PSE".
uggestedRemedy	Everywhere else in the draft we use "Type 2, Type 3, or Type 4".
change the sentence to: "A PD that requests Class 1 to Class 6 power level during Physical Layer classification, implements	Potentially, 'or greater' could be misunderstood to refer to power level, rather than Type number.
Multiple-Event classification, and accepts power on both Modes simultaneously. (See IEEI 802.3,	SuggestedRemedy Replace the construct 'Type 2 or greater' by 'Type 2, Type 3, or Type 4' in Clause 25.
Clause 145).	Response Response Status W
Pesponse Response Status C	ACCEPT.
REJECT.	C/ 25 SC 25.4.5 P 29 L 29 # i-206
There is no need for the words "power level".	Mcclellan, Brett Marvell Semiconducto
X 1 SC 1.4.418ac P 25 L 22 # [i-257] ukacs, Miklos Silicon Laboratories Silicon Laboratories Silicon Laboratories	Comment Type ER Comment Status R Editor link parameters are specified in 25.4.9 not 25.4.8
Comment Type E Comment Status R Editor	SuggestedRemedy
words "power level" are missing	change "25.4.8" to "25.4.9"
uggestedRemedy	Response Response Status W
change the sentence to:	REJECT.
"A PD that requests Class 7 or Class 8 power level during Physical Layer classification, implements Multiple-Event classification, is capable of Data Link Layer classification, and accepts	This comment is out of scope. The commenter is encouraged to file a maintenance request.
power on both Modes simultaneously. (See IEEE 802.3, Clause 145).	C/ 30 SC 30.9.1.1 P 35 L 8 # [i-350
Pesponse Response Status C	Thompson, Geoffrey Individual
REJECT.	Comment Type TR Comment Status A Manageme
There is no need for the words "power level".	It would appear that all of the strikethrough in this clause is incorrect as it constitutes a change to cl. 33. It is easily possible that the affected text could be improved but it is not proper to remove.
	SuggestedRemedy
	Restore stricken text in 30.9.1.1. Consider improvements to the text.
	Response Response Status C
	ACCEPT.

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C/ 30 SC 30.9.1.1.1 Anslow, Peter	P 35 Ciena Corpora	L 11	# [i-3	<i>CI</i> 30 Yseboodt,	SC 30.9.1.1. 1		5 s Lighting	L 24	# i-26
Comment Type E aPSEAdminState is 30.9 respect). Same issue for what is sl	Comment Status A .1.1.2 not 30.9.1.1.1 (the ec	liting instructior	<i>Editorial</i> n is correct in this	Comment TOPIC we sp	<i>Type</i> TR C: Clause 33 mar lit Clauses. This r	Comment Status nagement. We delete required updates in C	A ed subclause Clause 30.		Management of the PSE Enable bit
SuggestedRemedy Re-number 30 9 1 1 1 th	rough 30.9.1.1.8 to be 30.9.	1 1 2 through 3	09119		ied in 33.5.1.1.6.				
Response ACCEPT.	Response Status C			"For T	strikeout and cha			se 35 GMII is	s present, then this will
Cl 30 SC 30.9.1.1.1 Yseboodt, Lennart	P 35 Philips Lighting	L 11 9	# i-25	Response ACCE		Response Status	w		
Comment Type ER The subclause numbering	Comment Status A g of aPSEAdminState is wr	ong. Needs to I	<i>Editorial</i> be 30.9.1.1.2.	<i>Cl</i> 30 Yseboodt,	SC 30.9.1.1.2		5 s Lighting	L 37	# i-27
numbering] SuggestedRemedy	ent the other Clause 30 cor subclause number 30.9.1.1.		ll change all the		C: Clause 33 mar	Comment Status nagement. We delete required updates in C	d subclause	33.5 and th	Managemen en re-instated it when
	Response Status C				lause 22 MII or C bit specified in 3	Clause 35 GMII is pre 3.5.1.2.12"	sent, then th	nis will map t	to the Pair Control
	rough 30.9.1.1.8 to be 30.9.	1.1.2 through 3	0.9.1.1.9	"For T	strikeout and cha				s present, then this will
C/ 30 SC 30.9.1.1.1 Thompson, Geoffrey	P 35 Individual	L 21	# i-351	Response ACCE		Response Status	W		
Comment Type TR Reference to control regi	Comment Status R sters in cl. 145 is missing.		Management						
SuggestedRemedy Add reference to cl. 145	after the reference to cl. 33.								
Response REJECT.	Response Status C								
The reference cannot be clause 145 to point to.	added as there are no com	ment remedies	that create a section of						

Pa **35** Li **37**

C/ 30 SC 30.9.1.1.3	P 36	L 7	# i-28	C/ 30	SC 30.9.1.1.		36 na Linktin r	L 32	# i-29
Yseboodt, Lennart	Philips Lighting			Yseboodt, Le	nnart	Phili	ps Lighting		
Comment Type TR	Comment Status A		Management	Comment Ty	pe TR	Comment Status	6 A		Managemer
	ement. We deleted subclau uired updates in Clause 30.	se 33.5 and th	en re-instated it when			nagement. We delet required updates in		33.5 and the	en re-instated it when
"If a Clause 22 MII or Clause specified in 33.5.1.1.4."	use 35 GMII is present, then	this will map	to the Pair Control bits		se 22 MII or (in 33.5.1.2.1		esent, then thi	is will map t	to the PSE Status bits
SuggestedRemedy				SuggestedRe	emedy				
Undo strikeout and chang "For Type 1 or Type 2 PS map to the Pair Control bi	Es, if a Clause 22 MII or Cla	use 35 GMII is	s present, then this will	"For Type				e 35 GMII is	s present, then this will
Response	Response Status W			Response		Response Status	W		
ACCEPT.				ACCEPT					
C/ 30 SC 30.9.1.1.4	P 36	L 15	# i-262	C/ 30	SC 30.9.1.1.	5 P:	37	L 4	# i <u>-</u> 462
Stewart, Heath	Analog Devices	Inc.		Darshan, Yai	r				
	Comment Status A		Pres: Darshan5	Comment Ty	pe T	Comment Status	6 A		Managemen
Comment Type TR									
It is unclear how the dispa powered and the seconda SuggestedRemedy Either remove support for	arate SISM states will be des rry is searching, what will the dual-signature PDs or comp	e returned stat	e value be?	aPSEPo "deliverin This varia	verPairsCont gPower" isn't able is defined	is only valid while a rolAbility reporting th an enumeration valu d in page 35 line 27. rong variable to use l	e enumeration ue of variable	n "delivering	
It is unclear how the dispar powered and the seconda SuggestedRemedy Either remove support for standard.	arate SISM states will be des ary is searching, what will the dual-signature PDs or comp	e returned stat	e value be?	aPSEPo "deliverin This varia	verPairsCont gPower" isn't able is defined able is the wr	rolAbility reporting th an enumeration valu d in page 35 line 27.	e enumeration ue of variable	n "delivering	Power",
It is unclear how the dispar powered and the seconda SuggestedRemedy Either remove support for standard. Response	arate SISM states will be des ry is searching, what will the	e returned stat	e value be?	aPSEPo "deliverin This varia This varia SuggestedRe	verPairsCont gPower" isn't able is defined able is the wr emedy	rolAbility reporting th an enumeration valu d in page 35 line 27.	e enumeratior ue of variable here.	n "delivering 'aPSEPowe	jPower", erPairsControlAbility'.
It is unclear how the dispar powered and the seconda SuggestedRemedy Either remove support for standard.	arate SISM states will be des ary is searching, what will the dual-signature PDs or comp	e returned stat	e value be?	aPSEPor "deliverin This varia This varia SuggestedRe Change f aPSEPor To: "This	verPairsCont gPower" isn't able is defined able is the wr emedy rom: "This va verPairsCont s value is only	rolAbility reporting th an enumeration value d in page 35 line 27. ong variable to use l alue is only valid whi rolAbility reporting th valid while a PD is	e enumeration ue of variable here. le a PD is beir e enumeration being powered	n "delivering 'aPSEPowe ng powered, n "delivering d, that is the	pPower", erPairsControlAbility'. , that is the attribute pPower" e attribute
It is unclear how the dispa powered and the seconda SuggestedRemedy Either remove support for standard. Response ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	arate SISM states will be des ary is searching, what will the dual-signature PDs or comp	e returned stat	e value be?	aPSEPor "deliverin This varia This varia SuggestedRe Change f aPSEPor To: "This	verPairsCont gPower" isn't able is defined able is the wr emedy rom: "This va verPairsCont s value is only	rolAbility reporting th an enumeration valu d in page 35 line 27. ong variable to use l alue is only valid whi rolAbility reporting th	e enumeration ue of variable here. le a PD is beir e enumeration being powered enumeration "o	n "delivering 'aPSEPowe ng powered, n "delivering d, that is the	pPower", erPairsControlAbility'. , that is the attribute pPower" e attribute

Pa **37** Li **4**

C/ 30 SC 30.9.1.1.5 P 37 L 5 # i-30 Yseboodt, Lennart Philips Lighting	C/ 30 SC 30.9.1.1.7 P 37 L 25 # i-263 Stewart, Heath Analog Devices Inc. # i-263
comment Type TR Comment Status A Ma	nagement Comment Type TR Comment Status A Pres: Da
TOPIC: Clause 33 management. We deleted subclause 33.5 and then re-instated we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the PD Class specified in 33.5.1.2.10."	s bits counter is incremented when the PSE state diagram (Figure 33-9) enters the state
uggestedRemedy	POWER_DENIED.
Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then map to the PD Class bits specified in 33.5.1.2.10."	"(Figure 33-9) enters the state POWER_DENIED"
Response Response Status W ACCEPT.	to "(Figure 33-9, Figure 145-13, Figure 145-15, or Figure 145-16) enters the state POWER_DENIED, POWER_DENIED_PRI, or POWER_DENIED_SEC" Option 2 Change
C/ 30 SC 30.9.1.1.6 P 37 L 18 # [i-31] /seboodt, Lennart Philips Lighting	when the PSE" to "when the Type 1 and Type 2 PSE"
Comment Type TR Comment Status A Ma	nagement _
	Response Response Status C
TOPIC: Clause 33 management. We deleted subclause 33.5 and then re-instated we split Clauses. This required updates in Clause 30.	Response Response Status C
	it when ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6."	it when ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6."	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ignature Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33. this will C/ 30 SC 30.9.1.1.7 P 37 L 30 # i-32
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6." <i>uggestedRemedy</i> Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then map to the Invalid Signature bit specified in 33.5.1.2.6."	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. agnature Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33. this will C/ 30 SC 30.9.1.1.7 P 37 L 30 # i-32 Yseboodt, Lennart Philips Lighting
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6." <i>suggestedRemedy</i> Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then map to the Invalid Signature bit specified in 33.5.1.2.6."	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ignature Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33. this will C/ 30 SC 30.9.1.1.7 P 37 L 30 # i-32
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6." <i>uggestedRemedy</i> Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then map to the Invalid Signature bit specified in 33.5.1.2.6." <i>Response</i> <i>Response Status</i> W	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ignature Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33. This resolution is identical to comment #33. this will C/ 30 SC 30.9.1.1.7 P 37 L 30 # i-32 Yseboodt, Lennart Philips Lighting Comment Type TR Comment Status TOPIC: Clause 33 management. We deleted subclause 33.5 and then re-instated it w
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6." <i>SuggestedRemedy</i> Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then map to the Invalid Signature bit specified in 33.5.1.2.6." <i>Response</i> <i>Response Status</i> W	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ignature Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33. This resolution is identical to comment #33. this will C/ 30 SC 30.9.1.1.7 P 37 L 30 # [-32] Yseboodt, Lennart Philips Lighting Comment Type TR Comment Status TOPIC: Clause 33 management. We deleted subclause 33.5 and then re-instated it w we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Power Denied
we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Invalid S bit specified in 33.5.1.2.6." SuggestedRemedy Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then map to the Invalid Signature bit specified in 33.5.1.2.6." Response Response Status W	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ignature Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33. this will C/ 30 SC 30.9.1.1.7 P 37 L 30 # [-32] Yseboodt, Lennart Philips Lighting Comment Type TR Comment Status TOPIC: Clause 33 management. We deleted subclause 33.5 and then re-instated it w we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Power Denies specified in 33.5.1.2.4."

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C/ 30 SC 30.9.1.1.8 P 37 L 35 # i-33 Yseboodt, Lennart Philips Lighting	C/ 30 SC 30.9.1.1.8 P 37 L 43 # i-34 Yseboodt, Lennart Philips Lighting
Comment Type TR Comment Status A Pres: Darshan5 This object was modified to work with Clause 145, but was not updated after the Clause split. "This counter is incremented when the PSE state diagram (Figure 145-13, Figure 145-15, and Figure 145-16) enters the state ERROR_DELAY, ERROR_DELAY_PRI, or ERROR_DELAY_SEC." SuggestedRemedy Replace by: "For Type 1 and Type 2 PSEs, this counter is incremented when the PSE state diagram in Figure 33-9 enters the state ERROR_DELAY. For Type 3 and Type 4 PSEs, this counter is incremented when the PSE state diagram in Figure 145-13, Figure 145-15, and Figure 145-16 enters the state ERROR_DELAY, ERROR_DELAY, ERROR_DELAY, ERROR_DELAY, ERROR_DELAY, PRI, or ERROR_DELAY_SEC."	Comment Type TR Comment Status A Management TOPIC: Clause 33 management. We deleted subclause 33.5 and then re-instated it when we split Clauses. This required updates in Clause 30. "If a Clause 22 MII or Clause 35 GMII is present, then this will map to the Overload bit specified in 33.5.1.2.8." SuggestedRemedy Undo strikeout and change to: "For Type 1 or Type 2 PSEs, if a Clause 22 MII or Clause 35 GMII is present, then this will map to the Overload bit specified in 33.5.1.2.8." Response Response Status W ACCEPT. ACCEPT.
Response Response Status C ACCEPT IN PRINCIPLE. Adopt changes shown in Darshan_05_0917_final.pdf	Cl 30 SC 30.9.1.1.10 P 37 L 47 # i-4 Anslow, Peter Ciena Corporation Editorial Comment Type E Comment Status A
Cl 30 SC 30.9.1.1.8 P 37 L 41 # i-264 Stewart, Heath Analog Devices Inc. Pres: Darshan5 Comment Type E Comment Status A Pres: Darshan5 The reference to Figure 33-9 has been accidentally deleted. SuggestedRemedy Change "(Figure 145-23, " to "(Figure 33-9, Figure 145-13, " Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. A C A C	Firstly, is confusing to have nested editing instructions. Secondly, when 30.9.1.1.10 is deleted, what was previously 30.9.1.1.11 becomes 30.9.1.1.10. There are examples of this situation in previously published amendments. See IEEE Std 802.3bj-2014 subclause 69.1.2 SuggestedRemedy Change the editing instruction on page 35, line 9 to "Change 30.9.1.1.2 through 30.9.1.1.9 as follows:" Leave the "Delete" editing instruction on page 37, line 47 as it is. Add an editing instruction for "aPSEMPSAbsentCounter" of: "Change 30.9.1.1.10 (re- numbered from 30.9.1.1.11 by the deletion of 30.9.1.1.10 above) as follows:" Renumber the heading for "aPSEMPSAbsentCounter" to 30.9.1.1.10
Adopt changes shown in Darshan_05_0917_final.pdf This resolution is identical to comment #33.	Response Response Status C ACCEPT.

Pa **37** Li **47**

C/ 30	SC 30.9.1.1.	11	P 38	L 2	# i-265	C/ 30	SC	30.9.1.1.1 ⁻	1 <i>P</i> 38	L 3	#	i-35
Stewart, He	eath		Analog Devic	ces Inc.		Yseboodt,	Lenna	t	Philips I	_ighting		
Comment T	ype TR	Comme	nt Status A		Pres: Darshan5	Comment	Туре	TR	Comment Status	۱		Managemen
	ces. It is not cle				2 state machine be 3 and Type 4 should				agement. We deleted a equired updates in Cla		d then re-ins	tated it when
Current This co	lly: unter is increm				45-13, Figure 145- _DELAY_PRI, or	specif	ied in 3	3.5.1.2.9."	ause 35 GMII is prese	nt, then this will m	ap to the MP	S Absent bit
	R_DELAY_SEC		State ENNON_D	LEAT, LINCOR		Suggeste		,				
SuggestedF Option	R <i>emedy</i> 1 Change					"For T	ype 1 c		nge to: SEs, if a Clause 22 M bit specified in 33.5.1		III is present	, then this will
	ions directly fro timer_done bei		POWER_ON to	the state IDLE c	lue to	Response ACCE			Response Status V	v		
"transiti POWEI tmpdo_	R_ON_PRÍ, or _timer_done_pri	POWER_O		ate IDLE due to	SEMI_PWR_SEC, tmpdo_timer_done,	C/ 30 Thompsor		30.9.2 rey	P 38 Individu	L 19 al	#	i-352
"when t to	2 Change he PSE" he Type 1 and	Type 2 PSF	-"			<i>Comment</i> Comn		TR out of the s	Comment Status F cope of the project.	2		Managemen
Response			e Status C			Suggestee	dReme	dy				
ACCEP ACCEP	PT IN PRINCIPI PT IN PRINCIPI changes shown	, _E. _E.	_05_0917_final.p	odf		Delete <i>Response</i> REJE)	ie in the dra	aft Response Status (;		
This res	solution is ident	ical to com	ment #33.			Voter' 802.3		ern is actua	lly controlled by 802.3	.1. Further, that of	bject does no	ot appear in
						C/ 30 Stewart, H		30.12.2.1.3		L 30 Devices Inc.	#	i-266
						Comment Goog		E not think C	Comment Status	N .		Managemen
						Suggester Chang		,	Controllable			
						Response ACCE			Response Status	;		

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Cl 30 SC 30.12.2.1.9 Thompson, Geoffrey	P 38 Individual	L 53	# i-353	<i>Cl</i> 30 Anslow, Pe	SC 30.12	2.2.1.18a	P 40 Ciena Corpo	L 27 ration	# i-5
Comment Type TR Missing a syntax value fe	Comment Status R or "Both"		Management	Comment 7 The las			ent Status A .12.2.1.18z15 not	30.12.2.1.18z12	Managemer
SuggestedRemedy				Suggestedl	Remedy				
Add enumeration for "Bo	th" plus apprpriate expansio	n of the "BEHA	VIOUR".	In the e	editing instru	ction change "	30.12.2.1.18z12"	to "30.12.2.1.18	z15"
Response REJECT.	Response Status C			Response ACCEF	PT.	Respon	se Status C		
We cannot change this f Type 2 PDs.	ield without breaking backwa	ards compatibilit	y with Type 1 and	C/ 30 Law, David	SC 30.12	2.2.1.18a	P 40 Hewlett Pack	L 34 ard Enter	# i-317
C/ 30 SC 30.12.2.1 Thompson, Geoffrey	P 40 Individual	L	# i-355		format the	FALSE' and 'T			Managemer graphs. See IEEE Std
Comment Type E I don't understand why e	Comment Status A ach attribute has a "regular"	version and a lo	Management	Suggested	Remedy	use 30.12.2.1.	20 aLldpXdot3Loc	Ready for an ex	isting example.
SuggestedRemedy Please explain.				Response	omment.	Respon	se Status C		
Response	Response Status C			ACCEF	21.				
ACCEPT IN PRINCIPLE				C/ 30	SC 30.12	2.2.1.18b	P 40	L 50	# <u>i</u> -318
Accepting this comment	results in no changes to the	draft.		Law, David			Hewlett Pack	ard Enter	
Explanation requested: One is to manage PSEs	one is to manage LLDP DL	L.		Comment 7 Please 802.3-2	format the	FALSE' and 'T	ent Status A RUE' description 20 aLldpXdot3Loc	as hanging para Ready for an ex	Managemer graphs. See IEEE Std isting example.
C/ 30 SC 30.12.2.1.1 Thompson, Geoffrey	8 P 40 Individual	L 18	# i-354	Suggestedl See co	<i>Remedy</i> omment.				
Comment Type TR There is no enumeration	Comment Status R defined for "unknown" or "ne	ot supported".	Management	Response ACCEF	PT.	Respon	se Status C		
SuggestedRemedy Define the value -1 as in	dicating "unknown" or "not s	supported".							
Response	Response Status C								

Pa **40** Li **50**

C/ 30 SC 30.12.2.1.18i P 42 L # [i-319] Law, David Hewlett Packard Enter Hewlett Packard Enter Hewlett Packard Enter	C/ 30 SC 30.12.2.1.18k P 42 L 3 # [i-322 Law, David Hewlett Packard Enter
Comment Type TR Comment Status A Pres: Yseboodt	4 Comment Type TR Comment Status A Pres: Yseboodt4
The aLldpXdot3LocPowerClassxA, aLldpXdot3LocPowerClassxB, aLldpXdot3RemPowerClassxA and aLldpXdot3RemPowerClassxB attributes don't seem to map to any of the TLV fields defined in subclause 79.3.2 or its subclauses.	There are no attributes provided in the subclause 30.12.2 'LLDP Local System Group managed object class' or subclause 30.12.3 'LLDP Remote System Group managed object class' for the TLV fields 'Dual-signature power Classx Mode A' and 'Dual-signature power Classx Mode B'.
SuggestedRemedy	SuggestedRemedy
Suggest that:	Suggest that:
 [1] Delete attributes aLldpXdot3LocPowerClassxA (subclause 30.12.2.1.18i, page 42, line 22), aLldpXdot3LocPowerClassxB (subclause 30.12.2.1.18j, page 42, line 33), aLldpXdot3RemPowerClassxA (subclause 30.12.3.1.18g, page 51, line 29) and aLldpXdot3RemPowerClassxB (subclause 30.12.3.1.18h, page 51, line 41). [2] Remove entries for aLldpXdot3LocPowerClassxA, aLldpXdot3LocPowerClassxB, aLldpXdot3RemPowerClassxA and aLldpXdot3RemPowerClassxB from Table 30-7 'LLDP capabilities' (page 32, line 38). 	[1] The following new attributes are added in the LLDP local (aLldpXdot3LocDualSigPowerClassxModeA and aLldpXdot3LocDualSigPowerClassxModeB) and remote (aLldpXdot3RemDualSigPowerClassxModeA and aLldpXdot3RemDualSigPowerClassxModeB) managed object class to support the TLV fields 'Dual-signature power Classx Mode A' and 'Dual-signature power Classx Mode B'.
Response Response Status C	
ACCEPT IN PRINCIPLE.	aLldpXdot3LocDualSigPowerClassxModeA
These entries have been mapped to the TLV fields in yseboodt_04_0917_LLDP.pdf which has been adopted.	APPROPRIATE SYNTAX: An ENUMERATED value list that has the following entries: singleSignature Single-signature PD class5 Class 5 class4 Class 4 class3 Class 3 class2 Class 2 class1 Class 1 BEHAVIOUR DEFINED AS: If the local system is a PD, a read-only value that indicates if it is a single-signature PD, or for a dual-signature PD, the requested Class for Mode A during Physical Layer Classification (see 145.3.6). If the local system is a PSE, a read-only value that indicates if it has detected a single-signature PD, or if it has detected a dual-signature PD, the assigned Class for Alternative A (see 145.2.7).
	aLldpXdot3LocDualSigPowerClassxModeB
	ATTRIBUTE
	APPROPRIATE SYNTAX: The same as used for aLldpXdot3LocDualSigPowerClassxModeA.
	BEHAVIOUR DEFINED AS:
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open 1	5

SORT ORDER: Page, Line

If the local system is a PD, a read-only value that indicates if it is a single-signature PD, or for a dual-signature PD, the requested Class for Mode B during Physical Layer Classification (see 145.3.6). If the local system is a PSE, a read-only value that indicates if it has detected a single-signature PD, or if it has detected a dual-signature PD, the assigned Class for Alternative B (see 145.2.7).

power pairx' 'aLldpXdot3RemPowerPairsx' and the row 'Power classx' 'aLldpXdot3RemPowerClassx' in both tables.

'Dual-signature power Classx Mode A' 'aLldpXdot3RemDualSigPowerClassxModeA' 'Dual-signature power Classx Mode B' 'aLldpXdot3RemDualSigPowerClassxModeB'

Response

Response Status C

ACCEPT.

aLldpXdot3RemDualSigPowerClassxModeA

ATTRIBUTE

APPROPRIATE SYNTAX: The same as used for aLldpXdot3LocDualSigPowerClassxModeA.

BEHAVIOUR DEFINED AS:

If the remote system is a PD, a read-only value that indicates if it is a single-signature PD, or if it is a dual-signature PD, its requested Class for Mode A during Physical Layer Classification (see 145.3.6). If the remote system is a PSE, a read-only value that indicates if it has detected a single-signature PD, or if it has detected a dual-signature PD, its assigned Class for Alternative A (see 145.2.7).

aLldpXdot3RemDualSigPowerClassxModeB

ATTRIBUTE

APPROPRIATE SYNTAX:

The same as used for aLldpXdot3LocDualSigPowerClassxModeA.

BEHAVIOUR DEFINED AS:

If the remote system is a PD, a read-only value that indicates if it is a single-signature PD, or if it is a dual-signature PD, its requested Class for Mode B during Physical Layer Classification (see 145.3.6). If the remote system is a PSE, a read-only value that indicates if it has detected a single-signature PD, or if it has detected a dual-signature PD, its assigned Class for Alternative B (see 145.2.7).

[2] Mappings for two of the new attributes are added in Table 79-9 'IEEE 802.3 Organizationally Specific TLV/LLDP Local System Group managed object class cross references'. Suggest that the following two new entries are inserted between the row 'PSE power pairx' 'aLldpXdot3LocPowerPairsx' and the row 'Power classx' 'aLldpXdot3LocPowerClassx'.

'Dual-signature power Classx Mode A' 'aLldpXdot3LocDualSigPowerClassxModeA' 'Dual-signature power Classx Mode B' 'aLldpXdot3LocDualSigPowerClassxModeB'

[3] Mappings for two of the new attributes are added in Table 79-10 'IEEE 802.3 Organizationally Specific TLV/LLDP Remote System Group managed object class cross references'. Suggest that the following two new entries are inserted between the row 'PSE

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **42** Li **3** Page 12 of 134 9/15/2017 11:41:03 AM

C/ 30	SC 30.12.2.1.	18I <i>P</i> 43	L 6	# i-320
Law, David		Hewlett	Packard Enter	
Comment Typ	e TR	Comment Status A		Management

Comment Type TR Comment Status A

The behaviour defined for the attributes aLldpXdot3LocPowerTvpex and aLldpXdot3RemPowerTypex doesn't see to match the 'Power typex' TLV field that these attributes map to (see Table 79-9 and 79-10). Specifically, the behaviour doesn't include any reference to the single-signature and dual-signature values that Table 79-6d 'System setup field' defines for the 'Power typex' field. Rather than try to further expand the behaviour text to decode bits it would seem a better approach, since these are new attributes being added by IEEE P802.3bt, to change their syntax from 'BIT STRING ISIZE (4)]' to 'ENUMERATED value list'.

SuggestedRemedy

Suggest that:

[1] The 'APPROPRIATE SYNTAX:' text for the attributes aLldpXdot3LocPowerTypex and aLldpXdot3RemPowerTypex should be changed to read:

An ENUMERATED value list that has the following entries: type4dualPD Type 4 dual-signature PD type4singlePD Type 4 single-signature PD type3dualPD Type 3 dual-signature PD type3singlePD Type 3 single-signature PD type2PD Type 2 PD type1PD Type 1 PD Type 4 PSE type4PSE type3PSE Type 3 PSE type2PSE Type 2 PSE type1PSE Type 1 PSE

[2] The 'BEHAVIOUR DEFINED AS:' text for the attribute aLldpXdot3LocPowerTypex should be changed to read:

A read-only attribute that returns a value to indicate if the local system is a Type 1, Type 2, Type 3, or Type 4 PSE or PD, and in the case of a Type 3 or Type 4 PD, if it is singlesignature or dual-signature .;

[3] The 'BEHAVIOUR DEFINED AS:' text for the attribute aLldpXdot3RemPowerTypex (subclause 30.12.3.1.18), page 52, line 16) should be changed to read:

A read-only attribute that returns a value to indicate if the remote system is a Type 1, Type 2, Type 3, or Type 4 PSE or PD, and in the case of a Type 3 or Type 4 PD, if it is a singlesignature or dual-signature .:

Response Response Status W

ACCEPT IN PRINCIPLE.

Make following changes:

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

[1] The 'APPROPRIATE SYNTAX:' text for the attributes aLldpXdot3LocPowerTypex and aLldpXdot3RemPowerTypex should be changed to read:

An ENUMERATED value list that has the following entries: type4dualPD Type 4 dual-signature PD type4singlePD Type 4 single-signature PD type3dualPD Type 3 dual-signature PD type3singlePD Type 3 single-signature PD type2PD Type 2 PD Type 1 PD type1PD tvpe4PSE Type 4 PSE type3PSE Type 3 PSE type2PSE Type 2 PSE type1PSE Type 1 PSE

[2] The 'BEHAVIOUR DEFINED AS:' text for the attribute aLldpXdot3LocPowerTypex should be changed to read:

A read-only attribute that returns a value to indicate if the local system is a Type 1. Type 2. Type 3, or Type 4 PSE or PD, and in the case of a Type 3 or Type 4 PD, if it is a singlesignature PD or a dual-signature PD.;

[3] The 'BEHAVIOUR DEFINED AS:' text for the attribute aLldpXdot3RemPowerTypex (subclause 30.12.3.1.18), page 52, line 16) should be changed to read:

A read-only attribute that returns a value to indicate if the remote system is a Type 1, Type 2, Type 3, or Type 4 PSE or PD, and in the case of a Type 3 or Type 4 PD, if it is a singlesignature PD or a dual-signature PD.;

> Pa 43 Li 6

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<i>Cl</i> 79 Law, David	SC 79.3.2.6c	2 P 45 Hewlett Pac	L 45 kard Enter	# i-321	<i>CI</i> 30 Stewart, H	SC 30.12 eath	.3.1.8	P 48 Analog Devid	L 43 ces Inc.	#	i-267
of PD of	on Table 79-6d, or PSE, but there should always b <i>Remedy</i>	Comment Status A the 'power typex' field can a isn't a 'PD' or 'PSE' value. e placed in inverted comm	In addition, sugg		Suggested	e does not th <i>IRemedy</i> Je Controlable	nk Controlable e to Controllab	ent Status A e is a word			Management
field in	dicates a PD'	er typex is PD' should be at the following locations: page 79, line 45.	changed to read	I ' the "Power typex"	<i>Cl</i> 30 Anslow, Pe	SC 30.12 eter	.3.1.18a	P 50 Ciena Corpo	L 8 ration	#	i-6
Subcla Subcla	use 79.3.2.6c.3, use 79.3.2.6c.4,	page 79, line 53. page 80, line 51. -signature power Classx Mo	ada A fiald' sh	auld be changed to read		st inserted su	bclause is 30	ent Status A .12.3.1.18z13 not serted after 30.12			Editorial
' the Subcla	"Dual-signature use 79.3.2.6c.2,	page 79, line 45. page 79, line 45.			Also c	editing instru	.2.1.18" to "30		to "30.12.3.1.18	z13"	
[3] The	text ' the dual	-signature power Classx Mo power Classx Mode B" field			Response ACCE Cl 30	PT. SC 30.12		se Status C	/ 47	<i>µ</i>	
		page 79, line 53. page 80, line 45.			Thompson Comment	, Geoffrey		Individual ent Status A	L 17	#	i-356 Management
field in	dicates a PSE	er typex is PSE' should b ' at the following locations:	e changed to rea	ad ' the "Power typex"	Suggested	-					
Subcla <i>Response</i>	use 79.3.2.6c.3,	page 79, line 47. page 80, line 45. <i>Response Status</i> C				expand the ter PT IN PRINC	Respon	value in units of test to be status C	erm, see: 33.n oi	r 145.n."	
ACCEF	-1.				A read For a	l-only value th PSE this attri	oute contains	D AS text to: he supported PSE the value of the a s of this attribute a	PSEPowerPairs:		

Pa **51** Li **17**

C/ 30 Thompson, C	SC 30.12.3.1 Geoffrey	.18f	P 51 Individual	L 20	# i-357	Cl 30 SC 30.12.3.1.18j P 52 L 20 # i-358 Thompson, Geoffrey Individual
Comment Ty	ype TR		t Status A	h less how it ca	<i>Management</i> n be dsecribed by a	Comment Type E Comment Status A Management Description insufficiently precise.
BOOLEA			guiation 15, mac			Suggested Remedy
SuggestedRe Expand I the synta	BEHAVIOUR of	lescription s	o what it referend	ces is clear and	fully explain (repair?)	Change text to read: "The three most significant bits indicate the number of the Type in binary."
Response	T IN PRINCIPL	•	Status C			Response Response Status C ACCEPT.
Change	BEHAVIOR DE	EFINED AS	text to:			C/ 30 SC 30.12.3.1.18k P 52 L 30 # i-360 Thompson, Geoffrey Individual Individual
	attribute that ref ed in 79.3.2.6d		er the load of a d	ual-signature PD	is electrically isolated,	Comment Type E Comment Status A Management Definition is too terse. Syntax should probably be BOOLEAN. Management
Also, ch	ange BEHAVIC		OAS text in 30.1	2.2.1.18h to mat	ch.	SuggestedRemedy
	SC 30.12.3.1	.18j	P 52 Individual	L 20	# i-359	Expand BEHAVIOUR description so what it references is clear and fully explain (repair?) the syntax.
Comment Ty	ype E s a slightly diffe ason.		t Status A	nterpretation for	<i>Management</i> PSE vs. PD for no	Response Response Status C ACCEPT IN PRINCIPLE. Make 30.12.1.18k a BOOLEAN. Change behavior description to "A read-only boolean attribute indicating whether the remote PD system supports powering of both PD Modes."
	ntax the same	for PSE and	IPD.			C/ 30 SC 30.12.3.1.18m P 52 L 50 # i-361
Response		Response	Status C			Thompson, Geoffrey Individual
ACCEPT	T IN PRINCIPL	E.				Comment Type E Comment Status A Management
Delete la	ast two sentend	es of BEHA	VIOR DEFINED	AS text.		Definition is too terse. Perhaps the syntax should be BOOLEAN. In any case, if it is a bit string the value of one and zero should be defined.
Make sa	ame change in :	30.12.2.1.18	il.			SuggestedRemedy Expand BEHAVIOUR description so it is clear and fully explained.
						Response Response Status C ACCEPT IN PRINCIPLE.
						Make 30.12.1.18m a BOOLEAN. Change behavior description to "A read-only boolean attribute indicating whether the remote PSE system supports Autoclass."

Pa **52** Li **50**

<i>Cl</i> 30 Thompsor	SC 30.12.3	1.18n	P 53 Individual	L 8	# i-362	C/ 33 Yseboodt,	SC 33	3.2.1	P 61 Philips Lighting	L 25	# i-36		
Comment	· ·	Commei	nt Status A		Management	Comment		ER	Comment Status A	5	Ed		
string S <i>uggested</i>	the value of on dRemedy	e and zero sh	e syntax should b ould be defined. so it is clear and f		any case, if it is a bit	TOPIC: and/or The Chicago Manual of Style says the following about the use of 'and/or': "Avoid this Janus-faced term. It can often be replaced by 'and' or 'or' with no loss in meaning. Where it seems needed, try 'or or both'. But also think of other possibilities."							
Response ACCE	PT IN PRINCIF	,	e Status C						ble with 10BASE-T, 100BASE BBASE-T."	-TX, 1000BAS	E-T, 2.5GBASE-T,		
Make	30.12.1.18n a B	BOOLEAN. C	Change behavior of	description to "A	read-only boolean	Suggested	Remedy						
	ite indicating whurement."	ether the ren	note PSE system	has completed t	the Autoclass		can be c SE-T, or		ble with 10BASE-T, 100BASE SE-T."	-TX, 1000BAS	E-T, 2.5GBASE-T,		
CI 30	SC 30.12.3	1.18a	P 53	L 38	# i-363	Response			Response Status C				
	n, Geoffrey		Individual	- •••		ACCE	PT IN PR	INCIPL	Ε.				
Comment Incorre	51		nt Status A og and digital para	meter (i.e. meas	<i>Management</i> sure vs. count).				is designed to be compatible SE-T, 2.5GBASE-T, 5GBASE				
Suggested	dRemedy					C/ 33	SC 33	3.3.1	P 62	L 8	# i-258		
Chang	ge text to read:	"A GET attrib	oute that indicates	the number of s	seconds the"	Lukacs, M	iklos		Silicon Labora	tories			
Response	!	Response	e Status W			Comment	Туре	G	Comment Status A		Ge		
ACCE	PT.						confusin ers should		use Clause 145 is also part of ded.	THIS standard	d. Type 1 and Type 2		
						Suggested	Remedy						
						for Typ require	be 1 and	Type 2 om bot	ly Mode A or Mode B are spe PDs. PDs that simultaneously n Mode A and Mode B are sp PDs.	-	-		
						Response			Response Status C				
						ACCE	PT IN PR	INCIPL	E.				
						PDs th	nat impler	nent on	ly Mode A or Mode B are spe	cifically not all	wod by this standar		

Pa **62** Li **8**

Mcclellan,	Brott	P 64 Marvell Semi	L 34	# i-227	C/ 33 SC Zimmerman, Ge	33.4.9.1.1	P 6	5 htia, ADI, (L 27
Commont		Comment Status A		450		0	Comment Status		Comm
	ut is a time dom	ain peak to peak voltage but d_out isn't measured at indiv					bo, 33-48 should be		
Suggested	Remedy				SuggestedReme change 33-4				
chan "shal	ge text on line 3 [,] I not exceed the	a) and the text defining f and f 1 from: requirements Equation (33-1 0 mV peak-to-peak when me	7a)" (note the r		Response ACCEPT.		Response Status	С	
MHz a 100 M	nd shall not exce	eed 1mV peak-to-peak when E-T, 10 MHz to 250 MHz for s	measured in the	e band from 10 MHz to	Cl 33 SC Mcclellan, Brett	33.4.9.1.1	P 6 Marve	5 ell Semico	L 27 nducto
Response ACCE	PT	Response Status C			Comment Type typo, chang	ER e 33-48 to 33	Comment Status 3-18.	Α	
			1.0	<i></i>	SuggestedRem	ədy			
Cl 33 Anslow, Pe	SC 33.4.9.1	P 65 Ciena Corpor	L 3 ation	# i-7	change 33-4	48 to 33-18.			
Comment		Comment Status A		Editorial	Response		Response Status	w	
Firstly	, is confusing to	have nested editing instruction 4 is to be re-numbered it nee				PRINCIPLE			
Suggested	-				Ũ	ion is identic	al to commont #225		
Chang throug Chang	Remedy le the editing ins h 33.4.9.1.3 as f le the editing ins i.9.1.4 and re-nu	truction on page 65, line 3 to: follows:" truction on page 66, line 43 to imber it to 33.4.9.2 (re-numbe	"Change 33.4.9 026/07/2017 "Cl	9.1 and 33.4.9.1.1 hange the title and text	Ũ	ion is identica	al to comment #235		
Chang throug Chang of 33.4 as follo	Remedy le the editing ins h 33.4.9.1.3 as f le the editing ins i.9.1.4 and re-nu	follows:" truction on page 66, line 43 to	"Change 33.4.9 026/07/2017 "Cl	9.1 and 33.4.9.1.1 hange the title and text	Ũ	ion is identica	al to comment #235	i.	
Chang throug Chang of 33.4	Remedy le the editing ins h 33.4.9.1.3 as f le the editing ins l.9.1.4 and re-nu ows:"	follows:" truction on page 66, line 43 tr imber it to 33.4.9.2 (re-number	"Change 33.4.9 026/07/2017 "Cl	9.1 and 33.4.9.1.1 hange the title and text	Ũ	ion is identica	al to comment #235	i.	
Chang throug Chang of 33.4 as follo <i>Response</i> ACCE	Remedy le the editing ins h 33.4.9.1.3 as f le the editing ins l.9.1.4 and re-nu ows:"	follows:" truction on page 66, line 43 tr imber it to 33.4.9.2 (re-number	"Change 33.4.9 026/07/2017 "Cl	9.1 and 33.4.9.1.1 hange the title and text	Ũ	ion is identica	al to comment #235		
throug Chang of 33.4 as follo <i>Response</i>	IRemedy le the editing ins h 33.4.9.1.3 as f le the editing ins 4.9.1.4 and re-nu ows:" PT. SC 33.4.9.1	follows:" truction on page 66, line 43 to umber it to 33.4.9.2 (re-numbe Response Status C	Change 33.4.9 026/07/2017 "Clering the existing L 15	9.1 and 33.4.9.1.1 hange the title and text g 33.4.9.2 to 33.4.9.3)	Ũ	ion is identica	al to comment #235		
Chang throug Chang of 33.4 as follo Response ACCE C/ 33 Anslow, Pe Comment item 3	IRemedy le the editing ins h 33.4.9.1.3 as f le the editing ins i.9.1.4 and re-nu ows:" PT. SC 33.4.9.1 eter Type E	follows:" truction on page 66, line 43 to imber it to 33.4.9.2 (re-number <i>Response Status</i> C <i>P</i> 65 Ciena Corpor <i>Comment Status</i> A ed list is being re-numbered to	: "Change 33.4.9 o26/07/2017 "Cl ering the existing <i>L</i> 15 ation	9.1 and 33.4.9.1.1 hange the title and text g 33.4.9.2 to 33.4.9.3) # i-8 Editorial	Ũ	ion is identica	al to comment #235		
Chang throug Chang of 33.4 as follo <i>Response</i> ACCE <i>CI</i> 33 Anslow, Pe <i>Comment</i> item 3 item 2 <i>Suggested</i>	IRemedy le the editing ins h 33.4.9.1.3 as f le the editing ins 4.9.1.4 and re-nu ows:" PT. SC 33.4.9.1 eter Type E) in this numbered). This should be IRemedy	follows:" truction on page 66, line 43 to imber it to 33.4.9.2 (re-number <i>Response Status</i> C <i>P</i> 65 Ciena Corpor <i>Comment Status</i> A ed list is being re-numbered to	E "Change 33.4.9 026/07/2017 "Cl ering the existing <i>L</i> 15 ation o item 2) by the	9.1 and 33.4.9.1.1 hange the title and text g 33.4.9.2 to 33.4.9.3) # [i-8 <i>Editorial</i> deletion of the original	Ũ	ion is identica	al to comment #235		

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **65** Li **27**

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i-235

i-207

Editorial

C/33 SC 33.4.9.1.1 P 65 L 33 # [i-208] Mcclellan, Brett Marvell Semiconducto Marvell Semiconducto Marvell Semiconducto Marvell Semiconducto	Cl 33 Zimmormon	SC 33.4.9.1.1		65 antia, ADI,	L 43	# i-236			
	Zimmerman,	U U			Comm		AES		
Comment Type TR Comment Status A AES NEXT loss in 33-18 for PSE midspan is 40dB at 100MHz, however 2.5/5GBASE-T budgets 43dB for connectors. 2.5G and higher needs a separate equation. AES SuggestedRemedy SuggestedRemedy AES AES	Comment Type T Comment Status A NEXT loss on PSE midspan for 2.5G/5GBASE-T should be based on Category 5e, r Clause 40 requirements which predate Category 5e. (same change made in another comment in clause 145.4.9.1.1)								
line 25 change "2.5GBASE-T" to "1000BASE-T"	SuggestedR	emedy							
line 27 delete "For 5GBASE-T, NEXT loss for Midspan PSE devices shall meet the values	Change	"40" to "43" in e	equations 33-18						
determined by Equation (145-32) when measured for the transmit and receive pairs from 1 MHz to 250 MHz."	Response		Response Statu	5 C					
line 29 change "5GBASE-T" to "1000BASE-T" line 39 insert new paragraph "For 5GBASE-T, NEXT loss for Midspan PSE devices shall		Γ IN PRINCIPL Γ IN PRINCIPL							
meet the values determined by Equation (33-18aa) when measured for the transmit and receive pairs from 1 MHz to 100 MHz. For 5GBASE-T, NEXT loss for Midspan PSE devices shall meet the values determined by Equation (33-18aa) when measured for the transmit and receive pairs from 1 MHz to 250 MHz. For operation with 2.5GBASE-T and 5GBASE-T, for frequencies that correspond to calculated values greater than 65 dB, the requirement reverts to the minimum requirement of 65 dB." insert a new equation,(33-18aa), copied from (33-18) with accompanied 'NEXTconn' and 'f' definitions, except that "40" is changed to "43" esponse Response Status W ACCEPT IN PRINCIPLE. Line 25 change "2.5GBASE-T" to "1000BASE-T" line 27 delete "For 5GBASE-T, NEXT loss for Midspan PSE devices shall meet the values determined by Equation (33-XX) when measured for the transmit and receive pairs from 1 MHz to 250 MHz." line 29 change "5GBASE-T" to "1000BASE-T"	line 27 d determin MHz to 2 line 29 c line 39 ir meet the receive p devices s transmit 5GBASE requirerm insert a definitior	elete "For 5GB and by Equatior 250 MHz." hange "5GBAS sert new para(values determ pairs from 1 MH shall meet the and receive pa E-T, for frequen nent reverts to t new equation, ns, except that	n (33-XX) when me SE-T" to "1000BAS graph "For 2.5GBA ined by Equation (Iz to 100 MHz. For values determined irs from 1 MHz to 2 cies that correspon the minimum requi	for Midspa asured for E-T" SE-T, NEX 33-18aa) v 5GBASE- by Equatic 250 MHz. F d to calcul rement of 6 rom (33-18 "43"	the transmit and (T loss for Midsp when measured T, NEXT loss fo on (33-18aa) wh for operation with lated values gre 55 dB."	shall meet the value d receive pairs from pan PSE devices s for the transmit an- or Midspan PSE en measured for th th 2.5GBASE-T an eater than 65 dB, th nied 'NEXTconn' an	n 1 shall d ne id ne		
line 39 insert new paragraph "For 2.5GBASE-T, NEXT loss for Midspan PSE devices shall meet the values determined by Equation (33-18aa) when measured for the transmit and	C/ 33	SC 33.4.9.1.2	2 P	66	L 10	# i-238			
receive pairs from 1 MHz to 100 MHz. For 5GBASE-T, NEXT loss for Midspan PSE	Zimmerman,	George	Aqu	antia, ADI,	Comm				
devices shall meet the values determined by Equation (33-18aa) when measured for the transmit and receive pairs from 1 MHz to 250 MHz. For operation with 2.5GBASE-T and	Comment Ty	vpe TR	Comment Statu	s A			AES		
5GBASE-T, for frequencies that correspond to calculated values greater than 65 dB, the requirement reverts to the minimum requirement of 65 dB."	Missing		r 10GBASE-T in cl	ause 33 (th	is one is OK in	clause 145, just			
insert a new equation,(33-18aa), copied from (33-18) with accompanied 'NEXTconn' and 'f' definitions, except that "40" is changed to "43"	SuggestedR	emedy							
	Insert new equation 33-19a identical to 33-19 except 0.040 is changed to 0.020. Add text "For 10GBASE-T capable midspans, insertion loss for Midspan PSE devices shall meet the values determined by Equation (33-19) when measured for the transmit and receive pairs from 1 MHz to 500 MHz."								
	Response		Response Statu	s C					
	ACCEPT	IN PRINCIPL	E.						
	Adopt ch	anges shown o	on slides 5 - 7 in zi	mmerman_	_3bt_01_0917.p	df			
YPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/g OMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/wr ORT ORDER: Page, Line	•	U/unsatisfied 2	Z/withdrawn	Pa 66 Li 10		Page 18 o 9/15/2017			

C/ 33	SC 33.4.9.1.2	P 66	L 10	# i-209		C 33.4.9.1.		L 35	# i-210	
Mcclellan,	, Brett	Marvell Semic	conducto		Mcclellan, Brett		Marvell Sem	conducto		
Comment	t Type TR	Comment Status A		Pres: Zimmerman1	Comment Type	TR	Comment Status A			AE
missi	ng a requirement fo	or 10GBASE-T			The return	oss limit at	20MHz violates the RL spec	in 126.7.2.3 for	2.5G and 5G (17d	3).
Suggeste	edRemedy				SuggestedRem	edy				
Add to shall i	ext " For 10GBASE	9 identical to 33-19 except -T capable midspans, inser termined by Equation (33-1 z to 500 MHz."	tion loss for Mi	dspan PSE devices	1 MHz <f<< td=""><td>=31.5 MHz</td><td>Hz 20-20log10(f/100)</td><td>the following lim</td><td>its based on Cat5E:</td><td></td></f<<>	=31.5 MHz	Hz 20-20log10(f/100)	the following lim	its based on Cat5E:	
Response	e	Response Status C			ACCEPT.		Response Status W			
	EPT IN PRINCIPLE				ACCEPT.					
ACCE	EPT IN PRINCIPLE				C/ 33 S	C 33.4.9.1.	3 P 66	L 37	# i <u>-211</u>	
Adon	t changes shown o	n slides 5 - 7 in zimmerman	3bt 01 0017	ndf	Mcclellan, Brett		Marvell Sem	conducto		
Лиор	c changes shown o			pu	Comment Type	TR	Comment Status A			AE
This r	resolution is identic	al to comment #238.			at 100MHz	the limit of	14dB is only 4dB margin vs	the 2.5/5G spec		
C/ 33	SC 33.4.9.1.3	P 66	L 35	# i-239	SuggestedRem	edy				
Zimmerm	ian, George	Aquantia, ADI	l, Comm		create a se	parate table	e entry for 5GBASE-T with th	e following limits	s based on Cat6:	
Comment		Comment Status D		AES	1 MHz <f< 50 MHz<f< td=""><td></td><td>30 dB 24-20log10(f/100)</td><td></td><td></td><td></td></f<></f< 		30 dB 24-20log10(f/100)			
		span for 2.5G/5GBASE-T sl predating cat 5e. line 35 re			Response		Response Status W			
spec	in 126.7.2.3 for 2.5	G and 5G (17dB). Make co			ACCEPT IN		LE.			
	specifications				Create a se	eparate tabl	e entry for 5GBASE-T with th	ne following limit	s based on Cat5E:	
•••	edRemedy					=31.5 MHz		ie ielie ilig ilii		
Inser with fr 1 <f<: 31.5 I</f<: 	rt new row "2.5G/50 requency ranges of = 31.5 MHz at a ret MHz <f<=100mhz a<="" td=""><td>E-T" from 2nd row of 1st col GBASE-T" between 10/100/ ": urn loss value of 30 dB, and t a return loss value of 20 - return loss value (100 MHz</td><td>1000BASE-T ro d 20log10(f/100)</td><td>w and 5GBASE-T row,</td><td>31.5 MHz•</td><td><f<=250 mi<="" td=""><td>Hz 20-20log10(f/100)</td><td></td><td></td><td></td></f<=250></td></f<=100mhz>	E-T" from 2nd row of 1st col GBASE-T" between 10/100/ ": urn loss value of 30 dB, and t a return loss value of 20 - return loss value (100 MHz	1000BASE-T ro d 20log10(f/100)	w and 5GBASE-T row,	31.5 MHz•	<f<=250 mi<="" td=""><td>Hz 20-20log10(f/100)</td><td></td><td></td><td></td></f<=250>	Hz 20-20log10(f/100)			
Proposed	l Response	Response Status Z								
REJE	ECT.									
This (comment was WITI	HDRAWN by the commente	er.							

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **66** Li **37**

C/ 33 SC 33.4.9.2.3 P 67 L 40 # i-9 Anslow, Peter Ciena Corporation	C/ 33 SC 33.4.9.2.3 P 67 L 40 # i-212 Mcclellan, Brett Marvell Semiconducto
Comment Type T Comment Status A Editorial This says "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 5 through 10 in 33.4.9.1)" but there are only 5 variants in 33.4.9.1 SuggestedRemedy Change "variants 5 through 10 in 33.4.9.1" to "variants 3 through 5 in 33.4.9.1" Response Response Status C ACCEPT IN PRINCIPLE. C Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in 33.4.9.2) are" This resolution is identical to comment #37.	Comment Type ER Comment Status A Editorial (variants 5 through 10 in 33.4.9.1) there are only 5 variants SuggestedRemedy Final Status Change "(variants 5 through 10 in 33.4.9.1)" to "(variants 3 through 5 in 33.4.9.1)" Response Response Status W ACCEPT IN PRINCIPLE. Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in 33.4.9.2) are" This resolution is identical to comment #37.
Cl 33 SC 33.4.9.2.3 P 67 L 40 # i-241 Zimmerman, George Aquantia, ADI, Comm Editorial Comment Type E Comment Status A Editorial "variants 5 through 10" - there are only 5 variants in clause 33 SuggestedRemedy SuggestedRemedy SuggestedRemedy	C/ 33 SC 33.4.9.2.3 P 67 L 40 # i-37 Yseboodt, Lennart Philips Lighting Editoria Comment Type ER Comment Status A Editoria "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 5 through 10 in 33.4.9.1) are additionally required to meet the following parameters for coupling signals between ports relating to different link segments." Editoria
Change "(variants 5 through 10 in 33.4.9.1)" to "(variants 3 through 5 in 33.4.9.1)" Response Response Status C ACCEPT IN PRINCIPLE. Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in 33.4.9.1 and 33.4.9.2) are" This resolution is identical to comment #37.	That variant list was split by earlier baseline, there are no items 5 through 10. SuggestedRemedy Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in 33.4.9.1 and 33.4.9.2) are" Response Response Status W ACCEPT.

Pa **67** Li **40**

	33.4.9.2.4	P 67	L 50	# i-2	13	C/ 33	SC 33.4.9.2.	4	P 67	L 50	#	i-242		
Mcclellan, Brett		Marvell Semi	conducto			Zimmerma	· · ·		Aquantia, Al	JI, Comm				
	d frequencies	Comment Status A s, The frequency range			AES requency	Comment "for all	specified freque	encies", The	t Status A	e in Table 33-20	o exceeds	AE the frequency		
SuggestedRemedy		E-T and 5GBASE-T and	may be reduce	J.			ements for 2.5G 9.2.4 in another		SGBASE-1 and	I may be reduce	d. (same (change in		
delete "for all s insert "For oth PSE devices s For 5GBASE-1	specified freq her than 5GB shall meet the T capable mid	ASE-T or 10GBASE-T of values determined by dspans, PSANEXT loss	Table 33-20b fro	m 1 MHz to 1	00 MHz.	midsp	we were trying t an Cat 6a conne but more style. ncies.	ctor PSANE	XT requirements	s for 2.5G/5GBA	SE-T. Th	is isn't an		
		hall meet the values det capable midspans, PSA				Suggested	Remedy							
shall meet the	values deter	mined by Table 33-20b					1.9.2.4: delete "f							
		in of Table 33-20b					"For other than !							
Response ACCEPT.	R	Response Status C					PSE devices shall meet the values determined by Table 33-20b from 1 MHz to 100 MHz. For 5GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet th values determined by Table 33-20b from 1 MHz to 250 MHz. For 10GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet the values determined by Table 33-20b from 1 MHz to 500 MHz." Delete the frequency column of Table 33-20b							
						Response		Response	e Status C					
						ACCE	PT IN PRINCIP	LE.						
						insert PSE d For 50 for Mic 250 M shall n	"for all specified "For other than bevices shall me BASE-T capab Ispan PSE devic Hz. For 10GBA neet the values the frequency of	5GBASE-T c et the values le midspans, ces shall mee SE-T capable determined b	or 10GBASE-T of determined by PSANEXT loss et the values det midspans, PS/ y Table 33-20b	Table 33-20b fro termined by Tab ANEXT loss for l	om 1 MHz le 33-20b Vidspan F	to 100 MHz. from 1 MHz to		
						This re	esolution is iden	ical to comm	ient #213.					

Pa **67** Li **50**

CI 33	SC 3	3.4.9.2.5	F	^D 68	L 11	# i-244		CI 33	SC	33.4.9.2.5	5	P 68	L 11	#	i-214	
Zimmerma	an, Georg	ge	Aqı	uantia, ADI,	, Comm			Mcclellan,	Brett		N	larvell Sem	iconducto			
Comment	Туре	т	Comment Statu	us A			AES	Comment	Туре	TR	Comment Sta	atus A				AE
			requencies", Th or 2.5GBASE-T			le 33-20b exceeds be reduced.	s the	for all require	specifie ements	ed frequen for 2.5GB	icies, The freque BASE-T and 5GB	ency range BASE-T and	in Table 33-20b I may be reduced	exceeds t I.	he frequ	ency
Suggested	dRemedy	/						Suggested	dRemed	dy						
insert PSE c For 50 values midsp Table	"For othe levices s BBASE-T s determi ans, PSA 33-20b f	er than 5G hall meet to capable r ned by Ta AFEXT los rom 1 MH:	he values deter nidspans, PSAF ble 33-20b from	rmined by T EXT loss fo 1 MHz to 2 SE devices	able 33-20b fro or Midspan PSE 50 MHz. For 10	EXT loss for Midsp om 1 MHz to 100 E devices shall m 0GBASE-T capab values determine	MHz. eet the le	insert PSE c For 50 for Mic 250 M shall r	t "For ot devices GBASE dspan F IHz. For neet the	ther than 5 shall mee -T capable SE device r 10GBAS e values d	t the values dete e midspans, PSA es shall meet the E-T capable mid	ermined by AFEXT loss e values de Ispans, PSA ble 33-20b	operation, PSAFE Table 33-20b fror termined by Tabl AFEXT loss for M from 1 MHz to 50	m 1 MHz e 33-20b lidspan P	to 100 M from 1 N	Hz. IHz to
Response			Response Statu	us C				Response	•		Response Sta	tus W				
ACCE	PT IN PI	RINCIPLE	•	-				ACCE	PT.		,					
delete	"for all s	pecified fr	equencies"					C/ 33	SC	33.8.1		P 68	L 42	#	i-10	
insert	"For oth	er than 50	BASE-T or 10G			EXT loss for Mids		Anslow, Pe			C	iena Corpo	oration			
			ne values deterr nidspans, PSAF		able 33-20b fro	m 1 MHz to 100 M	VIHZ.	Comment	Tvpe	Е	Comment Sta	atus A			E	Editoria
for Mic	dspan PS	SE devices	shall meet the	values deter		le 33-20b from 1 l				vn is only t	the first paragrap	oh of 33.8.1				
			I capable mids ermined by Tabl			/lidspan PSE devi i00 MHz."	ces	Suggested	dRemed	dv						
			umn of Table 33-		0					-	ruction to: "Char	nge the first	paragraph of 33.	.8.1 as fol	lows:"	
This re	esolution	is identica	I to comment #2	214.				Response	•		Response Sta	tus C				
								ACCE	PT.							
								C/ 33	SC	33.8.2.2		P 69	L 9	#	i-11	
								Anslow, Po	eter		C	iena Corpo	oration			
								<i>Comment</i> The te	•••	E "Clause 3	Comment Sta 33," should matc		Clause 33 title.		E	Editoria
								Suggested Chang		,	thernet" to "Powe	er over Ethe	ernet over 2 Pairs	5"		
									-							
								Response	,		Response Sta	tus C				

Pa **69** Li **9**

C/ 33 SC 33.8.2.2 Anslow, Peter	P 69 Ciena Corpora	L 14 ation	# i-12	C/ 79 SC 79.3 Mcclellan, Brett	P 73 Marvell Semic	L 36 conducto	# i-215
Comment Type E The PICS is being mod Std 802.3bt	Comment Status A dified by the P802.3bt amend	ment, so the co	<i>Editorial</i> nformance is to IEEE	Comment Type ER can't have a TBD. SuggestedRemedy	Comment Status A		LLDP
SuggestedRemedy Change "IEEE Std 802	2.3-201x" to "IEEE Std 802.3b	t-201x"		Change TBD on line 3 Change TBD on line 3			
Response ACCEPT.	Response Status C			Response ACCEPT.	Response Status C		
C/ 40 SC 40.6.1.1 Zimmerman, George	P 71 Aquantia, ADI	L 12 , Comm	# i-234	C/ 79 SC 79.3.2 Mcclellan, Brett	P 74 Marvell Semic	L 15 conducto	# i-216
	Now that 2.5G/5GBASE-T ar ame line needs to be added to			Comment Type ER PI is used without defin SuggestedRemedy			Editorial
Bring Clauses 55 and 1 126.5.1 - "A PHY with a defined in 33.4.1 or 14	126 into the draft, and insert r a MDI that is a PI (see 33.1.3 5.4.1.", Change first sentence) shall meet the e of current first	isolation requirements paragraph of 55.5.1	Change "PI" to "Power <i>Response</i> ACCEPT.	Response Status W		
Bring Clauses 55 and 126.5.1 - "A PHY with a defined in 33.4.1 or 14 and 126.5.1 changing "PHY with a MDI that is	a MDI that is a PI (see 33.1.3) shall meet the e of current first MDI that is not a cal isolation betw	isolation requirements paragraph of 55.5.1 a PI" so that it reads: "A	Response ACCEPT. C/ 79 SC 79.3.2.1	Response Status W	L 5	# [i-13
Bring Clauses 55 and 1 126.5.1 - "A PHY with a defined in 33.4.1 or 14 and 126.5.1 changing ' PHY with a MDI that is circuits, including frame	a MDI that is a PI (see 33.1.3 5.4.1.", Change first sentence "The PHY" to "A PHY with a N not a PI shall provide electric) shall meet the e of current first MDI that is not a cal isolation betw	isolation requirements paragraph of 55.5.1 a PI" so that it reads: "A	Response ACCEPT. C/ 79 SC 79.3.2.1 Anslow, Peter Comment Type E Table 79-3 in the base	Response Status W	ation	Editorial
Response ACCEPT. C/ 79 SC 79 Yseboodt, Lennart	a MDI that is a PI (see 33.1.3 5.4.1.", Change first sentence "The PHY" to "A PHY with a N not a PI shall provide electric e ground (if any) and all MDI <i>Response Status</i> W <i>P</i> 73 Philips Lightin) shall meet the e of current first MDI that is not a cal isolation betw leads." <i>L</i> 1	# isolation requirements paragraph of 55.5.1 a PI" so that it reads: "A ween the port device # i-38	Response ACCEPT. Cl 79 SC 79.3.2.1 Anslow, Peter Comment Type E Table 79-3 in the base here. SuggestedRemedy	Response Status W P 75 Ciena Corpora Comment Status A	ation 15) is different	<i>Editorial</i> from what is shown
Bring Clauses 55 and 7 126.5.1 - "A PHY with a defined in 33.4.1 or 14 and 126.5.1 changing ' PHY with a MDI that is circuits, including frame Response ACCEPT. Cl 79 SC 79 Yseboodt, Lennart Comment Type TR	a MDI that is a PI (see 33.1.3 5.4.1.", Change first sentence "The PHY" to "A PHY with a N not a PI shall provide electric e ground (if any) and all MDI Response Status W P73) shall meet the e of current first MDI that is not a cal isolation betw leads." <i>L</i> 1	isolation requirements paragraph of 55.5.1 a PI" so that it reads: "A ween the port device	Response ACCEPT. Cl 79 SC 79.3.2.1 Anslow, Peter Comment Type E Table 79-3 in the base here. SuggestedRemedy	Response Status W P 75 Ciena Corpora Comment Status A standard (IEEE Std 802.3-20	ation 15) is different	<i>Editorial</i> from what is shown
Response ACCEPT. Cl 79 SC 79 Yseboodt, Lennart Comment Type TR	a MDI that is a PI (see 33.1.3 5.4.1.", Change first sentence "The PHY" to "A PHY with a N not a PI shall provide electric e ground (if any) and all MDI <i>Response Status</i> W <i>P</i> 73 Philips Lightin <i>Comment Status</i> A s incompletely and incorrectly) shall meet the e of current first MDI that is not a cal isolation betw leads." <i>L</i> 1	# isolation requirements paragraph of 55.5.1 a PI" so that it reads: "A ween the port device # i-38	Response ACCEPT. Cl 79 SC 79.3.2.1 Anslow, Peter Comment Type E Table 79-3 in the base here. SuggestedRemedy Change the table title f capabilities/status"	Response Status W P 75 Ciena Corpora Comment Status A standard (IEEE Std 802.3-20	ation 15) is different	<i>Editorial</i> from what is shown

Pa **75** Li **5**

CI 79	SC 79.3.2.1	P 75	L 8	# i-324
Law, David		Hewlett Pack	ard Enter	
Comment 7	Type TR	Comment Status A		LLDP

Note 1 to Table 79-3 states 'Port class information is implied by the support of the PSE or PD groups.'. As far as I can see there is no mention of a PD group in the last version of IETF RFC 3621 or in IEEE Std 802.3.1-2013 which deprecated IETF RFC 3621.

This table originated as Table G.1 in IEEE Std 802.1AB-2005, and was incorporated in to IEEE Std 802.3 by the IEEE Std 802.3bc-2009 Ethernet Organizationally Specific Type, Length, Values (TLVs) amendment, which added Clause 79. Based on this it seems that this note was generated as a result of comment 124 on IEEE P802.1AB draft D11 <hr/>
<http://www.ieee802.org/1/files/private/ab-drafts/d12/80211AB-D11-dis.pdf#Page=91>. The comment reads:

COMMENT TYPE: T CLAUSE: Annex G.3.1 PAGE: 133 LINE: 9 COMMENT START: The right columns look like missing information. COMMENT END: SUGGESTED CHANGES: Either: 1) Fill the information in. 2) Insert an N/A notation 3) Insert an em dash, which should then be described in the glossary (802.17 did this). SUGGESTED CHANGES END:

Disposition of Comment 124

Add notes -

For Port Class the information is implied by the support of the PSE or PD MIB groups For MDI power support the information is implied by support of the power over Ethernet MIB. Refer to the RFC

The latest version of IETF RFC 3621, version 08 dated 22nd June 2003 <https://tools.ietf.org/html/draft-ietf-hubmib-power-ethernet-mib-08> states 'The document proposes an extension to the Ethernet-like Interfaces MIB with a set of objects for managing a Power Source Equipment (PSE).'. Looking at the first version however, version 00 dated 25th June 2001, this text reads 'The document proposes an extension to the Ethernet-like Interfaces MIB [RFC2665] with a set of objects for managing a power Ethernet Powered Device (PD) and/or Power Source Equipment (PSE).'. This text changed between version 04 date 19th December 2002 <https://tools.ietf.org/html/draft-ietf-hubmibpower-ethernet-mib-04> and version 05 dated 21st May 2003

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 U/unsatisfied Z/withd SORT ORDER: Page, Line

<https://tools.ietf.org/html/draft-ietf-hubmib-power-ethernet-mib-05>. Based on this it seems the IETF RFC 3621 drafts supported both PSE and PD management up to 21st May 2003.

While the IEEE P802.3AB comment was processed in October 2004, after PD management was removed from RFC 3621, it may be possible that this had not been noted, or it may have been assumed that RFC 3621 which is titled 'Power Ethernet MIB' supported both PDs and PSEs. Regardless, it seems that the intent of the note was to describe how to determine how to set this bit by reference to attributes in the IETF RFC.

Since (a) this note references a non-existent PD group in the MIB; (b) we don't mandate implementation of any particular management protocol, or any management, a PSE may or may not implement the PSE group in the MIB, and (c) in the reminder of subclause 79.3.2 'Power Via MDI TLV' we generally defined the bits through text rather than a cross reference to Objects, suggest that we do the same for the MDI power capabilities/status field.

SuggestedRemedy

Suggest that:

[1] The entire 'Object reference' column of Table 79-3 'MDI power capabilities/status field' is deleted.

[2] The two remaining notes for Table 79-3 'MDI power capabilities/status field' are deleted.

[3] New subclauses are added to describe the "MDI power capabilities/status" fields that read as follows:

79.3.2.1.1 Port class

The "Port class" field transmitted shall indicate if the port is a PSE or a PD.

79.3.2.1.2 PSE MDI power support

The "PSE MDI power support" field shall indicate if MDI power is supported.

79.3.2.1.3 PSE MDI power state

The "PSE MDI power state" field transmitted by a PSE shall indicate if the PSE function is enabled or disabled. When disabled all PSE functions are disabled and behaviour is as if there was no PSE functionality. The value of the "PSE MDI power state" transmitted by a PD is undefined.

79.3.2.1.4 PSE pairs control ability

The "PSE pairs control ability" field transmitted by a PSE shall indicate if the PSE has the capability to control which PSE Pinout Alternative (see 33.2.3 and 145.2.4) is used for PD detection and power. If capable the PSE Pinout Alternative used can be controlled through the pethPsePortPowerPairs attribute (see IEEE Std 802.3.1). If not the PSE Pinout Alternative used cannot be controlled through the pethPsePortPowerPairs attribute.

	Pa 75	Page 24 of 134
drawn	Li 8	9/15/2017 11:41:03 AM

Response Response Status W ACCEPT.		76 L 21 /lett Packard Enter	# i-323
C/ 79 SC 79.3.2.1 P 75 L 13 # [i-217] Mcclellan, Brett Marvell Semiconducto Marvell Semiconducto	Comment Type TR Comment Status This text reads 'Class 5 and above is comr		LLDP Class field'. I don't
Comment Type ER Comment Status A Editorial Note 2 was deleted, but "Note 3" was not renumbered. Editorial Editorial	believe this is correct, I believe that the Cla Classx' field. In addition, suggest that TLV commas.		
SuggestedRemedy change "Note 2" to "Note 3" on lines 13 and 23	SuggestedRemedy Suggest that the text 'Class 5 and above is	s communicated by the F	Power Class field'
Response Response Status W	should be changed to read 'Class 5 and ab field'.		
ACCEPT IN PRINCIPLE.	Response Response Status	NA/	
Suggest that:	ACCEPT.	, vv	
[1] The entire 'Object reference' column of Table 79-3 'MDI power capabilities/status field' is deleted.		76 L 42 na Corporation	# i-14
[2] The two remaining notes for Table 79-3 'MDI power capabilities/status field' are deleted.	Comment Type E Comment Status	s A	Editorial
[3] New subclauses are added to describe the "MDI power capabilities/status" fields that read as follows:	Although the heading for 79.3.2.4 is require be shown here.	ed, the text is not being r	modified, so should not
Teau as follows.	SuggestedRemedy		
79.3.2.1.1 Port class	Delete the text from 79.3.2.4		
The "Port class" field transmitted shall indicate if the port is a PSE or a PD.	Response Response Status ACCEPT.	c C	
79.3.2.1.2 PSE MDI power support			"
The "PSE MDI power support" field shall indicate if MDI power is supported.		77 L 1 na Corporation	# i-15
79.3.2.1.3 PSE MDI power state	Comment Type E Comment Status	s A	Editorial
The "PSE MDI power state" field transmitted by a PSE shall indicate if the PSE function is	Although Table 79-4 is referenced from 79 not be shown here.	.3.2.4.1, the table reside	s in 79.3.2.4 so it should
enabled or disabled. When disabled all PSE functions are disabled and behaviour is as if there was no PSE functionality. The value of the "PSE MDI power state" transmitted by a PD is undefined.	SuggestedRemedy Delete Table 79-4 from the draft		
79.3.2.1.4 PSE pairs control ability	Response Response Status ACCEPT.	G C	
The "PSE pairs control ability" field transmitted by a PSE shall indicate if the PSE has the capability to control which PSE Pinout Alternative (see 33.2.3 and 145.2.4) is used for PD detection and power. If capable the PSE Pinout Alternative used can be controlled through the pethPsePortPowerPairs attribute (see IEEE Std 802.3.1). If not the PSE Pinout Alternative used cannot be controlled through the pethPsePortPowerPairs attribute.			
This resolution is identical to comment #324.			
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/v		Pa 77 Li 1	Page 25 of 134 9/15/2017 11:41:0

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

9/15/2017 11:41:03 AM

C/ 79 SC 79.3.3	2.6 P 78 Ciena Corpo	L 35 pration	# i-16	<i>Cl</i> 79 Yseboodt,	SC 79.3.2.60 Lennart	1 P 81 Philips Lightin	L 16 g	# i-41
Comment Type E	Comment Status A		Editorial	Comment	Type ER	Comment Status A		Editoria
51	5 should be "33.3.7.2" should be "33.2.6"			The bir easily The 'x'	s labeled "Powe be mistaken for	enote this is an extended field		
Change "33.3.8.2" Change "33.2.7" or	on line 35 to "33.3.7.2" 1 line 37 to "33.2.6"			Suggestea		sapitalized.		
Response	Response Status C				ne "Power typex 79, Clause 145	" to "Power Type ext" through 5).	out the draft (Cla	ause 30 objects,
			"	Response	T	Response Status W		
Cl 79 SC 79.3.2 Yseboodt, Lennart	2.6c.3 P 80 Philips Light	L 7	# i-39	ACCE				
Comment Type ER	Comment Status A	0	Editorial	C/ 79 Darshan, Y	SC 79.3.2 ′air	P 81	L 33	# <mark>i-395</mark>
can easily be mista The 'x' was meant	SE power pairsx" in the Power s ken for "PSE power pair" to denote this is an extended fie		a confusing name that		PID bit need to r	Comment Status A nove to legacy TLV field in ord comment #130 from D2.4.	der to support le	Pres: Yseboodt4 gacy PDs.
SuggestedRemedy Rename "PSE pow objects, Clause 79	er pairsx" to "PSE power pairs Clause 145).	ext" throughout t	he draft (Clause 30	Suggesteo In Tab	,	D bit: Move this bit to Table 79	9-4 to bit 3:2 in:	stead of the reserve
Response	Response Status W			bits. M	ake the PD 4PI	D bit as the reserved bits.		
ACCEPT.				Response		Response Status C		
CI 79 SC 79.3.2		L 29	# i-40		PT IN PRINCIP PT IN PRINCIP			
Yseboodt, Lennart Comment Type ER	Philips Light Comment Status A	ing	Editorial	Adopt	yseboodt_04_0	917_LLDP.pdf (v153)		
The bits labeled "P easily be mistaken	ower Classx" in the Power statu			This re	solution is ident	ical to comment #38.		
SuggestedRemedy								
Rename "Power Cl Clause 79, Clause	assx" to "Power Class ext" thro 145). je for Dual-signature power Cla	0						
Response	Response Status W							

ACCEPT.

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **81** Li **33**

					•					
CI 79	SC 79.3.2.6f	P 82	L 21	# i-460	CI 79	SC 79.3.8.1	P8	5	L 15	# i-42
Darshan, Yair					Yseboodt,	Lennart	Philip	s Lighting		
Comment Typ	pe T	Comment Status D		Pres: Yseboodt7	Comment	Type TR	Comment Status	Α		LLDP
 Table 79-6f describes autoclass field. Per the draft, autoclass can be requested any time including after the physical layer autoclass after transitioning to POWER_ON. The are some issues that appear to be not closed. In the case PD is and PSE supporting LLDP: Why PD will ask for autoclass through LLDP if he can do similar task by LLDP? I am asking this question since if PD eventually do this, it add a level of complexity (that can be resolved) that yet is not addressed in the standard. for example: a) There is no syncing or handshake mechanism defined to verify that the PD won't start to consume more power than the PSE allows it to draw, before the PSE is ready for it b) It is also not covered in the state machine diagram at page 131 line 43, when moving from IDLE_ACS to MEASURE_ACS. 					For the LLDP measurements, the valid values for current are 0-20000, voltage 1-65000, and power 1-10000. Why is current allowed to be zero, but not the other two ? SuggestedRemedy Change valid values for all 3 to start at 0. Response Response Status ACCEPT.					, voltage 1-65000,
			n at page 151 line	43, when moving	C/ 79	SC 79.5.3	Pg	0	L 7	# i-17
		d at least to add new variable			Anslow, P	eter	Ciena	a Corporatio	on	
and the P		It PD has set it's requested p ailable power to measure the on.			<i>Comment</i> The ta		Comment Status is been modified by IE		2.3br-2016	Editorial
SuggestedRemedy						Remedy				
		_autoclass_pd_pse_ready" t	o the variable list i	145.2.5.4 with the	Add th	ne row for "*AE"	as added by 802.3br			
 add new variable "dll_autoclass_pd_pse_ready" to the variable list in 145.2.5.4 with the following definition: "dll_autoclass_pd_pse_ready This variable indicates that PD has set it's requested power level for the PSE to be 					Response ACCE		Response Status	С		
the PD re	equested powe state machine	has the available power in ord r without going to overload/II in page 131 line 43 in the ex	im 2p condition."		Cl 145 Thompsor	SC 145.1 n, Geoffrey	P 9 Indivi	-	L 7	# i-364
"Mirrored	PDAutoclassR				Comment	Type ER	Comment Status	Α		Pres: Thompson1
		ssRequest*dll_autoclass_pc	l_pse_ready"				ement of the top level			
Proposed Res REJECT.	•	Response Status Z					ial for someone readir ow to structure his thir			
This second			-		Suggestee	dRemedy				
	SC 79.3.8	HDRAWN by the commente	L 36	# i-218		roposed text in art of the list at l	submitted file GOT - F ine 27.	Proposed te	xt.txt. Pick exis	ting text back up at
Mcclellan, Bre		Marvell Semic			Response		Response Status	С		
Comment Typ	be TR	Comment Status A		LLDP	ACCE	PT IN PRINCIP	LE.			
"subtype=	=2" is NOT def	ined for Power Via MDI Mea Via MDI Measurements was			adopt	Thompson_01_	_0917.rtf			
SuggestedRe	medy									
00	subtype=2" to '	"subtype=8"								
Response		Response Status W								
, ACCEPT.										
	TATUS: D/dis	d ER/editorial required GR/ patched A/accepted R/reject				d U/unsatisfied	Z/withdrawn	Pa 95 Li 7		Page 27 of 134 9/15/2017 11:41:

SORT ORDER: Page, Line

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Yseboodt, Lennart	P 95 Philips Lighting	L 9	# i-43	<i>Cl</i> 145 Thompson, C	SC 145.1 Geoffrey	P 95 Individual	L 25	# i-366
Comment Type E	Comment Status A		Pres: Thompson	Comment Ty	pe ER	Comment Status A		Editorial
enhancement of the F deployment over bala	he functional and electrical chara Power over Ethernet (PoE) system nced twisted-pair cabling."	m defined in Claus	se 33 for	this data T. The T	" implies that "F has done r	gle interface to both the dat the power provided is adeq to investigation to establish ader valid uses for PoE thar	uate to do data province to do data province to do data province to data pro	ocessing on 10GBASE- he case or is factual.
Makes it seem that Cl standalone PoE Claus	ause 145 is an 'add-on' to Claus	se 33. It isn't, it is a	a complete,	SuggestedR	emedy			
SuggestedRemedy				Change	text to read: "	with a single cabling interf	ace for both the d	lata and power."
"This clause defines t	he functional and electrical chara ystem originally defined in Claus			Response ACCEP1		Response Status C		
Response ACCEPT IN PRINCIP	Response Status C			<i>Cl</i> 145 Thompson, C	SC 145.1e Geoffrey	P 95 Individual	L 32	# i-367
				Comment Ty	pe ER	Comment Status A		Editorial
Replace sentence wit "This clause defines over Ethernet (PoE) s	h: the functional and electrical char ystem for deployment over balar			The PSE	and PD are PD. Dynami	Comment Status A mentioned in the plural. The c negotiation between PSE		d to is only between one
Replace sentence wit	h: the functional and electrical char ystem for deployment over balar			The PSE PSE and	and PD are I PD. Dynami dard.	mentioned in the plural. The		d to is only between one
Replace sentence witi "This clause defines over Ethernet (PoE) s PoE system is defined C/ 145 SC 145.1	h: the functional and electrical char ystem for deployment over balar			The PSE PSE and this stan SuggestedR Change	and PD are i I PD. Dynami dard. emedy	mentioned in the plural. The ic negotiation between PSE A method for a PSE and the	Es, while possible,	d to is only between one is outside the scope of
Replace sentence wit "This clause defines over Ethernet (PoE) s PoE system is defined	h: the functional and electrical char ystem for deployment over balar d in Clause 33." <i>P</i> 95	nced twisted-pair o	cabling. The original	The PSE PSE and this stan SuggestedR Change	and PD are in PD. Dynami I PD. Dynami dard. <i>emedy</i> text to read: ".	mentioned in the plural. The ic negotiation between PSE A method for a PSE and the	Es, while possible,	d to is only between one is outside the scope of
Replace sentence with "This clause defines is over Ethernet (PoE) s PoE system is defined <i>Cl</i> 145 <i>SC</i> 145.1 Thompson, Geoffrey <i>Comment Type</i> ER Clause 1.4 is the defin	h: the functional and electrical char ystem for deployment over balar d in Clause 33." P 95 Individual Comment Status A hitions clause for the entire stand	nced twisted-pair o	tabling. The original # <u>i-365</u> <i>Editorial</i>	The PSE PSE and this stan SuggestedRe Change negotiate Response	and PD are in PD. Dynami I PD. Dynami dard. <i>emedy</i> text to read: ".	A method for a PSE and the power"	Es, while possible,	d to is only between one is outside the scope of
Replace sentence with "This clause defines over Ethernet (PoE) s PoE system is defined C/ 145 SC 145.1 Thompson, Geoffrey Comment Type ER	h: the functional and electrical char ystem for deployment over balar d in Clause 33." P 95 Individual Comment Status A hitions clause for the entire stand	nced twisted-pair o	tabling. The original # <u>i-365</u> <i>Editorial</i>	The PSE PSE and this stan SuggestedRe Change negotiate Response ACCEPT Change	and PD are 1 I PD. Dynami dard. emedy text to read: " and allocate IN PRINCIP text to read: ".	A method for a PSE and the power"	s, while possible,	d to is only between one is outside the scope of paired to dynamically

Pa **95** Li **32**

C/ 145	SC 145.1	P 95	L 45	# i-368	C/ 145 SC 145	5.1.3 P 97
Thompson	n, Geoffrey	Individual			Thompson, Geoffrey	Individ
Comment	Type E	Comment Status A		Editorial	Comment Type E	R Comment Status
		differentiates between the two and the PD as separate but re				in TF discussions that there can be active for there not t
Suggeste	dRemedy				SuggestedRemedy	
link, i.	e the link sectior	differentiates between the two , defining the PSE and the PI			single PD, and th	to read: A valid power systeme link section connecting the onsists only of a single active
Response		Response Status C			connecting them.	
ACCE	PT IN PRINCIPI	_E.			Response	Response Status
		clause differentiates between ction, defining the PSE and th			ACCEPT IN PRI	NCIPLE.
C/ 145	SC 145.2	P 97	L1	# i-369		to read: "A valid power sys PD, and the link section conr
Thompsor	n, Geoffrey	Individual			C/ 145 SC 145	5.1.3 <i>P</i> 97
Comment	Type ER	Comment Status A		PI	Yseboodt, Lennart	Philips
shoul PI. TI MDI (i	d specify a PSE a nus, I don't think though I confess	bblem. Regarding the first ser at the MDI, we specify at the F there are any statements that I did not search). If there are	PI. After all, that express PSE s they should be	at is why we created the specs in terms of the e re-expressed in terms	Comment Type T	R Comment Status be 4 entry lists 0.96A as the r
ANY ı	mid-span to clain	e second sentence, this is a h n compliance to the standard	IUGE escape	clause which allows	We only allow >0 conditions).	0.6A when in 4-pair mode the
Suggeste	,		·	···	SuggestedRemedy	
physio		ase of a Midspan PSE PI, the m the MDI and is contained w			Split Type 4 line Type 4 0.6	2 12.5 (cable s
Response		Response Status C			Type 4 0.96	, ,
ACCE	PT IN PRINCIPI	_E.			Response	Response Status

Replace with: "In the case of a Midspan PSE, the PI is physically separate from the MDI and is contained within the cabling portion of the data transmission system."

C/ 145	SC 145.1.3	P 97 L 21 Individual		# i-370
Thompsor	n, Geoffrey			
Comment	Type ER	Comment Status A		Systems

ere can be multiple PSEs in a valid system but t to be a fault.

stem consists only of a single active PSE, a them. If needed, we could say: "A valid active ive PSE, a single PD, and the link section

stem consists only of a single PSE sourcing onnecting them."

C/ 145	SC 145.1.3	P 97 L 37		# i-44
Yseboodt, Le	ennart	Philips L	ighting	
Comment Ty	pe TR	Comment Status A		Systems

e nominal current and number of powered pairs

though (with the exception of dual-signature fault

Split Typ	e 4 line	in two:		
Type 4	0.6	2	12.5	(cable spec)
Type 4	0.96	4	12.5	(cable spec)
Response			Response	e Status C
ACCEPT				

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa 97 Li 37

C/ 145 SC 145.1.3 P 97 L 38 # i-394 Diminico, Christopher Image: Chrit Image: Christopher <td< td=""><td>C/ 145 SC 145.1.3 P 97 L 43 # i-45 Yseboodt, Lennart Philips Lighting</td></td<>	C/ 145 SC 145.1.3 P 97 L 43 # i-45 Yseboodt, Lennart Philips Lighting					
Comment TypeTRComment StatusAPres: DiminicoFor a constant power load and a worse case PSE the current per pair (ICable, A) is dependent on the loop resistance (equation 145-2). The current per pair/conductor is a parameter used to limit the number of 4-pair cables in a cable bundle. The 802.3bt nominal highest current per pair (ICable, A) derived by assuming the worse case DC loop restistance (RCh), associated with 100 meters of cabling, is being used to limit the number of 4-pair cables in a bundle for all cabling lengths (DCR). Assuming the worse case DCR (length) for all cabling topologies leads to overly pessimistic limits on the number of 4-pair cables in a cable bundle.SuggestedRemedyDevelop informative Annex to characterize the current as a function of DCR (length) for	Comment Type E Comment Status A Editor There are two paragraphs under Table 145-1: "I Cable is the current on one twisted pair in the balanced twisted-pair cable" "I Cable , defined in Table 145-1, is the highest nominal current on a pair for a system without pair-to-pair current unbalance" It doesn't make sense to say where ICable is defined in the second paragraph. SuggestedRemedy Change as follows:					
constant power loads and worse case PSEs (equation 145-2). Presention of proposed Annex to be provided. Response Response Status C ACCEPT IN PRINCIPLE.	"I Cable, defined in Table 145-1, is the current on one twisted pair in the balanced twisted- pair cable" "I Cable is the highest nominal current on a pair for a system without pair-to-pair current unbalance"					
adopt diminico_01_0917_final.pdf	Response Response Status C ACCEPT IN PRINCIPLE. Change as follows: "I Cable, specified in Table 145-1, is the current on one twisted pair in the balanced twisted-					
	"I Cable is the highest nominal current on a pair for a system without pair-to-pair current unbalance"					

Pa **97** Li **43**

C/ 145 SC 145.1.3 P 97 L 49 # [i-371 Thompson, Geoffrey Individual Individual	C/ 145 SC 145.1.3 P 98 L 6 # i-372 Thompson, Geoffrey Individual Indititititititititititititititititititit
Comment Type ER Comment Status A Editor This is not the "definition" of Icable, it is the specification. SuggestedRemedy Change the word "defined" to "specified". Response Response Status W ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. Change as follows: "I Cable, specified in Table 145-1, is the current on one twisted pair in the balanced twiste	I Comment Type E Comment Status R definition It is a fine point but Iport is defined on the basis of the cabling, but a "port" is a feature of equipment, not cabling. Therefore the definition should be "Iport is the total current sourced by a PSE or sunk by a PD." SuggestedRemedy Change text per comment. Response Response Status C REJECT. The existing definition is correct and points out that this is the current on pairs of the same
pair cable" "I Cable is the highest nominal current on a pair for a system without pair-to-pair current unbalance" This resolution is identical to comment #45.	cabling. Cl 145 SC 145.1.3.1 P 98 L 28 # [i-378] Thompson, Geoffrey Individual Individual Editori Comment Type ER Comment Status A Editori There is no reason for 145.1.3.1 Cabling requirements and 145.3.2 Link section
Cl 145 SC 145.1.3 P 98 L 2 # [i-334] Abramson, David Texas Instruments Inc Texas Instruments Inc Comment Type E Comment Status A Editor Inconsistent language: This clause uses "pairset DC loop resistance" However, a few lines below (lines 10 and 15) we use "DC pairset loop resistance". SuggestedRemedy Editor to change line 2 to "DC pairset loop resistance" and confirm all other uses in claus	 requirements to be separate peer clauses. There is no difference between the two so there is no reason to have separate clauses. SuggestedRemedy Consolidate the text of the two sub-clauses into a single clause or consolidate the text into any new form of the specification. Response Response Status C ACCEPT IN PRINCIPLE.
145 are aligned. Response Response Status C ACCEPT IN PRINCIPLE. change line 10 to "RCh is the maximum pairset DC loop resistance, as defined". Editor to search document and change any usages to "pairset DC loop resistance". One	Consolidate 145.1.3.1 and 145.1.3.2 into a single clause.

Pa **98** Li **28**

Cl 145 SC 145.1.3.1 P 98 L 28 # [i-379] Thompson, Geoffrey Individual Inditindividual </td <td>C/ 145 SC 145.2 P 99 L 1 # i-347 Jones, Chad Cisco Systems, Inc. Cisco Systems, Inc.</td>	C/ 145 SC 145.2 P 99 L 1 # i-347 Jones, Chad Cisco Systems, Inc.
Comment TypeERComment StatusAPres: Yseboodt9The placement of the cabling specifications in 145.1.3 System Parameters is wrong. Cabling is not a "system parameter". Placement there is organizationally confusing. Cabling is a full element of the the specified 3 element system. The cabling should have its own sub-clause at a peer level with 145.2 PSE and 145.3 PD.	Comment Type TR Comment Status R PSE Powe Chair notes Confirm that it is not possible that a Type 3, 4 PSE DOES NOT present 4 or 5 event class and only uses L1 to get to >30W. I know this is a bad format comment and breaks all my rules. I ran out of time to research. I will withdraw if I can find the answer after the ballot closes.
SuggestedRemedy Move the specification (whether it be by reference or local) for cabling to its own higher level clause, presumably cl. 145.4 which would bump the rest of the clause further out.	SuggestedRemedy Make the change to prevent a Type 3 or 4 PSE from only using LLDP to get to >30W
Response Response Status C ACCEPT IN PRINCIPLE.	Response Response Status C REJECT.
Adopt yseboodt_09_0917_introduction.pdf C/ 145 SC 145.1.3.1 P 98 L 40 # [i-46 Yseboodt, Lennart Philips Lighting Philips Lighting Philips Lighting Philips Lighting	Here is the text that prevents that: Page 148, line 28 says: "A PSE shall be capable of assigning the highest Class it can support by means of Multiple-Event Physical Layer Classification." This should prevent the behavior stated in your comment.
Comment Type E Comment Status A Editorial Footnote starts with number 3. It is the third footnote of the entire document	C/ 145 SC 145.2.1 P 99 L 25 # i-346 Jones, Chad Cisco Systems, Inc. Eisco S
SuggestedRemedy Check with Editorial staff to see if this is correct, and fix if needed.	Comment Type E Comment Status A PSE Powe Chair notes We are missing the statement that a PSE does not change Type once it is powering a PD. PSE Powering a PD. PSE Powering a PD.
Response Response Status C ACCEPT.	SuggestedRemedy On page 99, line 25, add the sentence: Once a PSE is reached POWER_ON, PSE Type does not change.
	Response Response Status C ACCEPT IN PRINCIPLE.
	Add sentence after line 26: "PSE Type is a constant."

Pa **99** Li **25**

145 SC 145.2.1 P 99 L 30 # i-259 kacs, Miklos Silicon Laboratories	C/ 145 SC 145.1.3.1 P 102 L 30 # i-48 Yseboodt, Lennart Philips Lighting
omment Type E Comment Status R Editorial	Comment Type ER Comment Status R Cabl
The "Range of maximum class supported" column of table 145-2 is confusing. Class 8 is not a range, and it suggests that Type 4 PSE only supports Class 8	"Type 3 and Type 4 operation requires Class D or better cabling as specified in ISO/IEC 11801:2002."
ggestedRemedy Break it to 2 columns for single and dual signature. esponse Response Status REJECT. The reason for the ranges is not single vs. dual signature. It is that 2-pair Type 3 can support class 3 (to replace old type 1 systems), or class 4 (to replace old type 2 systems). Furthermore, 4-pair Type 3 can support a maximum of class 5 (45W) or class 6 (60W). Finally, Type 4 is required to support all classes (up to 8, 90W).	Redundant reference to Type. Also, not completely true, a Type 3 system operating at Class 3 will still work over 20 ohm cable. Trying to explain that nuance in this sentence seems unneccesairy. SuggestedRemedy "Class D or better cabling as specified in ISO/IEC 11801:2002 is required to support operation as specified in this Clause." Response Response Status U REJECT.
145 SC 145.2.2 P 99 L 53 # i-47 eboodt, Lennart Philips Lighting P	This comment references a sentence that does not exist in the draft.
mment Type ER Comment Status A Editorial	C/ 145 SC 145.2.4 P 107 L 40 # i-268 Stewart, Heath Analog Devices Inc. Image: Comparison of the second seco
TOPIC: and/or The Chicago Manual of Style says the following about the use of 'and/or': "Avoid this Janus-faced term. It can often be replaced by 'and' or 'or' with no loss in meaning. Where it seems needed, try 'or or both'. But also think of other possibilities." "PSEs can be compatible with 10BASE-T, 100BASE-TX, 1000BASE-T, 2.5GBASE-T, 5GBASE-T, and/or 10GBASE-T." rggestedRemedy "PSEs can be compatible with 10BASE-T, 100BASE-TX, 1000BASE-T, 2.5GBASE-T, 5GBASE-T, or 10GBASE-T."	Comment Type E Comment Status A PSE Type "or" implies exclusivity. Eg the set of permitted polarity configures only includes one Alternative. "PSEs shall use only the permitted polarity configurations associated with Alternative A or Alternative B" "and" implies the selection can be made from A, B, A and B. Respectfully I believe this merits a less than one minute discussion and will withdraw if contentious. SuggestedRemedy Change "or" to "and"
esponse Response Status C	Response Response Status C
	ACCEPT.

Pa **107** Li **40**

C/ 145 SC 145.2.4	P 107	L 40	# i-49	C/ 145	SC 145.2	.5	P 108	L 6	# i-50
/seboodt, Lennart	Philips Lighting	y	Pres: Darshan12	Yseboodt, Comment		Comm	Philips Lighti ent Status D	ng	Pres: Ysebood
 A PD's diode bridge is the dominant, and most unpredicatable, contributor to pair-to-pair current unbalance. Diode specifications generally do not include information or guarantees about the maximum spread in forward voltage between samples. This makes it hard to get to a provable correct design that will always meet the current unbalance spec. It is however not impossible, analysis over the course of this project has shown that diode forward voltage differences of more than 60mV are extremely rare. This number has been used to calculate the unbalance budget for the PD. What isn't taken into account is diode aging. As diodes are exposed to current and temperature, their forward voltage will begin to drift. A pair of parallel diodes exposed to roughly the same current may be expected to age in the same way (this is uncertain, but let's accept it for the moment). If 4-pair PSEs are allowed to provide power in polarity configurations that can result in ONE pairset having the other polarity between two PSEs, this would mean that a PD that has been exposed to a certain current configuration, would find itself powered in a way that has one 'aged' diode conduct, and another 'new' diode in parallel. By 'new' I refer to a diode that has not seen any significant current over it's lifetime. At the moment of writing this comment, it is unknown what the magnitude of this issue is. Test to determine this are planned. 				Clause 33 in the base standard, subclause 33.5 says: "If the PSE is implemented with a management interface described in 22.2.4 or 45.2 (MDIO), then the management access shall use the PSE register definitions shown in 33.5.1. Where no physical embodiment of the Clause 22 or Clause 45 management is supported, equivalent management capability shall be provided. Managed objects corresponding to PSE and PD control parameters and states are described in Clause 30. Clause 145 will not define these specific registers, as implementors choose to use a different interface than MDIO to configure the PSE. We should however maintain the requirement that certain basic parameters in the state diagram must be configurable by the implementor of the PSE. <i>SuggestedRemedy</i> Adopt yseboodt_05_0917_management.pdf					lefinitions shown in 45 management is anaged objects escribed in Clause 30." s choose to use a
				Proposed Response Response Status Z REJECT. This comment was WITHDRAWN by the commenter. Cl 145 SC 145.2.5.1 P 108 L 48 # i-51 Yseboodt, Lennart Philips Lighting					
				Yseboodt, Comment		Comm	Philips Lighti ent Status A	ng	Editor
SuggestedRemedy 1. Quantify this issue for 2. Appropriate solition, if	the November meeting needed to be presented the	en		"If the to the s	connected Pl SISM_STAR	D is identified T state and re	as dual-signature	at which point t	ate diagram will proceed he semi-independent
Response Response Status U REJECT. A remedy was not provided with this comment.		State names do not need the extra word state. SuggestedRemedy Change to: "If the connected PD is identified as dual-signature, the top level state diagram will proce to SISM_START and remain in that state, at which point the semi-independent state diagrams for the Primary and Secondary Alternative become active."					ndependent state		
				Response		Respon	nse Status C		

Pa **108** Li **48**

C/ 145 SC	C 145.2.5.3	P 109	L 42	# i-253	C/ 145	SC 145.2.5.4	4 P 110	L 27	# i-52
Peker, Arkadiy		Microsemi Cor	poration		Yseboodt, Le	nnart	Philips Lighting	J	
Comment Type	TR	Comment Status A		PSE SD	Comment Ty	pe ER	Comment Status A		PSE S
Per the def and not stag detection ve a) To delete and also up b) (Preferred	inition of CC_ ggered and the ersions. So we figure 145B- date state ma d) Keep Figure ered detectior	te to the comment that requ DET_SEQ=0 for dual-signa is contradicts figure 145B-3 have two options to resolv to sync with CC_DET_SE inchine which will be complic te 145B-3, and change the in addition to parallel detect	ture, the detec that is shown e this: Q=0 definition ated task at thi ""CC_DET_SE	tion need to be parallel as one of the staggered for dual-signature PDs s point of time. OR, Q=0 definition that to	"FALSE: TRUE: or power Why are SuggestedRe Replace	The PSE is n The PSE has is being force we describin emedy TRUE by:	pri, the values are described: to to apply power to the Prima detected, classified, and will p ed on the Primary Alternative ir g half of the state machine for	n TEST_MODE the 'TRUE' val	<u> </u>
SuggestedReme	edy				TRUE. I		apply power to the Primary Alte	analive.	
		eck is followed by staggered	detection for a	a single-signature PD	Same ch	ange for _sec	2.		
		a dual-signature PD." followed by staggered deter	ction for a sing	le-signature PD and	Response		Response Status U		
		ection for a dual-signature P		Ū	ACCEPT	IN PRINCIPI	LE.		
Response ACCEPT.		Response Status W				oice 1 below	as new definitons of variable:		
Cl 145 SC Darshan, Yair Comment Type	C 145.2.5.3 T	P 109 Comment Status D	L 42	# i-481 Repeats	TRUE:	The PSE has ng the Primar	ot to apply power to the Prima detected, classified, and will p y Alternative, or power is being	ower a PD on	
Per the def and not stag	inition of CC_ ggered and th	te to the comment that requ DET_SEQ=0 for dual-signa is contradicts figure 145B-3 e have two options to resolv	ture, the detec that is shown	tion need to be parallel	Yseboodt, Le		Philips Lighting	L 42 g	# li-53
a) To delete and also up	e figure 145B- date state ma	3 to sync with CC_DET_SE achine which will be complic	Q=0 definition ated task at thi	s point of time. OR,	Comment Ty Variable		Comment Status A abled is not consistent with e.g	g. pse_dll_enal	Editoria
	ered detectior	e 145B-3, and change the in addition to parallel detection			SuggestedRe Change v	•	lass_enabled to autoclass_en	able throughou	ut draft.
SuggestedReme	edv				Response		Response Status C		
Change "Co and parallel To: Connect	detection Che tion Check is	eck is followed by staggered a dual-signature PD." followed by staggered dete ection for a dual-signature P	ction for a sing	0 0	ACCEPT				
Proposed Respo	onse	Response Status Z							
REJECT.		-							
This comme	ent was WIT⊦	IDRAWN by the commenter							
This comme	ent was withd	rawn before the comment re	solution meeti	ng.					

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **110** Li **42**

C/ 145 SC 145.2.5.4 Yseboodt, Lennart	P 111 Philips Lighting	L 30	# i-54	C/ 145 SC 145.2 Yseboodt, Lennart	2.5.4 P 112 Philips Lighting	L 38 g	# <u>i-56</u>
	Comment Status A y variable that indicates whether		PSE SD	diagram.	agram variable list, the variable IF	Port-2P-pri is n	PSE SL ot used in the state
The variable is not tem SuggestedRemedy Strike 'temporary'	porary, just it's use is restricted	in nature.		Same for IPort-2P SuggestedRemedy Remove both varia			
Response ACCEPT.	Response Status W			Response ACCEPT.	Response Status W		
C/ 145 SC 145.2.5.4 Darshan, Yair	P 111	L 36	# i-457	C/ 145 SC 145.2 Stewart, Heath	2.5.4 P 113 Analog Device	L 24 es Inc.	# i-269
and PD have negotiate	Comment Status A ion dll_4PID "dll_4PID A variab ed 2-pair or 4-pair power." at they were negotiate etc.	le that indicate	Pres: Yseboodt4 es whether the PSE	Comment Type T option_class_prob increase classifica See stewart_0917		ssapated heat	PSE SD during classification and
SuggestedRemedy Change from "dll_4PIE		a negatistad 2		SuggestedRemedy Adopt stewart_091	7_01.		
To: "dll_4PID	is whether the PSE and PD have is whether the PSE and PD have Link Layer."	0		Response ACCEPT IN PRIN ACCEPT IN PRIN	-		
Response ACCEPT IN PRINCIPL	Response Status C E.			adopt stewart_01_	0917_final.pdf		
	variable indicating the state of d, as defined in Table 79-4."	the PD 4PID b	it in the Power	This resolution is id	dentical to comment #198.		
C/ 145 SC 145.2.5.4 Yseboodt, Lennart	P 112 Philips Lighting	L 38	# i-55				
Comment Type TR	<i>Comment Status</i> A am variable list, the variable llnm	ush-2P is not u	PSE SD used in the state				
In the PSE state diagra diagram.							
•							

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line Pa **113** Li **24**

C/ 145 SC 145.2.5.4 Darshan, Yair	P 113	L 40	# i-477		<i>Cl</i> 145 Peker, Arka		145.2.5.4	1	P 113 Vicrosemi Co	L 40 prporation	# i-249
	e PSE will continue to det ne event an invalid detect pplies to CC_DET_SEQ = be the Secondary Alternative if w issues: "in the event an invalid de fines the TRUE and FALS ignature is found" in the T lead to wrong interpretation riable can be set in system therpreted as this parameter	or class result i = 3. ive if an invalid an invalid sign tect or class re SE. Only the "in RUE and FALS on. It should be n config phase ier can be confi	onally class on the is found on the Prir I signature is found nature is found on the sult is found" is not valid detection" is SE definition is not " if an invalid signa or on the fly, but the igured only on the f	mary d on the t ature he	Comment 7 In the v "option, This va Second Alterna Values: FALSE the Prin TRUE: Primary 1) The reflecte address 2) The logically will be f	ype ariable probe riable i ary Alt ive. Th PSE PSE d Alterr definiti d in th sed. text " i accur ound"	a_alt_sec indicates in ternative in his variable does not p lternative. on text say e text that if an invalie rate and co since this ion may be	Comment Si robe_alt_sec do f the PSE will of the event an if e applies to CC probe the Secondary the Secondary have few issu ys "in the event defines the TR d signature is fo an lead to wron variable can be e interpreted as	tatus A efinition: invalid detect C_DET_SEQ indary Alternative es: t an invalid detect UE and FAL ound" in the ¹ og interpretati e set in syste s this parame	etect and condit or class result = 3. tive if an invalid f an invalid sigr etect or class re SE. Only the "ir TRUE and FAL on. It should be m config phase	PSE ionally class on the is found on the Primar d signature is found or nature is found on the esult is found" is not valid detection" is SE definition is not " if an invalid signatu or on the fly, but the igured only on the fly
SuggestedRemedy Change the TRUE and FA "FALSE: PSE does not pro the Primary Alternative. TRUE: PSE does probe th Primary Alternative." To: "FALSE: PSE does not pro classification will be found TRUE: PSE does probe th classification will be found Proposed Response REJECT. This comment was WITHE This comment was withdra	bbe the Secondary Alternative if bbe the Secondary Alternative on the Primary Alternative e Secondary Alternative on the Primary Alternative Response Status Z	an invalid sign ative if an invalid an invalid dete a" r.	ature is found on the detection signature or	he ure or	"FALSE the Prir TRUE: Primary To: "FALSE classific Response ACCEF Change FALSE found o TRUE:	the T PSE d Alterr PSE d Alterr PSE d ation T IN F T IN F PSE n the F PSE d	RUE and I does not lternative. oes probe native." does not will be four oes probe will be four PRINCIPLE and FAL does not p Primary Al oes probe	probe the Secondary probe the Secondary the Secondary and on the Prima <i>Response St</i> E. SE definitions probe the Secondary the Secondary	ondary Altern Alternative ondary Altern ary Alternative ary Alternative ary Alternative ary Alternative to: ndary Alterna solication is Alternative	f an invalid sigr ative if an invali e. f an invalid dete e" tive if an invalid invalid on the P	d signature is found o nature is found on the d detection signature ection signature or d detection signature is rimary Alternative. ection signature is fou Alternative.

Pa **113** Li **40**

C/ 145 SC 145. Yseboodt, Lennart	2.5.4	P 114 Philips Lighting	L 19	# <u>i-57</u>	C/ 145 Yseboodt,	SC 145.2.5.4 Lennart	4	P 114 Philips Lightir	L 25	# i-59
Comment Type E	Comment	Status A		PSE SD	Comment	Type TR	Comment	Status A		PSE SL
	e (see 145.2.8.7) f	or at least T CUT	-2P of a one s	load condition on the second sliding time."	Issue: comm	SLIDING we use the cond ents try to make et everything in	the whole bun	ch consistent.		nsistently, the SLIDING
SuggestedRemedy					In this	case, the descri	intion of the ov	orload rules is i	in 1/15 2 8 7 and	d should not be
Replace by: "A variable indicat	ing if the PSE outp	out current has be	en in an over	load condition on the						ch perfectly like here).
Primary Alternativ	e (see 145.2.8.7) f			second sliding window."						oad condition on the e second sliding time."
Same fix for ovld_					Suggested	IRemedy				
Response ACCEPT IN PRIN	Response 3 CIPLE.	Status C				able indicating i dary Alternative			been in an overl	oad condition on the
"A variable indicat Primary Alternativ	•	out current has be	een in an over	load condition on the	Response ACCE	PT.	Response S	Status W		
This resolution is i	dentical to comme	nt #58.			C/ 145	SC 145.2.5.4	4	P 114	L 32	# i-270
C/ 145 SC 145.	2.5.4	P 114	L 20	# i-58	Stewart, H	eath		Analog Device	es Inc.	
rseboodt, Lennart		Philips Lighting			Comment	Туре Т	Comment	Status A		PSE SL
Comment Type TR Topic: SLIDING Issue: we use the comments try to n Aim: get everythin	concept of 'sliding nake the whole bur	windows' in our onch consistent.	-	PSE SD nsistently, the SLIDING g window".	possib pd_4p This va power	le procedures. T air_cand ariable is used b	The Physical C by the PSE to ir This variable i	lassification pro	ocedure is missi onnected PD is	hich describes 4 ing. a candidate to receive etection, Connection
In this case, the d	escription of the ov	verload rules is in	145287 an	d should not be	Suggested					
				ch perfectly like here).	Chang	e "Connection C	Check, " to "Co	nnection Check	k, Physical Class	sification, "
				load condition on the second sliding time."	Response ACCE	PT IN PRINCIPI	Response S	Status C		
SuggestedRemedy "A variable indicat Primary Alternativ		out current has be	een in an over	load condition on the	Chang	e "Connection C	Check, " to "Co	nnection Check	k, Physical Laye	er Classification, "
	_	C								
Response	Response	Status W								

Pa 114 Li **32**

		1 07	#			_	DAAF	/ ==	"
C/ 145 SC 145.2.5.4	4 <i>P</i> 114	L 37	# i-60	C/ 145	SC 145.2.5.4	4	P 115	L 53	# i-62
Yseboodt, Lennart	Philips Lighting	g		Yseboodt, L	ennart		Philips Lightir	ng	
Comment Type E	Comment Status A		PSE SD	Comment Ty	/pe ER	Comment S	Status A		PSE SI
	es 4PID and Type 3 or Type 4 on the method to generate 3 class			by Phys		sification. The			the PSE may assign ementation-specific
The PD has been esta	ablished ?								
SuggestedRemedy						ng in this sente that Table 145-		a 'PD Class' ? trictions that mu	st be followed.
	es that 4PID has been establish te 3 class events to determine			SuggestedR Replace	-				
Response ACCEPT IN PRINCIP	Response Status C	ine i D s Type.		"This va classific	riable indicate ation. The valu				e PD by Physical Layer Table 145-6 and set in
Change to:	s that the Type of the dual-sig	nature PD has h	peen established on the	Response ACCEP	Г.	Response S	Status W		
Primary Alternative by	Physical Laver Classification.	"							
Primary Alternative by	Physical Layer Classification.			C/ 145	SC 145.2.5.4	4	P 116	L 11	# i-63
Primary Alternative by Change FALSE definti FALSE: PD is not a ca	r Physical Layer Classification. ion to: andidate for 4-pair power or the	п		Yseboodt, L	ennart		Philips Lightin		
Primary Alternative by Change FALSE definti	r Physical Layer Classification. ion to: andidate for 4-pair power or the	п		Yseboodt, L Comment Ty	ennart /pe ER	Comment S	Philips Lightir S <i>tatus</i> A	ng	PSE SI
Primary Alternative by Change FALSE definiti FALSE: PD is not a ca Classification to deterr	Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type.	" e PSE has not u 		Yseboodt, L <i>Comment T</i> y "pse_av assign b	ennart /pe ER ail_pwr_pri: Th y Physical Lay	Comment S	Philips Lightir Status A cates the highe n on the Prima	ng est power PD Cl ary Alternative. T	-
Primary Alternative by Change FALSE definit FALSE: PD is not a ca Classification to detern Cl 145 SC 145.2.5.4 Yseboodt, Lennart Comment Type E "This variable indicate	 Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type. 4 P 114 Philips Lighting Comment Status A S 4PID and Type 3 or Type 4 does 	" PSE has not u <i>L</i> 45 g dual-signature P	used Physical Layer # <u>i-61</u> <i>PSE SD</i> PD has been	Yseboodt, L Comment Ty "pse_av assign b in an im - Somet	ennart //pe ER ail_pwr_pri: Th y Physical Lay plementation-s hing went wrou	Comment s nis variable indi yer classificatio specific mannel ng in this sente	Philips Lightir Status A cates the high n on the Prima r; see Table 14 nce what is	ng est power PD Cl ary Alternative. T I5-6."	PSE SI lass the PSE may The value is determined
Primary Alternative by Change FALSE definit FALSE: PD is not a ca Classification to detern Cl 145 SC 145.2.5.4 Yseboodt, Lennart Comment Type E "This variable indicate	 Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type. 4 P 114 Philips Lighting Comment Status A 	" PSE has not u <i>L</i> 45 g dual-signature P	used Physical Layer # <u>i-61</u> <i>PSE SD</i> PD has been	Yseboodt, L Comment Ty "pse_av assign b in an im - Somet - We sh	ennart <i>tpe</i> ER ail_pwr_pri: Th y Physical Lay plementation-s hing went wrow puld point out	Comment s nis variable indi yer classificatio specific mannel ng in this sente	Philips Lightir Status A cates the high n on the Prima r; see Table 14 nce what is	ng est power PD Cl ary Alternative. T I5-6." a 'PD Class' ?	PSE SI lass the PSE may The value is determined
Primary Alternative by Change FALSE definit FALSE: PD is not a ca Classification to detern Cl 145 SC 145.2.5.4 Yseboodt, Lennart Comment Type E "This variable indicate	 Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type. 4 P 114 Philips Lighting Comment Status A sta PID and Type 3 or Type 4 of the method to generate 3 class 	" PSE has not u <i>L</i> 45 g dual-signature P	used Physical Layer # <u>i-61</u> <i>PSE SD</i> PD has been	Yseboodt, L Comment Ty "pse_av assign b in an im - Somet	ennart ype ER ail_pwr_pri: Th y Physical Lay plementation-s hing went wron puld point out emedy	Comment s nis variable indi yer classificatio specific mannel ng in this sente	Philips Lightir Status A cates the high n on the Prima r; see Table 14 nce what is	ng est power PD Cl ary Alternative. T I5-6." a 'PD Class' ?	PSE SI lass the PSE may The value is determined
Primary Alternative by Change FALSE definit FALSE: PD is not a ca Classification to detern Cl 145 SC 145.2.5.4 Yseboodt, Lennart Comment Type E "This variable indicate established by using the The PD has been established	 Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type. 4 P 114 Philips Lighting Comment Status A sta PID and Type 3 or Type 4 of the method to generate 3 class 	" PSE has not u <i>L</i> 45 g dual-signature P	used Physical Layer # <u>i-61</u> <i>PSE SD</i> PD has been	Yseboodt, L Comment Ty "pse_av assign b in an im - Somet - We sh SuggestedR Replace "This va	ennart ype ER ail_pwr_pri: Th y Physical Lay plementation-s hing went wrow ould point out emedy by: riable indicate	Comment S his variable indi yer classificatio specific manner ng in this sente that Table 145- s the highest C	Philips Lightir Status A cates the higher n on the Prima r; see Table 14 nce what is 6 contains rest lass the PSE r	ng est power PD Cl ary Alternative. T ł5-6." a 'PD Class' ? trictions that mu	PSE S lass the PSE may he value is determined
Primary Alternative by Change FALSE definit FALSE: PD is not a ca Classification to detern Cl 145 SC 145.2.5.4 Yseboodt, Lennart Comment Type E "This variable indicate established by using th The PD has been esta SuggestedRemedy Replace by: "This variable indicate	 Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type. 4 P 114 Philips Lighting Comment Status A sta PID and Type 3 or Type 4 of the method to generate 3 class 	PSE has not u <i>L</i> 45 g dual-signature P events on the Seco	# <u>i-61</u> # <u>PSE SD</u> D has been Secondary Alternative."	Yseboodt, L Comment Ty "pse_av assign b in an im - Somet - We sh SuggestedR Replace "This va classific The valu	ennart ype ER ail_pwr_pri: Th y Physical Lay plementation-s hing went wrow ould point out emedy by: riable indicate ation on the P	Comment S his variable indi yer classificatio specific manner ng in this sente that Table 145- s the highest C rimary Alternati to the allowed	Philips Lightin Status A cates the highen n on the Prima r; see Table 14 nce what is 6 contains rest lass the PSE r ve.	ng est power PD Cl ary Alternative. T ł5-6." a 'PD Class' ? trictions that mu	PSE SI PSE SI he value is determined st be followed. e PD by Physical Layer
Primary Alternative by Change FALSE definit FALSE: PD is not a ca Classification to detern Cl 145 SC 145.2.5.4 Yseboodt, Lennart Comment Type E "This variable indicate established by using th The PD has been esta SuggestedRemedy Replace by: "This variable indicate	Physical Layer Classification. ion to: andidate for 4-pair power or the mine the PD's Type. 4 P 114 Philips Lighting Comment Status A es 4PID and Type 3 or Type 4 of he method to generate 3 class ablished ?	PSE has not u <i>L</i> 45 g dual-signature P events on the Seco	# <u>i-61</u> # <u>PSE SD</u> D has been Secondary Alternative."	Yseboodt, L Comment Ty "pse_av assign b in an im - Somet - We sh SuggestedR Replace "This va classific The valu	ennart ype ER ail_pwr_pri: Th y Physical Lay plementation-s hing went wrow buld point out emedy by: riable indicate: ation on the Phile is restricted	Comment S his variable indi yer classificatio specific manner ng in this sente that Table 145- s the highest C rimary Alternati to the allowed ic manner."	Philips Lightin Status A cates the highen n on the Prima r; see Table 14 nce what is 6 contains rest lass the PSE r ve.	ng est power PD Cl ary Alternative. T I5-6." a 'PD Class' ? trictions that mu may assign to th	PSE SI PSE SI he value is determined st be followed. e PD by Physical Layer

Pa **116** Li **11**

C/ 145 SC 145.2.5.4 P 117 L 1 # i-64	Cl 145 SC 145.2.5.5 P 119 L 10 # i-271
Yseboodt, Lennart Philips Lighting	Stewart, Heath Analog Devices Inc.
Comment Type TR Comment Status A PSE SD	Comment Type E Comment Status A Editorial
"pse_power_update_pri: A variable that is set when the PSEAllocatedPowerValue_alt(X) in the DLL state diagram in Figure 145-43 has been updated."	There are two differing spelling of t_class_acs vs t_classacs. Note the _ after the t denotes subscript.
Does not mention which Alternative this is for. The _sec variant has the exact same	SuggestedRemedy
description text.	Globally change t_classacs_timer to t_class_acs. Note the _ after the t denotes subscript.
SuggestedRemedy	Page 119, line 10 Page 128, lines 17 and 21
Change to:	Response Response Status C
"pse_power_update_pri: A variable that is set when the PSEAllocatedPowerValue_alt(X) in the DLL state diagram in Figure 145-43 has been updated, where X is the Primary Alternative."	ACCEPT IN PRINCIPLE.
Alternative.	Globally change "tclassacs_timer" to "tclass_acs_timer"
And for pse_power_update_sec:	C/ 145 SC 145.2.5.5 P 119 L 36 # i-272
"pse_power_update_sec: A variable that is set when the PSEAllocatedPowerValue_alt(X) in the DLL state diagram in Figure 145-43 has been updated, where X is the Secondary	Stewart, Heath Analog Devices Inc.
Alternative."	Comment Type E Comment Status A PSE SD
Response Response Status W	sism state machines only have four class events.
ACCEPT.	SuggestedRemedy
C/ 145 SC 145.2.5.4 P 118 L 29 # j-65	Change "fifth" to "fourth"
Yseboodt, Lennart Philips Lighting	Response Response Status C
Comment Type E Comment Status A PSE SD	ACCEPT.
"temp_var: A temporary variable used to store the value of the state variable pd_class_sig."	
	Cl 145 SC 145.2.5.5 P 119 L 39 # i-273
The variable is not temporary, it's use is.	Stewart, Heath Analog Devices Inc.
SuggestedRemedy	Comment Type E Comment Status A PSE SD
Change to: "temp_var: A variable used to store the value of pd_class_sig." Same fix for temp_var_pri and temp_var_sec.	sism state machines only have four class events.
Response Response Status C	SuggestedRemedy Change "fifth" to "fourth"
ACCEPT.	Response Response Status C ACCEPT.

Pa **119** Li **39**

C/ 145									
-	SC 145.2.5.6	P 122	L 13	# i-274	C/ 145 SC 14	5.2.5.6	P 122	L 44	# i-276
Stewart, Heath	h	Analog Device	es Inc.		Stewart, Heath		Analog Devic	ces Inc.	
Comment Typ	e E	Comment Status A		PSE SD	Comment Type E	Comme	ent Status A		PSE SD
		ri sec] function is unique in sponses based on the prece					nction is unique in based on the prece		s previous calls and f calls.
SuggestedRei	medy				SuggestedRemedy				
	lues are based	for the Primary Alternative." I on all do_classification_pri		etection or class reset		e based on all do	condary Alternation_se		detection or class reset
Response		Response Status C			Response	Respons	se Status C		
	IN PRINCIPLE				ACCEPT IN PRI ACCEPT IN PRI				
Append th	ne follwing to th	ne end of the pse_allocated	_pwr_pri descript	JON:	Append the follw	ing to the end of t	the pse_allocated	l nwr nri descrint	tion:
The return	ned value is ba	sed on all previous do_clas	sification_pri fun	ction calls since the				_pm_pn dooonp	
		/AL_PRI or CLASS_RESET E assigned Class".	[_PRI. See Table	9 145-11 for a		ECT_EVAL_PRI o	or CLASS_RESE		ction calls since the e 145-11 for a
Make simi	ilar change for	_sec.							
Append th	e following to	the end of the pd_req_pwr_	nri description:		Make similar cha	nge for _sec.			
	to following to	ine end of the pd_red_pm_			Append the follo	wing to the end of	f the pd_req_pwr_	_pri description:	
last time in determina	n DETECT_E\ Ition of the PD	Ised on all previous do_clas /AL_PRI or CLASS_RESET requested Class".				ECT_EVAL_PRI	or CLASS_RESE		ction calls since the e 145-25 for a
Maka simi	ilar change for	_sec.			Make similar cha	nge for sec			
Make Sim					marte enniar ene				
C/ 145 S	SC 145.2.5.6 h	P 122 Analog Device	L 37 es Inc.	# i-275	This resolution is	identical to com	ment #274.		
C/ 145 Stewart, Heath	h	Analog Device	-					/ 13	# ; 277
Cl 145 Stewart, Heath Comment Typ	h De E	Analog Device Comment Status A	es Inc.	PSE SD	C/ 145 SC 14		P 123	L 13	# i-277
C/ 145 Stewart, Heath Comment Typ The pd_cl	h pe E lass_sig_xxx va	Analog Device	es Inc.	PSE SD	Cl 145 SC 145 Stewart, Heath	5.2.5.6	P 123 Analog Devic		
Cl 145 Stewart, Heath Comment Typ The pd_cl SuggestedRei	h pe E lass_sig_xxx va	Analog Device Comment Status A ariable returns class signatu	es Inc.	PSE SD	Cl 145 SC 149 Stewart, Heath Comment Type E	5.2.5.6 Comme	P 123	ces Inc.	PSE SD
Cl 145 Stewart, Heath Comment Typ The pd_cl SuggestedRei	h ve E lass_sig_xxx vi medy	Analog Device Comment Status A ariable returns class signatu	es Inc.	PSE SD	Cl 145 SC 149 Stewart, Heath Comment Type E	5.2.5.6 Comme	P 123 Analog Devic ent Status A	ces Inc.	PSE SD
Cl 145 S Stewart, Heath Comment Typ The pd_cl SuggestedRen Change "C	h be E lass_sig_xxx v <i>medy</i> Class" to "class	Analog Device Comment Status A ariable returns class signatu s signature"	es Inc.	PSE SD	Cl 145 SC 145 Stewart, Heath Comment Type E The pd_class_si	5.2.5.6 Comme g_xxx variable ret	P 123 Analog Devic ent Status A turns class signate	ces Inc.	PSE SD

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line Pa **123** Li **13** Page 41 of 134 9/15/2017 11:41:04 AM

C/ 145 SC 145.2.5.6 P 123 L 39 # 1-278	Cl 145 SC 145.2.5.7 P 125 L 1 # i-348
Stewart, Heath Analog Devices Inc.	Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status A PSE SD	Comment Type TR Comment Status D
Odd language in the do_detect_pri definition. Existing: open_circuit: The PSE has detected an open circuit. valid: The PSE has detected a PD requesting power. invalid: Neither open circuit nor valid PD detection signature has been found. SuggestedRemedy	Chair notes PSE State Diagram. I cannot find a path to power up with pse_ss_mode=0. There is the ELSE statement in POWER_ON, where alt_pwrd_pri gets set true and alt_pwrd_sec gets set false. This seems to allow a Type 3 PSE to power up a class 1-4 in 2P mode, (which my Chair note indicated I needed to confirm) but then it implies that there is no path to 4P power for Class 1-4. Will withdraw when I am educated on how to get to each operating point.
Change:	SuggestedRemedy
Valid: The PSE has detected a PD requesting power.	Change figure 145-13 to enable Class 1-4 operation on either 2P or 4P.
To Valid: The PSE has detected a valid PD signature.	Proposed Response Response Status Z
Response Response Status C	REJECT.
ACCEPT.	This comment was WITHDRAWN by the commenter.
	C/ 145 SC 145.2.5.7 P 125 L 1 # i-66
C/ 145 SC 145.2.5.6 P 123 L 48 # i-279	C/ 145 SC 145.2.5.7 P 125 L 1 # i-66 Yseboodt, Lennart Philips Lighting Philips Lig
Stewart, Heath Analog Devices Inc.	
Comment Type E Comment Status A PSE SD	Comment Type TR Comment Status D Pres: Yseboodt
Odd language in the do_detect_sec definition. Existing: open_circuit: The PSE has detected an open circuit. valid: The PSE has detected a PD requesting power. invalid: Neither open circuit nor valid PD detection signature has been found.	The PSE state diagram currently requires a PSE to either turn on, or go back to IDLE within Tpon referenced at the end of detection. Another option is to 'renew' Tpon by checking is the PD is drawing a correct mark current. This flexibility has a number of use cases as explained in http://www.ieee802.org/3/bt/public/may17/lukacs_01_0517_Mark&Hold_rev1.0.pdf
SuggestedRemedy	SuggestedRemedy
Change:	Adopt yseboodt_06_0917_markhold.pdf
Valid: The PSE has detected a PD requesting power. To	Proposed Response Response Status Z
Valid: The PSE has detected a valid PD signature.	REJECT.
Response Response Status C	This comment was WITHDRAWN by the commenter.

Pa **125** Li **1**

C/ 145 SC 145.2.5.7 Darshan, Yair	P 125	L 29	# i-396	C/ 145 Stover, Da	SC 145.2.5.7 vid	7 P 127 Analog Devi	L 33 ces Inc.	# i-288
Comment Type T In the exit from CXN_C (sig_type = single) *(((C (CC_DET_SEQ = 1) *(s How it can be that sig_)		T_SEQ = 3)) *! ner_done). [_SEQ = 1) *(sig	tcc2det_timer_done + g_pri = valid) *	Comment Missin should Suggested Chang (det_te 3)) * (c valid) -	Type ER g parenthesis in be inserted as a Remedy e to "(pse_altern mp = both_neitl let_temp = only_ ⊦ (pse_alternativ arenthesis.	Comment Status R PSE SD (shown in propose a right parenthesis). hative = both) * ((det_temp = her) * (sig_sec != valid) + (((t _one) * tdet2det_timer_done re = b) * (sig_pri = open_circ Response Status C	d change as a ri only_one) * (sig CC_DET_SEQ =))] + (pse_altern	g_pri != valid) + = 0) + (CC_DET_SEQ = ative = a) * (sig_pri !=
This comment was WI	HDRAWN by the commente	r.		The ar	c contains 15 op	pen parens and 15 closing pa	arens.	
Cl 145 SC 145.2.5.7 Yseboodt, Lennart Comment Type TR State diagram logic from at the end. Caused by editing imple SuggestedRemedy	drawn before the comment r P 125 Philips Lightin Comment Status A In START_DETECT to DETE ementation mistake of ysebor e way at the end: " (det_ten Response Status W	<i>L</i> 32 g CT_EVAL is m odt_09_0317.pd	# i-67 PSE SD issing a closing paren df (copy/paste mistake).	error, t DETEC Suggested Chang "(pse_ both_r (det_te +(pse_ To: "error_ +(det_ 3)) * (c	Type T xt allows the PS o go to IDLE. Th CT_EVAL to IDL Remedy e from: _alternative = bo ieither) * (sig_se mp = only_one) _alternative = b) condition + (psi temp = both_nei let_temp = only_	<i>P</i> 127 <i>Comment Status</i> D E to do detection and if then his is not covered by the stat E, we need to add "+error th) * ((det_temp = only_one) th) * ((det_temp = only_one) ((CC_DET_SEC * tdet2det_timer_done)) + ((* (sig_pri = open_circuit)" e_alternative = both) * ((det_ ither) * (sig_sec ? valid) + (((_one) * tdet2det_timer_done e = b) * (sig_pri = open_circuit)	e machine. As a _condition". * (sig_pri ? valion Q = 0) + (CC_DE ose_alternative temp = only_on CC_DET_SEQ)) + (pse_alternative	a result in the exit from d) +(det_temp = ET_SEQ = 3)) * = a) * (sig_pri ? valid) e) * (sig_pri ? valid) = 0) + (CC_DET_SEQ =
					CT.	Response Status Z THDRAWN by the comment		ing.

Pa **127** Li **33**

C/ 145 S	SC 145.2.5.7	P 127	L 33	# i-196		C/ 145	SC 145.2.5.7		P 128	L 8	# i-456
Peker, Arkadiy	/	Microsemi Cor	poration			Darshan, Y	air				
Comment Typ	e TR	Comment Status R			PSE SD	Comment 7	Гуре Т	Comment St	atus D		PSE SI
error, to go DETECT_	o to IDLE. Th EVAL to IDLE	E to do detection and if there is is not covered by the state E , we need to add to the con	machine. As a	a result in the exit	t from	allowin PSEs r	g many class cy nay DET-CLASS	cles performed S, Then provide	prior to powe PD Request	ering on a PD. ed Class information	dd flexibility to PSE by ation to host, Host then T-CLASS as necessary
SuggestedRer Change f						Suggested					,
both_neith (det_temp +(pse_alte To: ""error_co +(det_tem = 3)) * (de	ner) * (sig_sec = only_one) ernative = b) * ndition + (ps p = both_neit t_temp = only	tth) * ((det_temp = only_one) c NE valid) + (((CC_DET_SEC * tdet2det_timer_done)) + (ps * (sig_pri = open_circuit)"" e_alternative = both) * ((det_t ther) * (sig_sec NE valid) + (((y_one) * tdet2det_timer_done = b) * (sig_pri = open_circuit	Q = 0) + (CC_ se_alternative emp = only_o (CC_DET_SE)) + (pse_alter	DET_SEQ = 3)) * = a) * (sig_pri NE ne) * (sig_pri NE Q = 0) + (CC_DE	∗ E valid) valid) ET_SEQ	"option 2. Cha To: "!o 3. Add "option This va Values FALS	otion_probe2idle the following ne _probe2idle triable indicates : E: The PSE will	class_probe_dc CLASS_PROB *do_class_prob w variable to the if the PSE shoul not go to IDLE_	ne". E to CLASS e_done". variable list d go to IDLE PRI after exe	ERESET from: " in 145.2.5.4: after executing ecuting do_class	probe.
Response		Response Status W					-			ng do_class_pro	be. "
REJECT.						Proposed I	•	Response Sta	ntus Z		
Thoro is a	alobal ontry l	based on error condition into	IDI E that cov	vore this		REJEC	CT.				
	0 ,	_				This co	mment was WI	HDRAWN by th	e commente	er.	
C/ 145 S Darshan, Yair	SC 145.2.5.7	P 128	L 6	# i-398		This co	mment was with	drawn before th	e comment	resolution meetir	ng.
	IFICATION st	Comment Status A tate, the assignment pse_allo er variable definition that star			PSE SD e per						
	,	cated_power<= = 0 ver<= = 1									
Response ACCEPT	IN PRINCIPL	Response Status C E.									
	0 to the varia to the PD".	able description of pse allocat	ed power, with	n text "No power i	is						

Pa **128** Li **8**

<i>Cl</i> 145 <i>SC</i> 145.2.5.7 Darshan, Yair	P 128	L 46	# i-459	<i>Cl</i> 145 Darshan, Y	SC 145.2.5. air	7 P12	28 L 46	# i-458		
Comment Type T Comm	nent Status A		PSE SD	Comment T	Туре Т	Comment Status	А	PSE SD		
In the exit from CLASS_EV3 MA *(pd_class_sig ? 4) *((pse_avail the "+" in pd_class_sig+5 is (ac intent here is to used as mather	_pwr ? pd_class_sig ccording to page 109 natical sum. There i	g+5) +(pse_avai 9 line 22) "a Boo is a need to eithe	l_pwr > 5))", lean OR" while in the	*(pd_cl	ass_sig ? 4) *((g parenthesis ir	S_EV3 MARK_EV3 "to pse_avail_pwr ? pd_c pd_class_sig+5.				
definition or add another symbo	I for mathematical s	ummation.		••	•	_timer_done * (pse_alt	ernative = both) *(pd	class sig?4)		
SuggestedRemedy 1. add '++' symbol to table in pa summation.	0		nathematical	*((pse_ To: "to	_avail_pwr ? pd	_class_sig+5) +(pse_a e * (pse_alternative = b se_avail_pwr > 5))"	vail_pwr > 5))""			
 Change from "pd_class_sig+ Fix the same problem in P12 				Response		Response Status	С			
•	nse Status C	0 01010			PT IN PRINCIP PT IN PRINCIP					
Replace addition ("+") in MARK	EV3 and MARK_E	V_LAST with a s	sum() function.	Replac	e addition ("+")	in MARK_EV3 and M	ARK_EV_LAST with a	sum() function.		
Change logic as follows: CLASS_EV3 -> MARK_EV3 tcle3_timer_done * (pse_alterna ((pd_class_sig = 0) + (pse_avail CLASS_EV3 -> MARK_EV_LAS tcle3_timer_done * ((pse_alterna + ((pd_class_sig != 0) * (pse_avail	l_pwr > 5)) ST ative != both) + (pd_			Change logic as follows: CLASS_EV3 -> MARK_EV3 tcle3_timer_done * (pse_alternative = both) * (pd_class_sig != 4) * (pse_avail_pwr > 4) * ((pd_class_sig = 0) + (pse_avail_pwr > 5)) CLASS_EV3 -> MARK_EV_LAST tcle3_timer_done * ((pse_alternative != both) + (pd_class_sig = 4) + (pse_avail_pwr <= 4) + ((pd_class_sig != 0) * (pse_avail_pwr <= 5))) This resolution is identical to comment #459.						
				<i>Cl</i> 145 Darshan, Y	SC 145.2.5. air	8 P 12	28 L 54	# i-470		
				Comment T The titl	<i>Type</i> E e of figure 145-	Comment Status 13 is: "Figure 145-13 or single-signature.		iagram (continued)"		
					e from: "Figure	145-13Top level PSE ignature PSE state dia		nued)" to ""Figure 145-		
				Proposed F REJEC	•	Response Status	Z			
				This co	omment was W	ITHDRAWN by the co	mmenter.			

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Cl 145 SC 145.2.5.7 P 129 L 42 # i-399 Darshan, Yair	C/ 145 SC 145.2.5.8 P 129 L 54 # [i-471 Darshan, Yair
Comment Type T Comment Status D Repeats I could not find in the text allowance for the PSE to do detection and classification and if there is any implementation specific system error, to go to IDLE. I couldn't find how currently it is covered by the state machine. As a result in the state CLASS_EVAL I propose to add exit to IDLE with the condition erorr_condition. SuggestedRemedy Add exit from the state CLASS_EVAL to IDLE with the condition erorr_condition. Proposed Response Response Status Z REJECT. This comment was WITHDRAWN by the commenter. This comment was withdrawn before the comment resolution meeting.	Comment Type E Comment Status D PSE SD The title of figure 145-13 is: "Figure 145-13Top level PSE state diagram (continued)" however it is actually for single-signature. SuggestedRemedy Change from: "Figure 145-13Top level PSE state diagram (continued)" to ""Figure 145-13Top level, single-signature PSE state diagram (continued)" Proposed Response Response Status Z REJECT. This comment was WITHDRAWN by the commenter. This comment was withdrawn before the comment resolution meeting.
C/ 145 SC 145.2.5.7 P 129 L 42 # i-194 Peker, Arkadiy Microsemi Corporation Microsemi Corporation I-194 I-194	
Comment Type TR Comment Status R PSE SD I could not find in the text allowance for the PSE to do detection and classification and if there is any implementation specific system error, to go to IDLE. I couldn't find how currently it is covered by the state machine. As a result in the state CLASS_EVAL I propose to add exit to IDLE with the condition error condition.	
SuggestedRemedy Add exit from the state CLASS_EVAL to IDLE with the condition error condition.	
Response Response Status W REJECT.	

There is a global entry into IDLE based on the variable error_condition.

Pa **129** Li **54**

2/ 145 SC 145.2.5.8 Parshan, Yair	P 130	L 34	# i-474	C/ 145 Darshan, Ya	SC 145.2.5 . r	.8 P 130) L 54	# i-472
omment Type T Comme	ent Status A		PSES	D Comment Ty	pe E	Comment Status)	PSE SD
In the POWER_ON state we are a) The PSE is working over 4-pair	rs	e cases:				-13 is: "Figure 145-13T for single-signature.	op level PSE state di	agram (continued)"
 b) The PSE is working over 2-pair If we work over 4-pairs and we have 		for overale we	are allowing the eas	SuggestedR	emedy			
keep working until the sec will have continue to work.						e 145-13Top level PSE signature PSE state diag		ued)" to ""Figure 145-
In the case that the sec is continu in page 131 which is done by the semi_pwr_en * !error_sec * error_	exit from POWER			Proposed R REJECT	•	Response Status Z	2	
Now we are in SEMI_PWR_SEC we have erro_sec (going to IDLE)	and our options to or not sufficient p	ower (going to P	PWR_SEC is when OWER_DENIDE and	This cor	iment was W	/ITHDRAWN by the com	menter.	
then to IDLE) or tmpdo_timer_do So far all is good.	ne (going to IDLE)			This cor	ment was wi	ithdrawn before the com	ment resolution meet	ing.
Now if the use case is that the po <5. This will cause issue in the st			PD over 2-pairs, class	C/ 145	SC 145.2.5	.7 <i>P</i> 131	L 6	# i-400
1. The above use case means pe		<pre>state alt_pwrd_</pre>	pri=TRUE and	Darshan, Ya	r			
alt_pwrd_sec=FALSE i.e. only the 2. Now something happened and		on the pri		Comment Ty		Comment Status	=	PSE SD
3. When I have error event on the SEMI_POWER_ON_SEC becam	primary, the cond	dition from POW		In the ex !power_	it from SEMI	_PWRON_PRI to POWE and not !power_availabl	ER_DENIDED need t e	o be
move to SEMI_POWER_ON_SE	C which is a proble	em.THE SEC wa	as OFF already.so I	SuggestedR	emedy			
can't be in SEMI_POWER_ON_S SEMI_POWER_ON_SEC back to	EC. So the questi	from going to	ave to do to exit from	Change	from "!power	_available" to " "!power_	available_pri"	
SEMI_POWER_ON_SEC?		from going to		Response		Response Status	2	
The simplest way is: to prevent going to IDLE through the ERRO	oing to SEMI_PO\ R_DELAY state.	VER_ON_SEC in	n this case and allow	REJECT			-	
uggestedRemedy				Power_a	vailable_pri i	s only used in the SISM	s, not in the top-level	SD.
1. Make the following changes in			II_PWRON_SEC:	C/ 145	SC 145.2.5.	.7 <i>P</i> 131	L7	# i-401
Change from: "semi_pwr_en * !er To: "semi_pwr_en * !error_sec * e	error_pri * altpwrd_	_sec"		Darshan, Ya		., , , , , , , , , , , , , , , , , , ,		
2. Make the following changes in Change from:"(!semi_pwr_en*(er	the exit from POV	ER_ON to ERR	OR_DELAY:	Comment Ty	ре Т	Comment Status	R	PSE SD
To:"(!semi_pwr_en*(error_pri+err (semi_pwr_en*error_pri*!alt_pwrc	or_sec))+(semi_p	wr_en*error_pri*e	error_sec)+	In the expower_a	-	_PWRON_PRI to IDLE r	need to be power_ava	ailable_pri and not
esponse Response	se Status C			SuggestedR	emedy			
ACCEPT IN PRINCIPLE.				Change	from "power_	_available" to " "power_a	vailable_pri"	
				Response		Response Status		
Fix as follows: - Arc from POWER ON to SEMI F				REJECT				
semi pwr en * alt pwrd sec *!error - Arc from POWER ON to ERROI (!semi pwr en * (error pri + error s (semi pwr en * error pri * (error se	sec * error pri R DELAY: sec)) +)		Power_a	vailable_pri i	s only used in the SISMs	s, not in the top-level	SD.
/PE: TR/technical required ER/edit OMMENT STATUS: D/dispatched / ORT ORDER: Page, Line	orial required GR/ A/accepted R/reje	/general required	I T/technical E/editori NSE STATUS: O/open	al G/general W/written C/closed	J/unsatisfied		Pa 131 Li 7	Page 47 of 134 9/15/2017 11:41:04

C/ 145 SC 145.2.5.7 P 131 L 21 # i-402 Darshan, Yair	Cl 145 SC 14 Darshan, Yair	45.2.5.7	P 131	L 39	# i-404
Comment Type T Comment Status R PSE SD	Comment Type	T Comn	nent Status D		Pres: Yseboodt7
In the exit from SEMI_PWRON_SEC to POWER_DENIDED need to be !power_available_sec and not !power_available SuggestedRemedy Change from "!power_available" to " "!power_available_sec" Response Response Status C REJECT. Power_available_sec is only used in the SISMs, not in the top-level SD. C/ 145 SC 145.2.5.7 P 131 L 25 # [-403 Darshan, Yair Comment Type T Comment Status R PSE SD In the exit from SEMI_PWRON_SEC to IDLE need to be power_available_sec and not power_available	In the Exit from pd_autoclass * (tinrush_timer_ It looks that we 1) redundancy is means that tinn 2) the term (!alt - alt_pwrd_sec Alternative. " - tirnush_timer_ inrush is done i So, we have a a It's like doing (X completely In order to find equivalent to th a) pd_autoclass	IDLE_ACS to W !tpon_timer_dony sec_done * pwr_s have two issues in the term " tinru ush_timer_pri_dc _pwrd_sec + (tin in false meaning sec_done *pwr_s n the secondary. condition that if w k or not X) that is what we really ne e following two p s * !tpon_timer_d	AIT_ACS we have e *tinrush_timer_pri app_sec)) here: sh_timer_pri_done in the TRUE as well rush_timer_sec_do that "The PSE is n app_pri indicates th re power up/or not p always true, which red here, let's expar arts: one *tinrush_timer_	_done * pwr_app * pwr_app_pri. If ne * pwr_app_se ot to apply powe at we POWER u power up. requires to remo nd the whole orig .pri_done * pwr_a	ditions: p_pri *(!alt_pwrd_sec + pwr_app_pri is true, it ec)) is always TRUE. r to the Primary p secondary pair and we this term jinal term. It is app_pri*!alt_pwrd_sec +
SuggestedRemedy		s * !tpon_timer_d sec_done * pwr_	one *tinrush_timer_ app_sec	pri_done * pwr_a	app_pri
Change from "power_available" to " "power_available_sec"	I believe that ou	ur intent is to allo	w Autoclass for Typ		
Response Response Status C REJECT.	There are few is	ssues:	pe 3 PSE supportin	-	
Power_available_sec is only used in the SISMs, not in the top-level SD.	If pwr_app_pri i As a result, it is to "pwr_app_pr "pd_autoclass * In part (b), the s pwr_app_sec i. well. As a result, we "pd_autoclass * The net result i pd_autoclass * !tpon_timer_do pd_autoclass *	s true, it means t sufficient to redu ", resulting with t '!tpon_timer_dor same concept as e. If pwr_app_sec can reduce term '!tpon_timer_dor is: !tpon_timer_dor ne * pwr_app_pri !tpon_timer_dor	erm (a): ne * pwr_app_pri*!a in part (a) applies t c is true, it means th	ri_done is TRUE tinrush_timer_pr lt_pwrd_sec" o tinrush_timer_ nat tinrush_timer owr_app_sec" t_pwrd_sec + pd	as well. i_done * pwr_app_pri " _sec_done * _sec_done is TRUE as _autoclass *
	SuggestedRemedy				
	(tinrush_timer_s To:	sec_done * pwr_a			p_pri *(!alt_pwrd_sec + pwr_app_sec)"
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/gen		tistical Zhuithadus	Pa 13 wn Li 39		Page 48 of 134 9/15/2017 11:41:04

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn Li 39 9/15/2017 11:41:04 AM SORT ORDER: Page, Line

Proposed Response Response Status Z REJECT.	C/ 145 SC 145.2.5.7 P 133 L 5 # i-68 Yseboodt, Lennart Philips Lighting Philips Lighting						
This comment was WITHDRAWN by the commenter.	Comment Type TR Comment Status A PSE SD						
C/ 145 SC 145.2.5.7 P 132 L 4 # [i-195] Peker, Arkadiy Microsemi Corporation	Figure 145-15, arc from CLASS_EV1_LCE_PRI to MARK_EV1_PRI: "tlce_timer_pri_done * ((class_4PID_mult_events_pri * (pd_class_sig_pri > 0)) + (pd_class_sig_pri = 4) * pse_avail_pwr_pri >= 4))"						
Comment Type TR Comment Status A Pres: Stewart1 Missing error_condition_pri at the input to the state IDLE_PRI at the condition pri at the condit he c	Missing paren.						
iclass_lim_det_pri. SuggestedRemedy 1. Change from: "iclass_lim_det_pri" to "iclass_lim_det_pri + error_condition_pri" 2. Add new variable to 145.2.5.4: "error_condition_pri	SuggestedRemedy Change to: "tlce_timer_pri_done * ((class_4PID_mult_events_pri * (pd_class_sig_pri > 0)) + (pd_class_sig_pri = 4) * (pse_avail_pwr_pri >= 4))" Response Response Status W						
A variable indicating the status of implementation-specific fault conditions or optionally other system faults that prevent the PSE from meeting the specifications in Table 145-16 and that require the PSE not to source power over the Primary Alternative. Values:	ACCEPT. <i>CI</i> 145 SC 145.2.5.7 <i>P</i> 133 <i>L</i> 5 # <u>i-406</u>						
FALSE: No fault indication. TRUE: A fault indication exists.	Darshan, Yair Comment Type T Comment Status D Repeats						
Response Response Status C ACCEPT.	Figure 145-15 doesn't have the option of using short class event when doing "class probe" functionality as we have in single-signature class probe case. This cost with more time to complete process and more power dissipation. The same applies to the secondary part in page 137. It is suggested to replicate CLASSIFICATION pre-state and CLASS_PROBE from page Figure 145-13 page 128 in primary and secondary state machines with the relevant modifications.						
Comment Type T Comment Status D Repeats	SuggestedRemedy						
Missing error_condition_pri at the input to the state IDLE_PRI at the condition iclass_lim_det_pri.	Adopt darshan_04_0917.pdf						
SuggestedRemedy	Proposed Response Response Status Z REJECT.						
 Change from: "iclass_lim_det_pri" to "iclass_lim_det_pri + error_condition_pri" Add new variable to 145.2.5.4: "error_condition_pri 	This comment was WITHDRAWN by the commenter.						
A variable indicating the status of implementation-specific fault conditions or optionally other system faults that prevent the PSE from meeting the specifications in Table 145-16 and that require the PSE not to source power over the Primary Alternative. Values: FALSE: No fault indication. TRUE: A fault indication exists.	This comment was withdrawn before the comment resolution meeting.						
Proposed Response Response Status Z							
REJECT.							
This comment was WITHDRAWN by the commenter.							
This comment was withdrawn before the comment resolution meeting.							
TYPE TD// shall shall shall be to be							

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **133** Li **5** Page 49 of 134 9/15/2017 11:41:04 AM

	2.5.7 P 133	L 5	# i-198	-	45.2.5.7	P 133	L 13	#	i-464
Peker, Arkadiy	Microsemi	Corporation		Darshan, Yair					
Comment Type TF	Comment Status A		Pres: Darshan4	Comment Type	т	Comment Status D			Repeat
functionality as we complete process page 137. It is sug		probe case. This he same applies t CATION pre-state	cost with more time to the secondary part in and CLASS_PROBE	tcle2_timer_pri +(pse_avail_pw signature case. SuggestedRemedy Change from: "tcle2_timer_pri +(pse_avail_pw	_done *(p /r_pri > 4) i_done *(p	EV2_PRI to MARK_EV2_PF d_class_sig_pri = temp_var) is missing the variable opt od_class_sig_pri = temp_va)"	_pri) * (class_4 ion_2ev as we	PID_mult did in the	single-
Response ACCEPT IN PRIN	Response Status C ICIPLE.					pd_class_sig_pri = temp_va s_pri * !option_2ev)+ (pse_a		4)) "	
adopt stewart_01	_0917_final.pdf			Proposed Response	е	Response Status Z			
C/ 145 SC 145.	2.5.7 <i>P</i> 133	L 13	# i-229	REJECT.					
Peker, Arkadiy		Corporation		This comment v	was WITH	IDRAWN by the commente	r.		
in the condition: tcle2_timer_pri_de +(pse_avail_pwr_	CLASS_EV2_PRI to MARK_EV	_var_pri) * (class_		This comment v	was withd	rawn before the comment re	esolution meeti	ng.	
SuggestedRemedy		-							
Change from: "tcle2_timer_pri_c +(pse_avail_pwr_	done *(pd_class_sig_pri = temp pri > 4))" done * (pd_class_sig_pri = temp	var_pri) * (
	_events_pri * !option_2ev)+ (ps	se_avail_pwr_pri >	- 4)) "						
"tcle2_timer_pri_c		se_avail_pwr_pri >	- 4)) "						

We do not need an option_ev2 for dual-signature diagrams.

Pa **133** Li **13**

C/ 145 SC 145.2.5.8 P 133 L 18 # [i-469 Darshan, Yair	C/ 145 SC 145.2.5.8 P 133 L 18 # i-465 Darshan, Yair
Comment Type E Comment Status A PSE Status In the exit from CLASS_EV2_SEC to MARK_EV_LAST_SEC, the condition: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * pse_avail_pwr_sec = 4" is missing parenthesis in "pse_avail_pwr_sec = 4".	Comment Type T Comment Status D Repeats In the exit from CLASS_EV2_PRI to MARK_EV_LAST_PRI, the condition: "tcle2_timer_pri_done * (pd_class_sig_pri = temp_var_pri) * !class_4PID_mult_events_pri * pse_avail_pwr_pri = 4" is missing the variable option_2ev as we did in the single-signature case.
SuggestedRemedy Change from: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * pse_avail_pwr_sec = 4" To: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * (pse_avail_pwr_sec = 4)"	SuggestedRemedy Change from: "tcle2_timer_pri_done * (pd_class_sig_pri = temp_var_pri) * !class_4PID_mult_events_pri * pse_avail_pwr_pri = 4" To: "tcle2_timer_pri_done * option_2ev * (pd_class_sig_pri = temp_var_pri) * !class_4PID_mult_events_pri * pse_avail_pwr_pri = 4"
Response Response Status C ACCEPT IN PRINCIPLE.	Proposed Response Response Status Z REJECT.
Change from: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * pse_avail_pwr_sec = 4"	This comment was WITHDRAWN by the commenter. This comment was withdrawn before the comment resolution meeting.
To: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * (pse_avail_pwr_sec = 4)"	C/ 145 SC 145.2.5.8 P 133 L 18 # [i-230] Peker, Arkadiy Microsemi Corporation
on page 137 (comment says page 133 by mistake). Apply same fix for _pri on page 133.	Comment Type TR Comment Status R PSE SD "In the exit from CLASS_EV2_PRI to MARK_EV_LAST_PRI, the variable option_2ev is missing in the condition: "tcle2_timer_pri_done * (pd_class_sig_pri = temp_var_pri) * !class_4PID_mult_events_pri * pse_avail_pwr_pri = 4". It needs to be the same concept as in the single-signature case."
	SuggestedRemedy
	"Change from: "tcle2_timer_pri_done * (pd_class_sig_pri = temp_var_pri) * !class_4PID_mult_events_pri * pse_avail_pwr_pri = 4" To: "tcle2_timer_pri_done * option_2ev * (pd_class_sig_pri = temp_var_pri) * !class_4PID_mult_events_pri * pse_avail_pwr_pri = 4"
	Response Response Status C REJECT.
	Setting class_4PID_mult_events_x FALSE already enables PSE to limit to 2 class events. We do not need an option_ev2 for dual-signature diagrams.

Pa **133** Li **18** Page 51 of 134 9/15/2017 11:41:04 AM

Cl 145 SC 145.2.5.8 Darshan, Yair	P 133	L 18	# i-466	<i>Cl</i> 145 Darshan, Ya	SC 145.2.5.7 air	P 135	L 6	# i-407
Comment Type E Co	mment Status A		PSE SD	Comment T	ype T	Comment Status D		PSE SD
In the exit from CLASS_EV2 "tcle2_timer_pri_done * (pd_ pse_avail_pwr_pri = 4" is mis SuggestedRemedy Change from: "tcle2_timer_pri_done * (pd_ pse_avail_pwr_pri = 4"	class_sig_pri = temp_v sing parenthesis in "ps	ar_pri) * !class_ se_avail_pwr_pri	4PID_mult_events_pri * = 4".	The inte IF (pd_ THEN p END " Was to	handle the follow	ig procedure: sig_sec = valid) * (sig_pri = = TRUE		
To: "tcle2_timer_pri_done * (pd_ (pse_avail_pwr_pri = 4)"	class_sig_pri = temp_v	ar_pri) * !class_	4PID_mult_events_pri *		pair_cand is TR he same time sig	JE if both pairs have valid s	ignature and se	condary pair is powered
Response Res ACCEPT.	ponse Status C			if we ard pd_4pa pd_cls_ pwr_apl Reviewi (a) If we (b) If pw sig_pri= Which r (c) pwr (d) pd_c Resultir IF (pd_ THEN p END " SuggestedF Change To: (pd Proposed R REJEC This cou	e doing the comp ir_cand <== TRU 4PID_pri * (sig_i b_sec ng the state CL/ e are in CLASS_ rr_app_sec is tru- valid at the sam neans that: _app_sec need to cls_4PID_pri * (sig_4PiD_pri * (sig_4PiD_	blete math we get: JE if: sec = valid) * (sig_pri = valid ASS_EVAL_PRI shows that EVAL_PRI state, it means the e, it means that sec_sig=va e time that pwr_app_sec is to be multiplied by (sig_pri = ed to be multiplied only with sig_sec = valid) + pwr_app	hat pri_sig=vali lid but it doesn' true. = valid) sig_sec = valid _sec * (sig_pri = * (sig_pri = vali p_sec* (sig_pri	d. t mean that = valid)) d) + pwr_app_sec)" = valid))

Pa **135** Li **6**

C/ 145 SC 145.2.5.7	<i>P</i> 135	L 8	# i-69	C/ 145 SC 145.2.5.7 P 135 L 10 # [-408
Yseboodt, Lennart	Philips Lighting	g		Darshan, Yair
Comment Type TR Co. Figure 145-15, arc from CLAS "ted_timer_pri_done * ted_tim (pd_4pair_cand + !alt_pwrd_s Missing operator after ted_tim SuggestedRemedy Replace by: "ted_timer_pri_d	ner_done (pd_req_pwr_ sec)" ner_done.	_pri <= pse_ava	il_pwr_pri) *	SE SD Comment Type T Comment Status A PSE SD In the exit from CLASS_EVAL_PRI to POWER_UP_PRI we use in the condition: "ted_timer_pri_done * ted_timer_done (pd_req_pwr_pri ? pse_avail_pwr_pri) * (pd_4pair_cand + !alt_pwrd_sec)". Two issues: a) Missing "*" afterted_timer_done. b) The variable ted_timer_done looks that is not belong here since we are in the semi-independent state machine or the intent for this is not clear.
pse_avail_pwr_pri) * (pd_4pa				SuggestedRemedy
Response Res ACCEPT.	ponse Status C			Two options for remedy: a) Add "*" afterted_timer_done and explain why we need ted_timer_done OR b) Delete ted_timer_done
C/ 145 SC 145.2.5.7 Darshan, Yair	P 135	L 10	# i-409	Response Response Status C ACCEPT IN PRINCIPLE.
In the exit from CLASS_EVAl "!ted_timer_pri_done + !ted_t (pd_req_pwr_pri > pse_avail_	 imer_done + _pwr_pri) + (!pd_4pair_(_ cand * !alt_pwr	se in the condition: d_sec)".	SE SD Replace by: "ted_timer_pri_done * ted_timer_done * (pd_req_pwr_pri <=
The variable ted_timer_done independent state machine o			e are in the semi-	Cl 145 SC 145.2.5.7 P 135 L 37 # i-410
SuggestedRemedy				Darshan, Yair
Two options for remedy: a)explain why we need ted_ti b) Delete ted_timer_done <i>Response Res</i> REJECT.	mer_done OR			Comment Type T Comment Status A PSE SD In the exit from ERROR_DELAY_PRI to IDLE we have the following condition: "ted_timer_pri_done + option_detect_ted_pri". A) The variable option_detect_ted_pri is missing from the variable list. B) in addition I believe it is not required since if you have the option to do detection during Ted time interval or you dont have the option, you are going to IDLE_PRI and in IDLE_PRI you don't do detection.
We need to the ted_timer bed				PD
and then power it as a DS PE for ted_timer to be done.	(due to a cable fault o	r some other re	eason) without waitir	Change from: " "ted_timer_pri_done + option_detect_ted_pri"" To: "ted_timer_pri_done "
				Response Response Status C ACCEPT IN PRINCIPLE.
				Remove extra space in "option_detect_ ted" on page 113, line 30.
				Add variables option_detect_ ted_pri and option_detect_ ted_sec to variable list. Use similar definition to option_detect_ ted with appropriate changes to distinguish _pri and _sec.
TYPE: TR/technical required ER/ COMMENT STATUS: D/dispatch SORT ORDER: Page, Line	/editorial required GR/g ed A/accepted R/rejec	general required	d T/technical E/edit NSE STATUS: O/op	ditorial G/general Pa 135 Page 53 of 134 open W/written C/closed U/unsatisfied Z/withdrawn Li 37 9/15/2017 11:41:0

C/ 145 SC 145.2.5.7 P 136 L 4 # [i-411	C/ 145 SC 145.2.5.7 P 136 L 11 # i-254
Darshan, Yair	Peker, Arkadiy Microsemi Corporation
Comment Type T Comment Status D Repeats	Comment Type TR Comment Status A Pres: Darshan13
Missing error_condition_sec at the input to the state IDLE_SEC at the condition iclass_lim_det_sec.	In the exit from IDLE_SEC to START_DETECT_SEC we have the following condition: "(!pwr_app_sec * pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec *
uggestedRemedy	!det_start_pri * !det_once_sec)" Based on the description in page 109 lines 37-38 for CC_DET_SEQ and specifically,
 Change from: "iclass_lim_det_sec" to "iclass_lim_det_sec + error_condition_sec" Add new variable to 145.2.5.4: "error_condition_sec A variable indicating the status of implementation-specific fault conditions or optionally other system faults that prevent the PSE from meeting the specifications in Table 145-16 	CC_DET_SEQ=3 for dual-signature means: Connection check is followed by staggered detection (The analysis and simulations results for other sequences 0, 1 and 2 are covered by other comments and most of them are OK).
and that require the PSE not to source power over the Secondary Alternative. Values:	The staggered detection range may occur with starting the secondary detection after doing
FALSE: No fault indication.	the primary detection (option 1) up to doing the secondary detection only if the primary is on (option 2). This covers the full range of possibilities.
TRUE: A fault indication exists.	Option 1 is normally used when class_4PID_mult_events_sec=TRUE. This currently is not
Proposed Response Response Status Z	covered by the state machine.
REJECT.	Option 2 is normally used when class_4PID_mult_events_sec=FALSE and it is covered in
KEJEGT.	the 1st part of the condition: (!pwr_app_sec * pwr_app_pri).
This comment was WITHDRAWN by the commenter.	Option 3 is covers the case that the primary return to IDLE_PRI due to various reasons and the secondary didn't detect even once: ((CC_DET_SEQ=3) * option_probe_alt_sec *
	!det_start_pri * !det_once_sec).
This comment was withdrawn before the comment resolution meeting.	
1 145 SC 145.2.5.7 P 136 L 4 # [i-199	The current state diagram covers option 2 and 3, and does not cover option 1!
eker, Arkadiy Microsemi Corporation	The state diagram should allow staggered detection before Primary power up, after primary
Comment Type TR Comment Status A Pres: Stewart1	power up, and during power up in case that class_4PID_mult_events_sec is set to FALSE.
Missing error_condition_sec at the input to the state IDLE_SEC at the condition	The proposed changes in the state diagram will allow staggered detection after Primary finished its 1st detection without affecting the previous functionality and flow, by oring the
iclass_lim_det_sec.	additional missing possibility (option 1).
uggestedRemedy	The proposed changes do not affect:
"1. Change from: ""iclass_lim_det_sec"" to ""iclass_lim_det_sec + error_condition_sec""	a) The behavior of other "CC_DET_SEQ NE 3" flows.
2. Add new variable to 145.2.5.4:	b) Previous state diagram possibilities.
""error_condition_sec A variable indicating the status of implementation-specific fault conditions or optionally	In addition, the proposed changes also required to cover multiple cycles of detection+classification until host decides to power on the port (which is covered by
other system faults that prevent the PSE from meeting the specifications in Table 145-16	darshan 04 0917.pdf).
and that require the PSE not to source power over the Secondary Alternative. Values:	The additional missing possibility is covered by adding the following part:
FALSE: No fault indication.	+ (class_4PID_mult_events_sec*(CC_DET_SEQ=3) * !det_once_sec * det_once_pri)
TRUE: A fault indication exists."	In order to implement the addition, we need to add the following variable for the primary
esponse Response Status C	side (similar variable is already exist for the secondary):
ACCEPT.	"det_once_pri
	This variable indicates if the PSE has probed the Primary Alternative at least once, when entering to DETECT_EVAL_PRI.
	Values: FALSE: The PSE has not probed on the Primary Alternative since entering the Primary Alternative state diagram.
VPE: TP/toophical required EP/aditarial required CP/gaparal required T/toophical E/aditorial	
YPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W	
ORT ORDER: Page, Line	

TRUE: The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram."	C/ 145 SC 145.2.5.8 P 136 L 11 # [i-473] Darshan, Yair
In the above proposed change, det_once_pri is used as a condition for starting detection in the secondary any time until power up, after primary was detected at least once. det_once_pri is set to FALSE when sism = FALSE at ENTRY_PRI. det_once_pri is set to TRUE when Primary state diagram reaches to "DETECT_EVAL_PRI", to clearly indicate that detection on primary has ended before tdet_timer_pri expired."	Comment Type T Comment Status D PSE SD This comment is marked CC_DET_SEQ=3. This problem was a dressed in other comment and is repeated here in shorter and clearer way. Using CC_DET_SEQ=3 is possible if we exit from ENTRY_SEC and from IDLE_SEC to
SuggestedRemedy	START_DETECT_SEC.
 1. Change from: "(!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec)"" To: "(!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec) + (class_4PID_mult_events_sec*(CC_DET_SEQ=3) * !det_once_sec * det_once_pri) 2. Add the following variable to the variable list: det_once_pri This variable indicates if the PSE has probed the Primary Alternative at least once, when entering to DETECT_EVAL_PRI. Values: FALSE: The PSE has not probed on the Primary Alternative since entering the Primary Alternative state diagram. TRUE: The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram. 	In the exit from IDLE_SEC to START_DETECT_SEC we have the following conditions: (!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec) = A+B. This condition syas: A) the first part of the condition says: go and detect sec if power is not applied to secondary AND power is applied to primary. This allows detection of secondary only if primary is ON. This is OK but not cover the other case of CC_DET_SEQ=3 that detect secondary after detection primary and not waiting until primary is ON. In addition, it doesnt allow to do multiple detection+classification until power on. B) The 2nd part is OK but doesnt resolve the issue in part A. Currently the staggered detection i slimited to the case of doing detection on sec only if pri is ON and it should be limited per th eCC_DET_SEQ=3)*do_detect_pri_done SuggestedRemedy
Response Response Status C ACCEPT IN PRINCIPLE. adopt stewart_02_0917_final.pdf	Change from: "(!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec)" To: "(!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec) + ((CC_DET_SEQ=3)*do_detect_pri_done)"
	Proposed Response Response Status Z
	REJECT.
	This comment was WITHDRAWN by the commenter.
	This comment was withdrawn before the comment resolution meeting.

Pa **136** Li **11**

C/ 145	SC 145.2.5.7	P 136	L 11	# i-475
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Darshan, Yair Comment Type

т

Comment Status D

PSF SD

This comment is marked as CC_DET_SEQ=3-1 and is improvement of the comment marked as CC_DET_SEQ=3.

In the exit from IDLE_SEC to START_DETECT_SEC we have the following condition: (!pwr_app_sec * pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec)

Based on the description in page 109 lines 37-38 for CC_DET_SEQ and specifically, CC_DET_SEQ=3 for dual-signature means: Connection check is followed by staggered detection

(The analysis and simulations results for other sequences 0, 1 and 2 are covered by other comments and most of them are OK).

The staggered detection range may occur with starting the secondary detection after doing the primary detection (option 1) up to doing the secondary detection only if the primary is on (option 2). This covers the full range of possibilities.

Option 1 is normally used when class_4PID_mult_events_sec=TRUE. This currently is not covered by the state machine.

Option 2 is normally used when class_4PID_mult_events_sec=FALSE and it is covered in the 1st part of the condition: (!pwr_app_sec * pwr_app_pri).

Option 3 is covers the case that the primary return to IDLE_PRI due to various reasons and the secondary didn't detect even once: ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec).

The current state diagram covers option 2 and 3, and does not cover option 1!

The state diagram should allow staggered detection before Primary power up, after primary power up, and during power up in case that class_4PID_mult_events_sec is set to FALSE. The proposed changes in the state diagram will allow staggered detection after Primary finished its 1st detection without affecting the previous functionality and flow, by oring the additional missing possibility (option 1).

The proposed changes do not affect:

a) The behavior of other CC_DET_SEQ ?3 flows.

b) Previous state diagram possibilities.

In addition, the proposed changes also required to cover multiple cycles of detection+classification until host decides to power on the port (which is covered by darshan_04_0917.pdf).

The additional missing possibility is covered by adding the following part:

+ (class_4PID_mult_events_sec*(CC_DET_SEQ=3) * !det_once_sec * det_once_pri) In order to implement the addition, we need to add the following variable for the primary side (similar variable is already exist for the secondary):

"det_once_pri This variable indicates if the PSE has probed the Primary Alternative at least once, when entering to DETECT_EVAL_PRI. Values:

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

FALSE: The PSE has not probed on the Primary Alternative since entering the Primary Alternative state diagram.

TRUE: The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram."

In the above proposed change, det_once_pri is used as a condition for starting detection in the secondary any time until power up, after primary was detected at least once. det_once_pri is set to FALSE when sism = FALSE at ENTRY_PRI. det_once_pri is set to TRUE when Primary state diagram reaches to "DETECT_EVAL_PRI", to clearly indicate that detection on primary has ended before tdet_timer_pri expired.

SuggestedRemedy

1. Change from:

"(!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec)"

To:

"(!pwr_app_sec *pwr_app_pri) + ((CC_DET_SEQ=3) * option_probe_alt_sec * !det_start_pri * !det_once_sec) +

(class_4PID_mult_events_sec*(CC_DET_SEQ=3) * !det_once_sec * det_once_pri) 2. Add the following variable to the variable list:

det_once_pri

This variable indicates if the PSE has probed the Primary Alternative at least once, when entering to DETECT_EVAL_PRI. Values:

FALSE: The PSE has not probed on the Primary Alternative since entering the Primary Alternative state diagram.

TRUE: The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

This comment was withdrawn before the comment resolution meeting.

Pa 136 Li 11 Page 56 of 134 9/15/2017 11:41:04 AM

comment Type EX Comment Status D Press: Davahant Three is redundant parenthesis in the exit from ENTRY_SEC to START_DETECT_SEC. Figure 14(a): the bart (dass. 4PID_mult_events, sec) * Figure 14(a): the bart (dass. 4PID_mult_events, sec) * Press: Davahant Using VIII.down the event sec * per yang.pp) + class. 4PID_mult_events, sec) * Figure 14(a): the bart (dass. 4PID_mult_events, sec) * Press: Davahant Viscage 4PID mult_events, sec * per yang.pp) + class. 4PID_mult_events, sec) * Figure 14(a): the event sec * per yang.pp) + class. 4PID_mult_events, sec) * Viscage 4PID mult_events, sec * per yang.pp) + class. 4PID_mult_events, sec) * (CC_DET_SEQ=0) + CC_DET_SEQ=1)* Figure 14(a): * Figure 14(a): * Figure 14(a): * Press: Davahant No "(class, 4PID_mult_events, sec * pwr.app.ph) + class. 4PID_mult_events, sec) * (CC_DET_SEQ=0) + CC_DET_SEQ=1)* Figure 14(a): * Figure 14(a): * <td< th=""><th>7 145 SC 145.2 eker, Arkadiy</th><th></th><th>L 20 Corporation</th><th># i-250</th><th><i>Cl</i> 145 Peker, Ark</th><th>SC 145.2.5.7 adiy</th><th>P 136 Microsemi Co</th><th>L 20 prporation</th><th># i-251</th></td<>	7 145 SC 145.2 eker, Arkadiy		L 20 Corporation	# i-250	<i>Cl</i> 145 Peker, Ark	SC 145.2.5.7 adiy	P 136 Microsemi Co	L 20 prporation	# i-251
 'sism' (!(class_4PID_mult_events_sec' pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)' 'sign_sterd/emedy 'class_4PID_mult_events_sec' pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)' 'sign_sterd/emedy 'class_4PID_mult_events_sec' pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)' 'sign_sterd/emedy 'class_4PID_mult_events_sec' pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)' 'sign_sterd/emedy 'sign_	comment Type ER	Comment Status D		Pres: Darshan4	Comment	Type TR	Comment Status A		Pres: Darshan13
<pre>Udgestoremedy Change from: "sism '((class_4PID_mult_events_sec * pwr_app_pr) + class_4PID_mult_events_sec) * (CC_DET_SEG=0 + CC_DET_SEG=1)' "comments." See darshan_04_0917,pdl for additional changes proposed to this condition due to other comments." Neposed Response Response Status Z REJECT. This comment was WITHDRAWN by the commenter.</pre> (CC_DET_SEG=0 + CC_DET_SEG=1)' "State which prevents suck at ENTRY_SEC. This solution requires the addition of new variable det_once_pri (the current draft has only det_once_sec) which is required also by other comments." Neposed Response New WITHDRAWN by the commenter. This comment was WITHDRAWN by the commenter. This comment was WITHDRAWN by the commenter. This comment was WITHDRAWN by the commenter. This variable det_once_pri (the current draft has only det_once_sec) which is required also by other comments that all related to each other and can be see in darshan_04_0917,pdf. See darshan_04_0917,pdf for how the following change is also addresses other issues including the possibility to do cycles of detection + class_probe events on primary and secondary with the option to go to IDLE_PRIVSEC and WAIT_PRIVSEC. This variable diagram. The PSE has probed the Primary Alternative at least once, when end the following variable: det_once_pri (CC_DET_SEQ=0 + CC_DET_SEQ=1)' to comments that all diagram. The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram. The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram. Class_4PID_mult_events_sec * pwr_app_pri + dte_once_pri * dte_stat_pri)) + class_4PID_mult_events_sec * pwr_app_pri + dte_once_pri * dte_stat_pri)) + class_4PID_mult_events_sec * pwr_app_pri + dte_once_pri * dte_stat_pri)) + class_4PID_mult_events_sec * (CC_DET_SEQ=1).* Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	"sism *((!class_4P) (CC_DET_SEQ=0 in the part: (!class_	D_mult_events_sec * pwr_ap + CC_DET_SEQ=1)"	p_pri) + class_4P		CC_D machi pwr_a	ET_SEQ 0 or 1, and ne allows to move fr pp_pri = TRUE per t	d class_4PID_multi_event rom ENTRY_SEC state to the existing condition:	_sec = FALSE, START_DETE	the secondary state CT_SEC only if
*sism *(I(class_4PID_mult_events_sec * pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)* *ism *(I(class_4PID_mult_events_sec * pwr_app_pri + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)* Timesor fails to powerup, the Primary tatte machine returns back to IDLE_PRI As a result form ENTRY_SEC i.e. will be stuck there. *ism *(I(class_4PID_mult_events_sec * pwr_app_pri + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)* Timesor fails to powerup, the Primary tatte machine rotion to START_DETECT_SEC from ENTRY_SEC, also it primary performed detection at least once and is now in IDLE_PRI state which prevents suck at ENTRY_SEC. This solution at least once and is now in IDLE_PRI state which prevents used at ENTRY_SEC. This solution at least once and is now in IDLE_PRI state which prevents used at ENTRY_SEC and WAIT_PRUSEC. *toposed Response Response Status Z REJECT. This comment was WITHDRAWN by the commenter. *to addition of the primary failed to each other and can be see in darsham_04_0917.pdf. See darsham_04_0917.pdf for how the following change is also addresses other issues including the possibility to do cycles of detection + class_probe events on primary and secondary with the option to go to IDLE_PRI/SEC and WAIT_PRI/SEC. *to addition of the Primary Alternative at least once, when entering to DETECT_EVAL_PRI. Values: FALSE: The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram. (CC_DET_SEQ=0) + CC_DET_SEQ=1)* Response Response Status C ACCEPT IN PRINCIPLE: ACCEPT IN PRINCIPLE: Adopt stewart_02_0917.final.pdf								, · · · · · · · ·	
REJECT. See darshan_04_0917.pdf for how the following change is also addresses other issues including the possibility to do cycles of detection + class_probe events on primary and secondary with the option to go to IDLE_PRI/SEC and WAIT_PRI/SEC. This comment was WITHDRAWN by the commenter. 1) Add the following variable: det_once_pri 1) Add the following variable indicates if the PSE has probed the Primary Alternative at least once, when entering to DETECT_EVAL_PRI.Values: FALSE: The PSE has not probed on the Primary Alternative since entering the Primary Alternative state diagram. TRUE: The PSE has not probed the Primary Alternative at least once since entering the Primary Alternative state diagram. TQUE: The PSE has not probed the Primary Alternative at least once since entering the Primary Alternative state diagram. 2) Change from: "sism *((Iclass_4PID_mult_events_sec * pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=0).* Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	"sism *((!class_4PI (CC_DET_SEQ=0 To: "sism *(!class_4PII (CC_DET_SEQ=0 See darshan_04_0	+ CC_DET_SEQ=1)" D_mult_events_sec * pwr_apj + CC_DET_SEQ=1)"	o_pri + class_4PIC	D_mult_events_sec) *	result, be abl The ea ENTR state v variab	pwr_app_pri variab e to exit from ENTR asy way to handle th Y_SEC, also if prim which prevents stuck le det_once_pri (the	le will remain in FALSE, a Y_SEC i.e. will be stuck th is problem is to enable m ary performed detection a c at ENTRY_SEC. This so current draft has only det	nd the seconda nere. oving to START t least once and lution requires _once_sec) wh	T_DETECT_SEC from T_DETECT_SEC from d is now in IDLE_PRI the addition of new ich is required also by
This comment was WITHDRAWN by the commenter. This comment was WITHDRAWN by the commenter. Commenter was been commenter. Commenter	roposed Response	Response Status Z			Suggested	Remedy			
det_once_pri This variable indicates if the PSE has probed the Primary Alternative at least once, when entering to DETECT_EVAL_PRI. Values: FALSE: The PSE has not probed on the Primary Alternative since entering the Primary Alternative state diagram. TRUE: The PSE has probed the Primary Alternative at least once since entering the Primary Alternative state diagram. 2) Change from: "sism *((lclass_4PID_mult_events_sec * pwr_app_pri) + class_4PID_mult_events_sec) * (CC_DET_SEQ=0 + CC_DET_SEQ=1)" To: sism * ((lclass_4PID_mult_events_sec * (pwr_app_pri + det_once_pri * !det_start_pri)) + class_4PID_mult_events_sec * (CC_DET_SEQ=0 + CC_DET_SEQ=0, + CC_DET_SEQ=1)." Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. adopt stewart_02_0917_final.pdf adopt stewart_02_0917_final.pdf		WITHDRAWN by the comme	enter.		includ	ing the possibility to	do cycles of detection + c	lass_probe eve	ents on primary and
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. adopt stewart_02_0917_final.pdf					det_oi This v enterin FALSI Altern TRUE Prima 2) Cha "sism (CC_L To: sism *	hce_pri ariable indicates if th ng to DETECT_EVA E: The PSE has not ative state diagram. : The PSE has prob ry Alternative state of ange from: *((!class_4PID_mult DET_SEQ=0 + CC_I • ((!class_4PID_mult	he PSE has probed the Pr L_PRI. Values: probed on the Primary Alt ed the Primary Alternative diagram. t_events_sec * pwr_app_p DET_SEQ=1)"	ernative since of at least once s pri) + class_4PI pri + det_once_	entering the Primary since entering the D_mult_events_sec) * .pri * !det_start_pri)) +
ACCEPT IN PRINCIPLE. adopt stewart_02_0917_final.pdf					Response	I	Response Status C		
						-			
This resolution is identical to comment #254.					adopt	stewart_02_0917_fi	nal.pdf		
					This re	esolution is identical	to comment #254.		

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Cl 145 SC 145.2.5.7 Darshan, Yair	P 136	L 20	# [i-478	C/ 145 Darshan, Y	SC 145.2.5.7 Yair	7 P 136	L 20	# i-479			
Comment Type E Co There is redundant parenthe "sism *((!class_4PID_mult_ec (CC_DET_SEQ=0 + CC_DE in the part: (!class_4PID_mult_ec Change from: "sism *((!class_4PID_mult_ec (CC_DET_SEQ=0 + CC_DE To: "sism *(!class_4PID_mult_ec (CC_DET_SEQ=0 + CC_DE	vents_sec * pwr_app_prij T_SEQ=1)" It_events_sec * pwr_app_ vents_sec * pwr_app_prij T_SEQ=1)" vents_sec * pwr_app_pri -	+ class_4PII pri). + class_4PII	D_mult_events_sec) * D_mult_events_sec) *	s Comment In Figu CC_D machi pwr_a sism * (CC_E If Prim result, be abl The ea ENTR state v variab	Type T ure 145-16, in the ET_SEQ 0 or 1, ne allows to mov pp_pri = TRUE p ((!class_4PID_r DET_SEQ=0 + C hary fails to powe pwr_app_pri va e to exit from EN asy way to handl Y_SEC, also if p which prevents s le det_once_pri	Comment Status D e exit from ENTRY_SEC to and class_4PID_multi_eve ve from ENTRY_SEC state ber the existing condition: mult_events_sec * pwr_app :C_DET_SEQ=1) erup, the Primary state mac riable will remain in FALSE, NTRY_SEC i.e. will be stuck le this problem is to enable orimary performed detection tuck at ENTRY_SEC. This (the current draft has only d ult related to each other and	nt_sec = FALSE, to START_DETE _pri) + class_4Pli hine returns back and the seconda there. moving to START at least once and solution requires et_once_sec) wh	the secondary state CT_SEC only if D_mult_events_sec) * to IDLE_PRI. As a ary state machine won't T_DETECT_SEC from d is now in IDLE_PRI the addition of new ich is required also by			
	This comment was WITHDRAWN by the commenter. This comment was withdrawn before the comment resolution meeting.				other comments that all related to each other and can be see in darshan_04_0917.pdf. SuggestedRemedy See darshan_04_0917.pdf for how the following change is also addresses other issues including the possibility to do cycles of detection + class_probe events on primary and						
				1) Add det_or This v enterir FALSI Altern TRUE Prima 2) Cha "sism (CC_E To: sism *	I the following vance_pri ariable indicates by to DETECT_E The PSE has ative state diagra The PSE has pry Alternative sta ange from: *((!class_4PID_I) DET_SEQ=0 + C ((!class_4PID_r)	ariable: if the PSE has probed the EVAL_PRI. Values: not probed on the Primary <i>i</i> am. probed the Primary Alternati	Primary Alternativ Alternative since ov ve at least once s _pri) + class_4PI p_pri + det_once_	ve at least once, when entering the Primary since entering the D_mult_events_sec) * _pri * !det_start_pri)) +			
				Proposed REJE This c	CT.	Response Status Z	ıter.				
						hdrawn before the commen		ing.			

Pa **136** Li **20**

C/ 145 SC 145.2.5	5.7 <i>P</i> 136	L 21	# i-412	C/ 145 Dokor Arks	SC 145.2.5.		L 21	# i-252
Darshan, Yair				Peker, Arka		Microsemi Co	orporation	
sism * ((!class_4PIE (CC_DET_SEQ=0 + class_4PID_mult_ev way how we do dete relevant to the issue	Comment Status D RY_SEC to START_DETECT_ D_mult_events_sec * pwr_app_ CC_DET_SEQ=1). ents_sec and !class_4PID_mu ction sequence or connection c of how we do 4PID. The 4PID and page 139 line 6 CLASS_EV	pri) + class_4Pl lt_events_sec d heck and detec way is determin	D_mult_events_sec) * oesn't belong here. The tion sequence is not	conditio "sism * (CC_DI In this o If STAF remain	ansition betwe n: ((!class_4PID_ T_SEQ=0 + C ondition, wher T_DET_PRI e in FALSE whic	Comment Status A en ENTRY_SEC to START_I 	_pri) + class_4F ec=FALSE, and mer_pri_done, TRY_SEC to S	PID_mult_events_sec) * CC_DET_SEQ=0 OR 1, the pwr_app_pri will
class_4PID_mult_ev To: "sism * (pwr_ap 2. Use other solution primary for single sig primary (regardless i is even more flexible Proposed Response REJECT.	n * ((!class_4PID_mult_events ents_sec) * (CC_DET_SEQ=0 p_pri + ((CC_DET_SEQ=0) + (that doesn't block detecting th ynature or staggered detection f f primary is powered) per CC_I than CC_DET_SEQ=0. <i>Response Status</i> Z VITHDRAWN by the commente) + CC_DET_SE (CC_DET_SEQ e secondary in j for dual-signatur DET_SEQ=0 or	Q=1)." =1))." parallel to detecting the re after detection the	The pro 1) To a tdet_tin DETEC tdet_tin the usa ENTRY 2. To a START ""sism class_4 will allo	posed solution dd stop_tdet_ti ier_pri_done w T_EVAL_PRI. ier_pri is expirr ge of tdet_time _SEC to STAF dd ""tdet_time _DETECT_SE ((!class_4PID_ PID_mult_eve w to move to S	n for this problem is: mer_pri in the DETECT_EVA ill remain FALSE when movin This modification is required ed, we will get tdet_timer_pri- er_pri_done in the secondary set T_DETECT_SEC when we we t_pri_done to the condition of	L_PRI state. The from STAR since even if w done anyway. state machine a vill add this var the exit from E p_pri + tdet_tim + CC_DET_SE e that we move	T_DETECT_PRI to e did detection before This action will enables at the exit from iable in (2). NTRY_SEC to er_pri_done)) + EQ=1)"" . This change from
This comment was v	vithdrawn before the comment	resolution meeti	ng.	2. Add START Change "sism * (CC_DI To: "sism *	stop_tdet_time (tdet_timer_pri _DETECT_SE from: (!class_4PID_ ET_SEQ=0 + C (!class_4PID_	er_pri" to the DETECT_EVAl _done to the condition of the of C by performing the following mult_events_sec * pwr_app_l CC_DET_SEQ=1)" mult_events_sec * (pwr_app_ nts_sec) * (CC_DET_SEQ=0	exit from ENTR change: pri) + class_4P _pri + tdet_time	ID_mult_events_sec) * er_pri_done)) +
				meet th here bu darshaı possibi	e requirement t may cause en n_04_0917.pdf ity to do cycles	m 2 need additional changes that we need single independ ditor confusion of how to apply for how the above change is of detection + class_probe e E_PRI/SEC and WAIT_PRI/S Response Status C	lent comment f y the remedies combined with vents on prima	or each issue which I did of other comments, See other changes i.e. the
				ACCEF	T IN PRINCIP T IN PRINCIP	, LE.		

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	I			
adopt stewart_02_0917_final.pdf	C/ 145 SC 145.2.5.7	P 136	L 21	# i-480
This resolution is identical to comment #254.	Darshan, Yair			
	Comment Type T	Comment Status D		Repeats
	In the transition between E condition:	ENTRY_SEC to START_D)ET_SEC we hav	ve the following
	sism * (((class_4PID_mult (CC_DET_SEQ=0 + CC_) In this condition, when cla If START_DET_PRI exit to remain in FALSE which w and the secondary state n	DET_SEQ=1). ss_4PID_mult_events_se DIDLE_PRI due to tdet_tin ront allow exiting from EN	c=FALSE, and C mer_pri_done, th TRY_SEC to ST/	C_DET_SEQ=0 OR 1, he pwr_app_pri will
	The proposed solution for 1) To add stop_tdet_timer tdet_timer_pri_done will re DETECT_EVAL_PRI. This secondary state machine 2. Add "tdet_timer_pri_dou START_DETECT_SEC as "sism *((!class_4PID_mult class_4PID_mult_events_ allow to move to START_ to IDLE_PRI due to tdet_t	_pri in the DETECT_EVAl smain FALSE when movin s action enables the usage at the exit from ENTRY_S ne to the condition of the es follows: _events_sec * (pwr_app_ sec) * (CC_DET_SEQ=0 DETECT_SEC in case that	g from START_ e of tdet_timer_p EC to START_D exit from ENTRY _pri + tdet_timer_ + CC_DET_SEC	DETECT_PRI to ri_done in the DETECT_SEC. _SEC to _pri_done)) + Q=1)" . This change will
	SuggestedRemedy			
	1. Add "stop_tdet_timer_p 2. Add "tdet_timer_pri_do START_DETECT_SEC by Change from: "sism *((!class_4PID_mul (CC_DET_SEQ=0 + CC_) To: "sism *((!class_4PID_mul class_4PID_mult_events_	ne to the condition of the e v performing the following c_events_sec * pwr_app_p DET_SEQ=1)" c_events_sec * (pwr_app_ sec) * (CC_DET_SEQ=0	exit from ENTRY change: pri) + class_4PID _pri + tdet_timer_	_mult_events_sec) * _pri_done)) +
	Due to the fact that item 2 meet the requirement that here but may cause editor darshan_04_0917.pdf for possibility to do cycles of the option to go to IDLE_F	need additional changes we need single independ confusion of how to apply how the above change is detection + class_probe e	ent comment for / the remedies of combined with ot vents on primary	each issue which I did f other comments, See ther changes i.e. the
	Proposed Response REJECT.	Response Status Z		
	This comment was WITH	DRAWN by the commenter	er.	
	This comment was withdra	awn before the comment r	esolution meetin	ıg.
				Dama 00 - (40 4

C/ 145 SC 145.2.5.7 P 137 L 7 # i-70 Yseboodt, Lennart Philips Lighting Philips Lighting	C/ 145 SC 145.2.5.8 P 137 L 13 # i-231 Peker, Arkadiy Microsemi Corporation
Comment Type TR Comment Status A PSE S Arc logic from CLASS_EV1_LCE_SEC to MARK_EV1_SEC: "tice_timer_sec_done * ((class_4PID_mult_events_sec * (pd_class_sig_sec > 0)) + (pd_class_sig_sec = 4) * pse_avail_pwr_sec >= 4))"	
Missing paren.	It needs to be the same concept as in the single-signature case."
SuggestedRemedy Replace by: "tlce_timer_sec_done * ((class_4PID_mult_events_sec * (pd_class_sig_sec > 0)) + (pd_class_sig_sec = 4) * (pse_avail_pwr_sec >= 4))" Response Response Status C	SuggestedRemedy Change from:"tcle2_timer_sec_done *(pd_class_sig_sec = temp_var_sec) * (class_4PID_mult_events_sec +(pse_avail_pwr_sec > 4))" To: "tcle2_timer_sec_done *(pd_class_sig_sec = temp_var_sec) * ((class_4PID_mult_events_sec * !option_2ev) + (pse_avail_pwr_sec > 4))"
ACCEPT. 	Response Response Status C REJECT.
Comment Type T Comment Status D Repea	Setting class_4PID_mult_events_x FALSE already enables PSE to limit to 2 class events. We do not need an option ev2 for dual-signature diagrams.
In the exit from CLASS_EV2_SEC to MARK_EV2_SEC, the condition: "tcle2_timer_sec_done *(pd_class_sig_sec = temp_var_sec) * (class_4PID_mult_events_sec +(pse_avail_pwr_sec > 4))" is missing the variable option_2ev as we did in the single-signature case. SuggestedRemedy Change from: "tcle2_timer_sec_done *(pd_class_sig_sec = temp_var_sec) * (class_4PID_mult_events_sec +(pse_avail_pwr_sec > 4))" To: "tcle2_timer_sec_done *(pd_class_sig_sec = temp_var_sec) *	Cl 145 SC 145.2.5.8 P 137 L 18 # [i-232] Peker, Arkadiy Microsemi Corporation Microsemi Corporation Comment Type TR Comment Status R PSE SI In the exit from CLASS_EV2_SEC to MARK_EV_LAST_SEC, the variable option_2ev is missing in the condition: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * pse_avail_pwr_sec = 4".
?((class_4PID_mult_events_sec * !option_2ev) + (pse_avail_pwr_sec > 4))" Proposed Response Response Status Z	It needs to be the same concept as in the single-signature case." SuggestedRemedy
REJECT. This comment was WITHDRAWN by the commenter.	Change from: "tcle2_timer_sec_done * (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * pse_avail_pwr_sec = 4" To:
This comment was withdrawn before the comment resolution meeting.	"tcle2_timer_sec_done * option_2ev* (pd_class_sig_sec = temp_var_sec) * !class_4PID_mult_events_sec * pse_avail_pwr_sec = 4"
	Response Response Status C REJECT.
	Setting class_4PID_mult_events_x FALSE already enables PSE to limit to 2 class events. We do not need an option_ev2 for dual-signature diagrams.

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C/ 145 SC 145.2.5.8 Darshan, Yair	B P 137	L 18	# i-468		Cl 145 Darshan, Y	SC 145.2.5.8 ′air	P 139	L 6	# i-413
"tcle2_timer_sec_done !class_4PID_mult_eve as we did in the single SuggestedRemedy Change from: "tcle2_timer_sec_done !class_4PID_mult_eve To: "tcle2_timer_sec_done !class_4PID_mult_eve Proposed Response REJECT.	* (pd_class_sig_sec = temp_var_sec) * hts_sec * pse_avail_pwr_sec = 4" * option_2ev* (pd_class_sig_sec = temp_var_sec) * hts_sec * pse_avail_pwr_sec = 4" <i>Response Status</i> Z THDRAWN by the commenter.				commo State r IF (pd THEN END " Review (c) If w (d) If p at the Result pwr_aj To: p Suggested Chang	with changing with changing with changing with changing construction wing the logic shore wing the logic shore wing the logic shore wing the logic shore are in CLASS wr_app_pri is true same time that p ing with changing op_pri) d_cls_4PID_sec Wremedy the from: " (pd_cls)	er. 5_EVAL_SEC: 5 (sig_sec = valid) * (sig c== TRUE pws that: _EVAL_SEC state, it m	ment regarding CLA _pri = valid) + pwr_a eans that sec_sig=v =valid but it doesn't ' (sig_sec = valid) * (r_app_pri * (sig_sec = valid) * (sig_pri = v	alid. : mean that sig_sec=valid (sig_pri = valid) + = valid) ;alid) + pwr_app_pri) "
This comment was wit	hdrawn before the comment	resolution meetin	ıg.		Response REJEC This co C/ 145 Darshan, Y	CT. comment was with SC 145.2.5.7	Response Status (ndrawn before the com	ment resolution mee	ting. # <u>i-415</u>
					Comment In the "!ted_t (pd_re The va indepe Suggested Two op a)expla	Type T exit from CLASS imer_sec_done = q_pwr_sec > pso ariable ted_timer endent state mace <i>Remedy</i> potions for remedy	ted_timer_done OR	R_DENIDE_SEC w d_4pair_cand * !alt_p belong here since w	owrd_pri)".
					Response REJEC This p	CT. revents a PSE fr	Response Status (om shutting down a SS without waiting for the	PD requiring an erro	or delay but then

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C/ 145	SC 145.2.5.7	P 139	L 10	# i-414	C/ 145	SC 145.2.5.	-		# i-71
Darshan, Ya	air				Yseboodt,	Lennart	Philips L	_ighting	
Comment Ty	ype T Co	omment Status R		PSE SD	Comment	Type TR	Comment Status	L .	PSE SD
"ted_tim	er_sec_done * ted_t						S monitor state diagram, wrong (editor mistake in e		
		il_pwr_sec) * (pd_4pair ne looks that is not belo			Suggestee	Remedy			
		or the intent for this is n			Make	arc from DETE	CT_MPS go to MONITO	R_MPS.	
SuggestedR	Remedy				Response		Response Status C	;	
a) Expla	ions for remedy: iin why we need ted_	_timer_done OR			ACCE				
b) Delet	e ted_timer_done				C/ 145	SC 145.2.5.	7 P 140	L 27	# i-72
Response	Re	sponse Status C			Yseboodt,	Lennart	Philips L	₋ighting	
REJECT	Г.				Comment	Type TR	Comment Status	L .	PSE SE
		nutting down a SS PD r out waiting for the ted_t		delay but then	IDLE_		S monitor state diagram, h is wrong (editor mistak		CT_MPS_PRI goes to en redrawing the figures).
C/ 145	SC 145.2.5.7	P 139	L 37	# i-416	Suggestee	Remedy			
arshan, Ya	air					•	CT_MPS_PRI go to MON	NITOR_MPS_PRI an	nd same for _SEC.
Comment T	vpe T Co	omment Status A		PSE SD	Response		Response Status	1	
"ted_tim A) The v B) in add Ted time	er_sec_done + optic /ariable option_dete dition I believe it is n	ct_ted_sec is missing f ot required since if you t have the option, you a	rom the variable have the option	list. to do detection during	ACCE	PT.			
SuggestedR	Remedy								
	from: " "ted_timer_s d_timer_sec_done "	sec_done + option_dete	ect_ted_sec""						
Response	Re	sponse Status C							
	T IN PRINCIPLE. T IN PRINCIPLE.								
Remove	e extra space in "opti	on_detect_ ted" on pag	je 113, line 30.						
		_ ted_pri and option_de etect_ ted with appropri							
-									

This resolution is identical to comment #410.

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **140** Li **27**

C/ 145 SC 145.2.6	P 141	L 20	# i-73		145.2.6	P 141	L 29	# i-203
Yseboodt, Lennart	Philips Lighting			Peker, Arkadiy		Microsemi C	orporation	
Comment Type T	Comment Status A		PSE Detection	Comment Type	TR	Comment Status A		PSE Detection
PSE has successfully A PSE does not apply	te, the PSE shall not apply oper detected a valid signature over power, it applies voltage and th	that pairset."		power the de successfully	tected PD detect and	text: "Also, a PSE may succ 0.". We need similar text for t d classify a PD but then opt .2.7 page 148 after line 38.	he classification	i.e. "A PSE may
to be sourced.	wer' is not defined either.			SuggestedReme	dy			
"In any operation state	are 4 redundant words.					n 145.2.7 page 148 after line hen opt not to power that PI		y successfully detect
SuggestedRemedy				Response		Response Status W		
"The PSE shall not app detected a valid signat	oly operating voltage to a pairse ure over that pairset."	et until the PSE	has successfully	ACCEPT IN	PRINCIPL	'		
Response	Response Status C			Change exist	ina senter	nce to: "Also, a PSE may su	ccessfully detec	t a PD or detect and
ACCEPT IN PRINCIPI	_E.					opt not to power the detected		
	PSE shall not apply operating ve a valid signature over that pairs		set until the PSE has	Cl 145 SC Darshan, Yair	145.2.6	P 141	L 29	# i-418
	a valid signature over that pairs		set until the PSE has		145.2.6 T	P 141 Comment Status D	L 29	# [i-418 Repeats
successfully detected	a valid signature over that pairs		set until the PSE has # i-74	Darshan, Yair Comment Type We have the	T following		essfully detect a	Repeats PD but then opt not to
successfully detected	a valid signature over that pairs _0917_final.pdf	L 25		Darshan, Yair Comment Type We have the power the de successfully	T following tected PD detect and	Comment Status D text: "Also, a PSE may succ .". We need similar text for t d classify a PD but then opt	essfully detect a he classification	Repeats PD but then opt not to i.e. "A PSE may
successfully detected and adopt stewart_03_ C/ 145 SC 145.2.6 Yseboodt, Lennart	a valid signature over that pairs _0917_final.pdf 	L 25		Darshan, Yair Comment Type We have the power the de successfully the end of cl	T following tected PD detect and ause 145.	Comment Status D text: "Also, a PSE may succ .". We need similar text for t	essfully detect a he classification	Repeats PD but then opt not to i.e. "A PSE may
successfully detected a and adopt stewart_03_ Cl 145 SC 145.2.6 Yseboodt, Lennart Comment Type E	a valid signature over that pairs _0917_final.pdf P 141 Philips Lighting Comment Status A	L 25	# i-74 Editorial	Darshan, Yair Comment Type We have the power the de successfully	T following tected PD detect and ause 145.	Comment Status D text: "Also, a PSE may succ .". We need similar text for t d classify a PD but then opt	essfully detect a he classification	Repeats PD but then opt not to i.e. "A PSE may
successfully detected a and adopt stewart_03_ Cl 145 SC 145.2.6 Yseboodt, Lennart Comment Type E "The PSE probes the I	a valid signature over that pairs _0917_final.pdf P 141 Philips Lighting	L 25	# i-74 Editorial	Darshan, Yair Comment Type We have the power the de successfully the end of cl SuggestedRement Add the follow	T following t tected PD detect and ause 145. dy wing text in	Comment Status D text: "Also, a PSE may succ .". We need similar text for t d classify a PD but then opt	essfully detect a he classification not to power that e 38: "A PSE ma	<i>Repeats</i> PD but then opt not to i.e. "A PSE may PD. " to be added at
successfully detected and adopt stewart_03_ Cl 145 SC 145.2.6 Yseboodt, Lennart Comment Type E "The PSE probes the I PSE PI is connected to	a valid signature over that pairs _0917_final.pdf P 141 Philips Lighting <i>Comment Status</i> A ink section in order to detect a v	L 25	# <u>i-74</u> <i>Editorial</i> tion signature. The	Darshan, Yair Comment Type We have the power the de successfully the end of cl SuggestedRement Add the follow	T following tected PD detect and ause 145. dy wing text in a PD but th	Comment Status D text: "Also, a PSE may succ .". We need similar text for t d classify a PD but then opt .2.7 page 148 after line 38.	essfully detect a he classification not to power that e 38: "A PSE ma	<i>Repeats</i> PD but then opt not to i.e. "A PSE may PD. " to be added at
successfully detected a and adopt stewart_03_ Cl 145 SC 145.2.6 Yseboodt, Lennart Comment Type E "The PSE probes the I PSE PI is connected to Swapping the order of	a valid signature over that pairs _0917_final.pdf P 141 Philips Lighting <i>Comment Status</i> A ink section in order to detect a v o a PD through a link section."	L 25	# <u>i-74</u> <i>Editorial</i> tion signature. The	Darshan, Yair Comment Type We have the power the de successfully the end of cl SuggestedRement Add the follow and classify a	T following tected PD detect and ause 145. dy wing text in a PD but th	Comment Status D text: "Also, a PSE may succ .". We need similar text for f d classify a PD but then opt 2.7 page 148 after line 38. n 145.2.7 page 148 after line hen opt not to power that PE	essfully detect a he classification not to power that e 38: "A PSE ma	<i>Repeats</i> PD but then opt not to i.e. "A PSE may PD. " to be added at
successfully detected a and adopt stewart_03_ Cl 145 SC 145.2.6 Yseboodt, Lennart Comment Type E "The PSE probes the I PSE PI is connected to Swapping the order of	a valid signature over that pairs _0917_final.pdf	L 25	# <u>i-74</u> <i>Editorial</i> tion signature. The	Darshan, Yair Comment Type We have the power the de successfully the end of cl SuggestedRement Add the follow and classify a Proposed Respont REJECT.	T following tected PD detect and ause 145. dy wing text in a PD but th nse	Comment Status D text: "Also, a PSE may succ b.". We need similar text for f d classify a PD but then opt 2.7 page 148 after line 38. In 145.2.7 page 148 after line hen opt not to power that PE Response Status Z	essfully detect a the classification not to power that e 38: "A PSE ma). "	<i>Repeats</i> PD but then opt not to i.e. "A PSE may PD. " to be added at
successfully detected a and adopt stewart_03_ Cl 145 SC 145.2.6 Yseboodt, Lennart Comment Type E "The PSE probes the I PSE PI is connected to Swapping the order of SuggestedRemedy	a valid signature over that pairs _0917_final.pdf	L 25	# <u>i-74</u> <i>Editorial</i> tion signature. The	Darshan, Yair Comment Type We have the power the de successfully the end of cl SuggestedRement Add the follow and classify a Proposed Respont REJECT.	T following tected PD detect and ause 145. dy wing text in a PD but th nse	Comment Status D text: "Also, a PSE may succ .". We need similar text for f d classify a PD but then opt 2.7 page 148 after line 38. n 145.2.7 page 148 after line hen opt not to power that PE	essfully detect a the classification not to power that e 38: "A PSE ma). "	<i>Repeats</i> PD but then opt not to i.e. "A PSE may PD. " to be added at

Pa **141** Li **29**

C/ 145 SC 145.2.6.1	P 141	L 36	# i-75	C/ 145 S	C 145	P 142	L 10	# <u>i</u> -1
rseboodt, Lennart	Philips Lightin	g		Anslow, Peter		Ciena Corpora	ation	
Comment Type E	Comment Status A		Connection Check	Comment Type	TR	Comment Status R		Editoria
the classification of a P single-signature PD cor	power on both pairsets shall on D as defined in 145.2.7 to de nfiguration, a dual-signature f ce power' (7x) and 'deliver po	termine if the I PD configuration	PSE is connected to a	indicate the Comment #	lack of da 29 agains r max colu	rds Style Manual 13.3.2 says "A ta for a particular cell in a table t P802.3bt D2.4 was: "Several mms, which should contain an	e." tables in Clause	e 145 have blank cells
SuggestedRemedy		(_/)		"The lack o	f em-dashe	es is intentional. The em-dash	,	
	" by "source power" in the qu	oted sentence		information This makes		lack of the em-dash conveys the	hat there is no s	specific number."
Response ACCEPT.	Response Status C			Tcc2det ha IEEE style	s a maxim manual the	nis issue is in Table 145-7. "Co um value of 0.4 s, but the min o e cell should contain an em das	column is blank sh, which would	. According to the indicate that there is
C/ 145 SC 145.2.6.1 Abramson, David	P 141 Texas Instrum	L 44 ents Inc	# i-335	just a numb	er) then a	ent for this time. If there is sor n indication of this should be m s not the case, then the cell sh	ade via an entr	y in the cell such as
Comment Type E	Comment Status A		Editorial	SuggestedRem	edy			
Symbol names should l SuggestedRemedy Add ", Voc," after "oper	be included. n circuit voltage" and ", lsc," a	fter "short circ	uit current".	blank min c	r max colu , Tables 1	45-7, 145-8, 145-9, 145-10, 14		-
Response	Response Status C			Response		Response Status U		
, ACCEPT.				REJECT.				
				We will wor	k with edite	orial staff to try to clarify the sty	/le guide. Here	is our opinion:
				cell blank. I indicate the would conv	Eg. For par re is lack o ey an inco	between an em-dash, which ind ameters that convey a range, h of data, rather that the minimum rrect message. Em-dashes	having a blank '	Min' cell, does NOT

Pa **142** Li **10**

have been put in all cells where it is appropriate.

C/ 145 SC 145.2.							
	6.3 <i>P</i> 143	L 34	# i-76	C/ 145 SC 145.2	2.7 <i>P</i> 146	L 41	# i-79
Yseboodt, Lennart	Philips Lightin	g		Yseboodt, Lennart	Philips Lighting	I	
Comment Type E	Comment Status A		Editorial	Comment Type TR	Comment Status R		PSE Pow
	itten; "In detection state or connection check happen in multiple		≥".	Topic: SLIDING "Measuremer	nts should be averaged using any s	liding window	with a width of 1 s."
SuggestedRemedy				This sentence	e follows after the definition of PCla	es and PClass	-2P That whole
Change to: "In detection states	or connection check states" (two	o occurrences in ⁻	Гable 145-8)	section is informati - Why is this a	ve in nature.		
Response ACCEPT IN PRINC	Response Status C				nts of what ? PClass is a capability ower requirement of a PSE is enco		P.
				SuggestedRemedy			
delete additional inf	ormation column in table.			Remove quoted se	ntence.		
C/ 145 SC 145.2.	6.7 P 145	L 20	# i-77	Response	Response Status U		
Yseboodt, Lennart	Philips Lightin	g		REJECT.			
pairsets prior to app	Comment Status A ine whether an attached PD is a lying power to both pairsets."	candidate to rece	Connection Check eive power on both	the specification.	ention of averaging for Pclass and r		
PSEs apply a voltaç	ge and PDs can draw current.			C/ 145 SC 145.2		L 25	# i-80
SuggestedRemedy				Yseboodt, Lennart	Philips Lighting	1	
	ine whether an attached PD is a lying operating voltage to both p		vive power on both	Comment Type T "PSEs that will delicities classification on ea	Comment Status A ver 4-pair power to a dual-signatur	e PD shall per	Editor form Physical Layer
pairsets prior to app	in a speraling voltage to both p						
Response	Response Status C				power they source power.		
				SuggestedRemedy	power they source power.		
Response ACCEPT. Cl 145 SC 145.2.	Response Status C	L 43	# [i-78	SuggestedRemedy	rce power over 4 pairs to a dual-si	gnature PD sha	all perform Physical
Response ACCEPT. Cl 145 SC 145.2.	Response Status C		# [i-78	SuggestedRemedy "PSEs that will sou	rce power over 4 pairs to a dual-si	gnature PD sha	all perform Physical
Response ACCEPT. Cl 145 SC 145.2. Yseboodt, Lennart Comment Type ER "PSEs or PDs that of	Response Status C	ig vill not be able to a	Editorial	SuggestedRemedy "PSEs that will sou Layer classificatior	rce power over 4 pairs to a dual-si o on each pairset."	gnature PD sha	all perform Physical
Response ACCEPT. Cl 145 SC 145.2. Yseboodt, Lennart Comment Type ER "PSEs or PDs that of identification and ca	Response Status C 7 P 145 Philips Lightin Comment Status A do not implement classification w	ng vill not be able to o es."	<i>Editorial</i> complete mutual	SuggestedRemedy "PSEs that will sou Layer classification Response	rce power over 4 pairs to a dual-si o on each pairset."	gnature PD sha	all perform Physical
Response ACCEPT. Cl 145 SC 145.2. Yseboodt, Lennart Comment Type ER "PSEs or PDs that of identification and ca Does not apply for T	Response Status C 7 P 145 Philips Lightin Comment Status A do not implement classification was only perform as Type 1 device	ng vill not be able to o es."	<i>Editorial</i> complete mutual	SuggestedRemedy "PSEs that will sou Layer classification Response	rce power over 4 pairs to a dual-si o on each pairset."	gnature PD sha	all perform Physical
Response ACCEPT. Cl 145 SC 145.2. Yseboodt, Lennart Comment Type ER "PSEs or PDs that of identification and ca	Response Status C 7 P 145 7 P 145 7 Philips Lightin Comment Status A do not implement classification w in only perform as Type 1 device Fype 3 / Type 4. All of those supp	ng vill not be able to o es."	<i>Editorial</i> complete mutual	SuggestedRemedy "PSEs that will sou Layer classification Response	rce power over 4 pairs to a dual-si o on each pairset."	gnature PD sh	all perform Physical

Pa **148** Li **25**

C/ 145 SC 145.2.7 P 148 L 36 # i-81 Yseboodt, Lennart Philips Lighting	C/ 145 SC 145.2.7.1 P 148 L 44 # i-280 Stewart, Heath Analog Devices Inc. Figure 1000000000000000000000000000000000000
Comment Type TR Comment Status A "When connected to a dual-signature PD, a PSE operating over 4 pairs shall treat requested power over each pairset independently."	PSE Class Comment Type E Comment Status A Editoria the Misplaced comma. SuggestedRemedy
Redundant and untestable. The requirement on ICon-2P clearly states that power independently handled for each pairset. A PSE is also allowed to allocate the greater of the pairset power to each pairset. Classification must be performed on both pairsets of a dual-signature PD per line	is Change: Voltages, VClass, VMark, and VReset are specified in Table 145-14. To
SuggestedRemedy Remove quoted text.	Response Response Status C ACCEPT IN PRINCIPLE.
Response Response Status C ACCEPT IN PRINCIPLE.	Change to: "Voltages VClass, VMark, and VReset and currents IClass_LIM and IMark_LIM are specified in Table 145-14."
Change to: "When connected to a dual-signature PD, a PSE operating over 4 pai the requested power over each pairset independently."	rs treats This resolution is identical to comment #82.
and move it to the beginning of the paragraph on page 146, line 25.	C/ 145 SC 145.2.7.1 P 149 L 30 # i-83 Yseboodt, Lennart Philips Lighting
C/ 145 SC 145.2.7.1 P 148 L 44 # i-82 Yseboodt, Lennart Philips Lighting	Comment Type E Comment Status A Editoria
	"PSEs that issue more class events than the class they are capable of supporting, in order
Comment Type E Comment Status A "Voltages, VClass, VMark, and VReset are specified in Table 145-14. Currents IC and IMark LIM are specified in Table 145-14."	Editorial to determine the PD requested Class, transition to CLASS_RESET to reset the PD's class
"Voltages, VClass, VMark, and VReset are specified in Table 145-14. Currents IC and IMark_LIM are specified in Table 145-14."	Editorial to determine the PD requested Class, transition to CLASS_RESET to reset the PD's class
"Voltages, VClass, VMark, and VReset are specified in Table 145-14. Currents IC and IMark_LIM are specified in Table 145-14." Both sentences refer to the same Table, can be merged.	Editorialto determine the PD requested Class, transition to CLASS_RESET to reset the PD's classlass_LIM,event count."
 "Voltages, VClass, VMark, and VReset are specified in Table 145-14. Currents IC and IMark_LIM are specified in Table 145-14." Both sentences refer to the same Table, can be merged. Two crimes against commas in those sentences. SuggestedRemedy Change to: "Voltages VClass, VMark, and VReset and currents IClass_LIM and IMark_LIM ar 	Editorial to determine the PD requested Class, transition to CLASS_RESET to reset the PD's class lass_LIM, event count." Second "class" is not written with capital C. SuggestedRemedy Change to: "PSEs that issue more class events than the Class they are capable of supporting, in order to determine the PD requested Class, transition to CLASS_RESET to reset the PD's class
"Voltages, VClass, VMark, and VReset are specified in Table 145-14. Currents IC and IMark_LIM are specified in Table 145-14." Both sentences refer to the same Table, can be merged. Two crimes against commas in those sentences. SuggestedRemedy Change to:	Editorial to determine the PD requested Class, transition to CLASS_RESET to reset the PD's class lass_LIM, event count." Second "class" is not written with capital C. SuggestedRemedy Change to: "PSEs that issue more class events than the Class they are capable of supporting, in order to determine the PD requested Class, transition to CLASS_RESET to reset the PD's class

Pa **149** Li **30**

	7.1 P 149 Analog Devid	L 36 ces Inc.	# i-281	C/ 145 SC 145.2.7 Yseboodt, Lennart	7.1 P 151 Philips Lightin	L 11 g	# i-84
Comment Type TR Typo.	Comment Status A		Editorial	Comment Type T Table 145-14:	Comment Status A		PSE Class
SuggestedRemedy Change T_CLE to T	LCE indicates subscript.			T_CLE2 has value 6 T_CLE3 has value 6			
Response	Response Status C			Post clause split, the	re is no longer a reason to keep	T CLE2.	
ACCEPT.				SuggestedRemedy			
C/ 145 SC 145.2.7 Stewart, Heath Comment Type E	Analog Devic Comment Status A		# <u>i-282</u> Editorial	* Remove tcle2 tim	o T_CLE on of T_CLE2 and T_CLE3 in the ers	e draft to T_CLE:	
has already met the	state machine. Because the P "PSE in the state CLASS_EV ² ture 0 and the " clause.			* Rename tcle3 tim * Update usage in t * Update text in dra		to T_CLE)	
SuggestedRemedy				Response	Response Status C		
IClass in the range of 145.2.7.2 and 145.3 to If the Autoclass enal	gnature 0 and the PSE in the s of class signature 0 this indicat .6.2. bled PSE in the state CLASS_ ture 0 this indicates the PD wil	es the PD will po	erform Autoclass; see es measure IClass in the	* Remove tcle2 tim * Rename tcle3 tim * Update usage in t	DT_CEV on of T_CLE2 and T_CLE3 in the ers ers to tcev timers		
Response	Response Status C			C/ 145 SC 145.2.7	7.2 P 151	L 23	# i-85
ACCEPT IN PRINCI	PLE.			Yseboodt, Lennart	Philips Lightin	g	
	toclass enabled PSE in the sta signature 0 this indicates the				Comment Status A A Autoclass timing diagrams." c pointing to figure where it is sh	iown.	Editoria
				SuggestedRemedy			
				Change to: "See Figure 145B-15	o for Autoclass timing diagrams.	n	
				Response ACCEPT.	Response Status C		

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line Pa **151** Li **23** Page 68 of 134 9/15/2017 11:41:04 AM

C/ 145 SC 145.2.7.1 P 151 L 27 # i-86 Yseboodt, Lennart Philips Lighting Philips Lighting	C/ 145 SC 145.2.7.2 P 151 L 44 # i-283 Stewart, Heath Analog Devices Inc. A				
Comment Type TR Comment Status D PSE SD	Comment Type E Comment Status A Autoclass				
"If the PSE returns to IDLE, it shall maintain the PI voltage in the range of V Reset for a period of at least T Reset min before starting a new detection cycle."	The preceding paragraph and the note do not match. The preceding paragraph hooks the start of the T_AUTO_PSEx timers to a specific arc entering the POWER_ON state. The table row incorrectly hooks the timer start to _any_ entry into the POWER_ON state.				
Is contradicted by the state diagram, which does not have this requirement, invalidating this 'shall'.	SuggestedRemedy				
SuggestedRemedy	Change Measured from the transition to state POWER_ON				
 Add to IDLE state (Figure 145-13): "start tclass_reset_timer" Prepend "tclass_reset_timer_done * " to the logic from IDLE to START_CXN_CHK, START_DETECT, and START_CXN_CHK_DETECT. 	to Measured from the transition of the POWER_UP state to the POWER_ON state. Also change line 44 same page				
Proposed Response Response Status Z	Response Response Status C				
REJECT.	ACCEPT IN PRINCIPLE.				
This comment was WITHDRAWN by the commenter. C/ 145 SC 145.2.7.2 P 151 L 32 # i-87 Yseboodt, Lennart Philips Lighting Philips Lighting Philips Lighting Philips Lighting	Change Measured from the transition to state POWER_ON to Measured from the transition of the POWER_UP state to the POWER_ON state.				
Comment Type T Comment Status A Sliding Topic:SLIDING	And merge the two additional information cells for items 1 and 2.				
Issue: we use the concept of 'sliding windows' in our draft very inconsistently, the SLIDING comments try to make the whole bunch consistent.	C/ 145 SC 145.2.7.2 P 151 L 46 # [i-88 Yseboodt, Lennart Philips Lighting				
Aim: get everything in the form "measure xxx using a xx time sliding window". "Average power is calculated using any sliding window with a width in the range of T AUTO_Window as defined in Table 145-15."	Comment Type E Comment Status A Autoclass Table 145-15 Autoclass timing requirements, item 3 is called "Autoclass average power sliding window" but really describes the width of the window.				
SuggestedRemedy	SuggestedRemedy				
Replace quoted sentence by: "Average power is measured using a sliding window with a width in the range of T	Replace 'Parameter' by "Autoclass average power sliding window width".				
AUTO_Window as defined in Table 145-15."	Response Response Status C				
Response Response Status C ACCEPT.	ACCEPT.				

Pa **151** Li **46**

Yseboodt, Lennart	P 152 Philips Lighting	L 29	# i-89	Cl 145 SC Yseboodt, Lennar	145.2.8	P 152 Philips Lighting	L 38	# <u>i-90</u>
SuggestedRemedy		·	Editorial	doesn't make SuggestedRemed Rename T_C Response	rs that dea too much y	al with time and are not exclusi		PSE Power
pairset in a power on st	e per pairset in the POWER_O ate". ter name to "Pair-to-pair voltag		utput voltage per	ACCEPT. C/ 145 SC Darshan, Yair	145.2.8	P 152	L 46	# [i-419
This resolution is identiCl 145SC 145.2.8	cal to comment #289. <i>P</i> 152	L 30	# [i-289			Comment Status A 45-16 item 5 needs some upda models accuracy.	ates to sync	Pres: Darshan3 with latest changes and
Stover, David Comment Type TR	Analog Devices Comment Status A	Inc.	PSE Power	SuggestedRemed	•	osed in darshan_03_0917.pdf		
Vport_PSE_diff and Vp	ort_PSE-2P both apply to either state (POWER_ON, POWER_ t labeled consistently in the tab	_ON_PRI, PO	e PSE when that	Response ACCEPT IN F	0 1 1	Response Status C		
These items are are no SuggestedRemedy Change "Output voltage with both pairsets in a p	e pair-to-pair difference" to "Ou power on state"; Change "Outp Output voltage per pairset in a	ut voltage per	pairset in the	Adopt the cha	nges prop	osed in darshan_03_0917_fin	al.pdf	

Change item 2 parameter name to "Pair-to-pair voltage difference".

Pa **152** Li **46**

7 145 SC 14 arshan, Yair	5.2.8	P 1 52	L 46	# <u>i-463</u>	C/ 145 Darshan, Ya	SC 145.2.8 air	P 152	L 49	# i-420	
mment Type	r Com	nment Status R		Pres: Darshan12	Comment 7	<i>уре</i> т	Comment Status A		PSE Power	
The following question has been asked regarding diode aging and its affect on PD_Vdiff that affect unbalance. Background: Our spec defines unbalance requirements for the PSE in terms of VPort_PSE-2P, Icon- 2P_unb and for the PD in terms of Icon-2P_unb and inexplicit design requirement to keep PD_Vdiff=60mV max measured at 1-10mA range. The PD_Vdiff has the highest effect on the system current/resistance unbalance. The following use case has been investigated: A PD is connected to a PSE over 4-pairs. The PSE is using Alt A (MDI) and Alt B (X)						6A + 0.005A m g, darshan_07_ but the conclus Remedy	n-2P_unb value in Table 145- argin =0.791A instead of 0.78 0517.pdf page 1 where the sir ion derived from it (not to upd or class 7 from 0.781A to 0.7	1A. See preser nulations of clas ate the spec) wa	ntation from May 2017 ss 7 results where	
A PD is connect resulting with 1,	ted to a PSE ov 2 and 7,8 are p	ver 4-pairs. The PSE positive and 3,6 and 4	,5 are negative.	t runs this way for	Response ACCEF	ΥТ.	Response Status C			
MANY years. II	ne PD front end	d is not an active bride	ge, it is a diode b	fidge. The PSE has 5 are positive and 3,6	C/ 145	SC 145.2.8	P 153	L 2	# i-91	
and 7,8 are neg	ative. Now we	have diodes that have	e been aged (1,2	and 3,6) in parallel	Yseboodt, L		Philips Lightin			
		ive current through the			Comment T	ype E	Comment Status A		PSE Power	
not simply switching from the old diodes to the new ones, its mixing old with new. The questions are: 1. If the aging has an effect on Vf, then we may have higher mismatch between the diodes in parallel leading to higher unbalance.					original text: "See 145.2.8.6 and maximum value definition in Figure 145-23." Both Figure 145-23 and Equation 145-18 describe the same thing. Only one of them should be leading, in another comment we picked the Equation to be in the lead.					
In an extreme power and heat	e case, we may	/ have a runaway situ	ation as the age	d diode drops more	Suggested	Remedy				
Answers:					Change	e to: "See 145.2	.8.6 and maximum value defin	nition in in Equa	tion (145-18)."	
1. All diodes in t		e has to have 60mV r	maximum Vdiff b	etween any	Response		Response Status C			
	't have a memo	ory. The performance		hange may changed d other issues that are	ACCEF	РТ.				
function of curre			r construction and		C/ 145	SC 145.2.8	P 153	L 16	# i-92	
		of life will introduce h	igher leakage cu	rent, higher VF, and	Yseboodt, L	ennart	Philips Lightin	g		
other parameter		ne spec. with their allowed op	erating conditions	VF will not change	Comment T	ype TR	Comment Status A		PSE Inrush	
significantly dur 5. Life time of a reliable vendors 6. As a result of	ing the diode d diode of reliab is 10 years. Th the above, any	efined life time with o le vendor can be 20 y he typical is somewhe y component in the P	r without current years. The lowest are between thes D or PSE need to	conduction. life time value of e ranges.	PDs ma	ay be started up , dual-sig PDs a	item 6) lists minimum values o in a staggered fashion, maki are specified exclusively on a	ng this paramet	er meaningless. In	
		life time like any othe les, the effect of agin		a problem for VE (or	Suggested	Remedy				
other parameter							s for dual-signature PDs in Iter s for dual-signature PDs in Iter			
IggestedRemedy	0047 = - 46 fe =	dataila			Response		Response Status C			
See darshan_12					ACCEF	T IN PRINCIPL	_E.			
esponse	Resp	onse Status C			ACCEF	T IN PRINCIPL	-E.			
REJECT.					adopt o	hanges shown	in yseboodt_10_0917_inrush.	pdf		
There was no re	emedy provided	d in the referenced pro	esentation.			-	ical to comment #291.	F		
	S: D/dispatche	•		T/technical E/editorial G SE STATUS: O/open W/	0	U/unsatisfied	Pa 15 Z/withdrawn Li 16		Page 71 of 134 9/15/2017 11:41:	

145 SC 145.2.8 P 153 L 16 # i-290	C/ 145 SC 145.2.8 P 153 L 25 # i-284
tover, David Analog Devices Inc.	Stewart, Heath Analog Devices Inc.
T Comment Status A PSE Inrush Item 6 specifies "Total output currentin the POWER_UP state per the assigned Class", but includes rows for "Type 3" and "Type 4" dual-signature PDs. PSE Inrush uggestedRemedy Change from "Type 3 dual-signature PD" to "Dual-signature PD, Class 1 to 4"; Change from "Type 4 dual-signature PD" to "Dual-signature PD, Class 5". Response Response Status C	Comment Type TR Comment Status A PSE Power Item 12 is associated with Type not assigned Class SuggestedRemedy Delete ", per the assigned Class" Response Response Status C ACCEPT IN PRINCIPLE. C
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	Delete ", per the assigned Class" in item 12 on page 154 (comment says page 153).
adopt changes shown in yseboodt_10_0917_inrush.pdf	C/ 145 SC 145.2.8 P 153 L 31 # i-485 Johnson, Peter
This resolution is identical to comment #291.	Comment Type T Comment Status A PSE Inrus
Instrument Type TR Comment Status A P 153 L 16 # [i-291] Itover, David Analog Devices Inc. Analog Devices Inc. PSE Inrush Pomment Type TR Comment Status A PSE Inrush The PSE inrush requirements "I_Inrush" and "I_Inrush-2P" always apply. However, dual-signature PDs may be powered over one or both pairs. For this reason, specifying total output current (I_Inrush) for dual-signature PDs is problematic. For example: When a single pairset of a Type 4/Class 5 dual-signature PD is inrushed, the PSE shall provide an	Dual Signature Class 5 Minimum I_Inrush-2P is specified as 325 mA. Class 5 Dual Signature PD's are specified in 145.3.8.3 as allowing up to 180uF for C_Port-2P without PD current limiting. Is there a rationale why 325mA current limiting meets the needs of a Class 5 Dual Signature but we require 400mA for all other cases where C_Port or C_Port-2P 2P can go up to 180uF ? SuggestedRemedy Unless there is a justifiable reason, I_Inrush should be 800mA and I_Inrush-2P 400mA for the Type-4 Dual Signature case.
I_Inrush of at least 0.65A and shall not provide an I_Inrush-2P of more than 0.6A. For dual-signature PDs, output current during inrush should only be specified per-pairset. <i>uggestedRemedy</i> Remove I_Inrush entries for dual-signature PDs.	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
	adopt changes shown in yseboodt_10_0917_inrush.pdf
esponse Response Status C	

Pa **153** Li **31**

Yseboodt, Lennart	P 153 Philips Lightin	L 33	# i-93	<i>Cl</i> 45 Darshan, Ya	SC 45.2.8		P 153	L 33	# i-435
Comment Type E	Comment Status A	y	PSE Power	Comment T		Comment Sta			Repeats
Table 145-16, item 8 For parameters that of doesn't make too mu On the PD side we ca SuggestedRemedy	: T_Inrush-2P. deal with time and are not exclu ich sense.	isive to dual-sigr		Table 14 Tinrush. which ne discuss To cons 1st long since we	45-16, item 8, It means tha eeds to cover if it sufficient ider if Tpon n class events e had so far 2	, Tinrush: It is clear it effective Tpon is long 1st class eve for their designs ar eed to be increase	from the s (400-50) ms nts, + 4 clas nd application d by ~50ms ns as in 802 om the 600n	sec=350ms or (4 ss events + desig ons in both single se to compensate 2.3af/at. It doesn't	t Tpon includes 00-75) ms=325mse on margin. group to and dual-signatures. for the increase in the affect reliability etc.
ACCEPT.				SuggestedR	•				
C/ 145 SC 145.2.8	P 153	L 33	# : 205	Increase	e Tpon from 4	00msec to 450ms	ec or to wha	at ever the group	decide.
Peker, Arkadiy	Microsemi Co		# i-205	Proposed R REJEC	,	Response Sta	tus Z		
Tinrush. It means that which needs to cover discuss if it sufficient To consider if Tpon r increase in the 1st lo reliability etc. since w 802.3af experiments SuggestedRemedy	 a, Tinrush: It is clear from the state ffective Tpon is (400-50) ms r long 1st class events, + 4 clas for their designs and application need to be increased by approxing class events to keep our maye had so far 200msec margin f and the actual spec numbers." 400msec to 450msec or to wha Response Status Z 	ec=350ms or (4 s events + desig ons in both single imately 50mse t argins as in 802.3 from the 600mse	00-75) ms=325mse gn margin. group to a and dual-signatures. b compensate for the 3af/at. It doesn't affect ac value from the	This cor Cl 145 Darshan, Ya Comment Ty Resolve derived and as a updated If Ppeak	SC 145.2.8 SC 145.2.8 Sir ype T first commer from Ipeak-2f a result, Ppea a result, Ppea in all Tables C_PD for class	<i>Comment Sta</i> nt marked CLASS8 P_unb. The value o	P 154 <i>P</i> 154 <i>A</i> <i>B</i> _PPD. Tab <i>f</i> 0.99 was W. Now it is not in related LIM-2P nee	L 16 L 16 le 145-16 item 11 simulated when l s 71.3W and Ppe d parameters in 1 d to be 0.995A.	# [<u>i-421</u> <i>PSE Power</i> I, ILIM-2P. ILIM_2P is PClass_PD was 71W wak_PD was already
This comment was WITHDRAWN by the commenter.				SuggestedRemedy After resolving the comment marked CLASS8_PPD. Adopt the following option: accordingly: Option 1: If Ppeak_PD for class 8 is 74.8W then ILIM-2P need to be 0.995A. Option 2: If Ppeak_PD for class 8 is 74.9W then ILIM-2P need to be 0.996A.					
				Response Response Status C ACCEPT IN PRINCIPLE.					
						•	tus C		

Pa **154** Li **16**

C/ 145 SC 145.3.1 P 154 L 19 # i-285	C/ 145 SC 145.2.8 P 154 L 23 # i-94
Stewart, Heath Analog Devices Inc.	Yseboodt, Lennart Philips Lighting
Comment TypeTRComment StatusADLLData Link Layer Classification is deemed optional in Table 145-18. However, because a PSE is _allowed_ to select any one of 4 4PID inspection techniques (see 145.2.6.7), it logically follows that the PD_must_exhibit all 4 of the 4PID characteristics. Notably, the 1st characteristic (single-signature) is enough to prove a PD is 4PID compatible, thus a single-signature PD need not comply with the remaining 3 attributes. However, a dual-signature PD has little choice but to comply with all 3 attributes (2-4). Because the PD does not know which of the aforementioned tests will be performed it must have all 2-4 attributes in order to receive 4P power.DLL	Comment Type E Comment Status A Editorial Table 145-16, parameter 12: T_LIM-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. SuggestedRemedy Rename T_LIM-2P to T_LIM throughout Clause 145. Response Response Status C ACCEPT. C ACCEPT.
SuggestedRemedy Change	Cl 145 SC 145.2.8 P 154 L 27 # i-95
Table 145-18, Type 3, Dual, 1 to 3 row :: Data Link Layer Classification column :: from "Optional" to "Mandatory"	Yseboodt, Lennart Philips Lighting
Delete Table 145-18, Note 2 Page 184, Line 3 Change Single-signature PDs that request Class 4 or higher and dual-signature PDs that request Class 4 or higher on at least one of its Modes shall provide DLL classification. to Single-signature PDs that request Class 4 or higher and dual-signature PDs shall provide DLL classification. <i>Response Response Response</i> ACCEPT IN PRINCIPLE.	 While this is not entirely unambiguous, the spec today requires a PSE to support at least Class 3, due to the PType(min) parameter having a value of 15.4W. The historic reason for this is that classification was optional and not well understood. By requiring at least support for Class 3, the situation was avoided that a PD was plugged in a nothing ever happened (eg. because it is a Class 1 only PSE). The situation has now changed: Classification is mandatory The concept of Classes is much more prevalent in the standard
delete item D on page 145, line 33	 The Ethernet Alliance logo program uses Class in the logo to make it clear what kind of PSE is needed to power a particular PD
C/ 145 SC 145.2.8 P 154 L 23 # i-292 Stover, David Analog Devices Inc. DCF Device DCF Device	There are valid use-cases for Class 1 and Class 2 only PSE ports, for which it is currently unclear if these are compliant or not. Per the same logic, Type 4 PSEs should then be allowed to support only Class 7.
Comment Type TR Comment Status A PSE Power Tlim-2p is solely a function of PSE Type, regardless of PD assigned Class. SuggestedRemedy Change "Short circuit time limit per pairset, per the assigned Class" to "Short circuit time	SuggestedRemedy Change Table 145-16, Item 13: - minimum value of Type 3 from 15.4 to 4 - minimum value of Type 4 from 90 to 75
limit per pairset". Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	Response Response Status C ACCEPT.
Delete ", per the assigned Class" in item 12 on page 154 (comment says page 153).	
This resolution is identical to comment #284.	

Pa **154** Li **27**

C/ 145 SC 145.2.8.1	P 155	L 32	# i-293	C/ 145	SC 145.2.8.	1 /	^o 155	L 38	# i-96
Stover, David	Analog Device	-	1200	Yseboodt,			lips Lightin		
Comment Type TR	Comment Status A		PSE Power	Comment	Туре Т	Comment Stat	ıs A		PSE Pou
	ver on" and "power up" states pairset in one of these states		he requirements in			R_ON state may re ets the VPort_PSE-			t when the pairset
SuggestedRemedy In 145.2.8.1, change "t POWER_UP state" to	he POWER_ON state" to "a "a power up state".	oower on state'	'; change "the	dual-si	g states.	mentioned do not	use the wo	rd "state". Also	we need to mention th
Response	Response Status C			Suggested					
ACCEPT.					in POWER_C				may remove power _PSE-2P specification.'
C/ 145 SC 145.2.8.1		L 37	# i-294	Response		Response Statu	s C		
Stover, David	Analog Device	ACCEPT IN PRINCIPLE.							
Comment Type T	Comment Status D		PSE Power						
3.5V/us". This PSE rec	as a result of load changes of quirement seems to be the du	al of the PD tra	Insient behavior			'the POWER_ON s "a power up state"		oower on state'	; change "the
). In another comment, I shown is PSE requirement should li			This re	solution is iden	tical to comment #2	293.		
SuggestedRemedy				C/ 145	SC 145.2.8.	1 /	^o 155	L 39	# i-295
Replace "3.5 V/us" with	h "3500 V/s".			Stover, Da	vid	An	alog Devic	es Inc.	
Proposed Response	Response Status Z			Comment	Type T	Comment Stat	us A		Edito
REJECT.				"A PSE	in the POWE		nove powe	er from a pairse	et" there are multiple
This comment was WI	THDRAWN by the commente	r.		Suggested	- /				
This comment was with	hdrawn before the comment r	esolution meet	ing.	00		_ON state" to "a po	wer on stat	te".	
				Response ACCEI	PT IN PRINCIP	Response Statu	s C		
						'the POWER_ON s , "a power up state"		oower on state'	'; change "the
				This re	solution is iden	tical to comment #2	93.		

Pa **155** Li **39**

C/ 145 SC 145.2.8.1 P 155 L 41 # i-97 Yseboodt, Lennart Philips Lighting Philips Lighting	C/ 145 SC 145.2.8.1 P 155 L 47 # i-296 Stover, David Analog Devices Inc. Inc.
Comment Type E Comment Status A Editorial	Comment Type T Comment Status A PSE Pow
"A PSE that has assigned Class 1 to 4 to a single-signature PD and is in the POWER_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon. A PSE that has assigned Class 5 to 8 to a single-signature PD shall	"TRiseis referenced fromthe voltage difference betweenconductors of a pairset in the POWER_ON state from the beginning of POWER_UP" applies to all power on and power up states.
apply power to both pairsets while in the POWER_ON state."	SuggestedRemedy
When a state name is mentioned do not use the word "state".	Change "the POWER_ON state" to "a power on state"; change "the POWER_UP state" to "a power up state".
SuggestedRemedy	Response Response Status C
Change to: "A PSE that has assigned Class 1 to 4 to a single-signature PD and is in POWER_ON may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon. A PSE that has assigned Class 5 to 8 to a single-signature PD shall apply power to both pairsets while in POWER_ON."	ACCEPT.
Response Response Status C	
ACCEPT.	
C/ 145 SC 145.2.8.1 P 155 L 46 # [i-98	
Yseboodt, Lennart Philips Lighting	
Comment Type E Comment Status A Editorial "TRise, as defined in Table 145-16, is referenced from 10% to 90% of the voltage difference between the positive and the negative conductors of a pairset in the POWER_ON state from the beginning of POWER_UP." Editorial	
When a state name is mentioned do not use the word "state".	
SuggestedRemedy	
Change to: "TRise, as defined in Table 145-16, is referenced from 10% to 90% of the voltage difference between the positive and the negative conductors of a pairset in POWER_ON from the beginning of POWER_UP."	
Response Response Status C	
ACCEPT IN PRINCIPLE.	
Change "the POWER_ON state" to "a power on state"; change "the POWER_UP state" to "a power up state".	
This resolution is identical to comment #296.	

Pa **155** Li **47**

C/ 145	SC 145.2.8.3	P 156	L 3	# i-99	"A PS
Yseboodt,		Philips Lighting	-		lasting mo Transients
Comment	Туре Т	Comment Status A		PSE Power	2P."
		peak PSE voltages for Type	3, Class 6 and	l Type 4, Class 8 are	Chan
	and 48.05 V resp e values are used	to calculate VTran_lo-2p in	the PD under v	vorst case	C/ 145 S
circum	stances, the calcu	ulated PD voltages are 37.2	/ and 34.5V.		Picard, Jean
i nis m	ismatches with th	e VTran_lo-2P specification	In Table 145-2	8 WHICH IS 36V.	Comment Type
Otherw	vise we might get	he KTran_lo spec to someth into Von/Voff PD issues.	ing that results	in 36V on the PD side.	The followi voltage, all 0.1uF cap)
"A PSE for trar lasting	nsient conditions more than 30 us ents less than 30	w this proposal. n output voltage no less thar and less than 250 us, and m us in duration may cause the	neet the require	ements of 145.2.8.8.	"The minin allows a Pl lasting less SuggestedRen
Suggested	Remedy				Use simila
We ca		lo to VTran-2P, it is obvious	it is the low tra	nsient voltage, because	V". The wordir "The minin allows a Pl
	hange item 3 in T Tran-2P for Type:	able 145-16 from KTran_lo t	o VTran-2P.		145.3.8.6"
	Tran-2P for Type				Response
С	hange 'parameter	' to read: "Output voltage du	ring transient".		ACCEPT I
"A	hange text in 145 A PSE shall maint	.2.8.3 to: ain an output voltage no less than 30 us and less than 250	s than VTran-2	P for transient	Replace se "See 145.3
145.2.8	3.8. Transients les VTran-2P."	ss than 30 us in duration ma	y cause the vol	tage at the PI to fall	Modify sen A PD shall -lasting lor
С	hange parameter	name in Table 145-28, item	2 from VTran_	lo-2P to VTran_PD-2P.	-lasting les
Response		Response Status C			
ACCEI	PT IN PRINCIPLE				
	n rename KTran_ num is specified.	lo to VTran-2P, it is obvious	it is the low tra	nsient voltage, because	
V	Tran-2P for Type:	able 145-16 from KTran_lo t 3 is 45.3V (MIN)	o VTran-2P.		

VTran-2P for Type4 is 48.4V (MIN) Change 'parameter' to read: "Output voltage during transient".

Change text in 145.2.8.3 to:

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

PSE shall maintain an output voltage no less than Vtran-2P for transient conditions ore than 30 us and less than 250 us, and meet the requirements of 145.2.8.8. is less than 30 us in duration may cause the voltage at the PI to fall below Vtran-

nge parameter name in Table 145-28, item 2 from Vtran Io-2P to Vtran PD-2P.

C/ 145	SC 145.2.8.3		P 156	L 8	# i-248
Picard, Je	ean		Texas Instrun	nents Inc	
•		~			

Comment Status A Эе TR PSE Power

wing sentence does not make sense. In reality the PSE cannot really short the PI all it can do is temporarily turn off its port (it's only a low side switch after all, with a o).

imum PD input capacitance CPort min or CPort-2P min defined in Table 145-28, PD to operate for input voltage transients which cause VPD to drop as low as 0 V, ss than 30 us as specified in 145.3.8.6."

emedy

ar wording to the "at" standard, removing "which cause VPD to drop as low as 0

lina becomes this:

imum PD input capacitance CPort min or CPort-2P min defined in Table 145-28, PD to operate for input voltage transients lasting less than 30 us as specified in

Response Status C

IN PRINCIPLE.

sentence with: .3.8.6 for PD transient requirements."

entence on page 194, line 3 as follows:

all continue to operate without interruption in the presence of transients: onger than 30us and less than 250us at the PSE PI as defined in 145.2.8.3 ess than 30us and causing the voltage at the PD PI to fall to not less than 34V.

> Pa 156 Li 8

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C/ 145 SC 145.2.8.3 ₋emahieu, Joris	P 156 ON Semicono	L 8 ductor	# i-337	C/ 145 Yseboodt,	SC 145.2.8.4 Lennart	₽ 156 Philips Ligh	L 18 ting	# i-100
Comment Type TR C Input Voltage drop to 0V is Drop to 0V during 30us spe Have diode reverse recove been taken into account he Active bridges seem very p	c seems to be written fo y and cable inductance re?	effects (peak re	verse recovery current)	The Cł "Avoid meanir Where	:: and/or hicago Manual o this Janus-face ng. it seems neede	Comment Status A of Style says the following a d term. It can often be repla ed, try 'or or both'. But als ation for power feeding ripp	aced by 'and' or 'o o think of other p	r' with no loss in ossibilities."
rectifier stage. An immediate short at the i off the mosfet.				met for x V Po	r common-mode	and/or pair-to-pair noise va to the maximum power per	alues for power o	utputs from (I Hold max
SuggestedRemedy Increase minimum voltage bridges at the PD input. Response R	evel during first 30us an	nd make spec co	ompliant with active	shall.		is sentence is particularly b I lot of words to redundantly		
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.					se, the specific	ation for power feeding ripp and pair-to-pair noise valu		
Replace sentence with: "See 145.3.8.6 for PD trans Modify sentence on page 1 A PD shall continue to oper -lasting longer than 30us ar	94, line 3 as follows: ate without interruption i			Replac	PT IN PRINCIP ce with: se, the specifica	Response Status C LE.	e and noise in Ta	ble 145-16, shall be met
-lasting less than 30us and	causing the voltage at the					l pair-to-pair noise values a		
				equipn source <i>Suggested</i> Chang <i>Response</i> REJEC The ex	Type E ine point but lpo nent, not cabling d by a PSE or s <i>Remedy</i> e text per comm CT. disting definition y which is impor		hould be "Iport is at this is the curre	the total current

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Cl 145 SC 145 Darshan, Yair	2.8.5 P1	1 56 <i>L</i> 51	# i-423	C/ 145 SC 145 Yseboodt, Lennart	.2.8.5	P 157 Philips Lighti	L 13 ng	# i-101
Comment Type T Equation 145-8 c	Comment Status	-	Repeats alue of Icon-2P in case of	Comment Type T		ent Status A	e pairs of the sa	Pres: Yseboodt3 me polarity under
However, for the Equation 145-8 co operating over 4- -Icon is defined ir -Icon-2P_unb is co There is no inform	Equation 145-9. efined in Table 145-16 ite	which is operating ove min(Icon - IPort-2P-ot em 5.	r 4-pairs. her, ICon-2P-unb) when r to calculate the value of	The unbalance sp - It is the minimu - It is the maximu cable + PD	pecification is ti m current a PSI m current a PS	E must be able to s E may source whe	n-2P-unb which supply on a pairs n connected to a	serves 3 distinct roles:
SuggestedRemedy Adopt darshan_0	0917 pdf			That makes it that	t there is ZERC) margin between I	PSE minimum a	nd PD maximum.
• –		_		SuggestedRemedy				
Proposed Response REJECT.	Response Status				v parameter tha	ancemargin.pdf wh t takes the role of s		ate margin by inimum current a PSE
This comment wa	s WITHDRAWN by the co	ommenter.		Response	Respo	nse Status C		
This comment wa	s withdrawn before the co	omment resolution me	eting.	ACCEPT IN PRIM				
	Micro Comment Status ontains the parts that allo	R w us to calculate the v	# i-204 Pres: Darshan9 value of Icon-2P in case of	1. Use the Icon-2 Icon-2p-unb	2p-unb numbers		_0917_final.pdf	changes: for lunbalance-2p and lance section, rename
However, for the Equation 145-8 c	airs and for the dual-sign nost important use case v ntains the part ""Icon-2P=	which is operating ove	r 4-pairs. ther, ICon-2P-unb) when	C/ 145 SC 145 Yseboodt, Lennart	.2.8.5	<i>P</i> 157 Philips Lighti	L 14 ng	# <u>i-103</u>
operating over 4- -Icon is defined in				Comment Type E	Comm	nent Status A		Editorial
 -Icon-2P_unb is c There is no inform 	efined in Table 145-16 ite		r to calculate the value of	"A minimum curre	ent of ICon-2P-	state with statenan unb over one of the see 145.2.8.5.1) in	e pairs of the sai	
SuggestedRemedy				SuggestedRemedy				
Adopt darshan_0	_0917.pdf			Change to:				
Response	Response Status	U				unb over one of the see 145.2.8.5.1) in		me polarity under
REJECT.				Response		nse Status C	_	
				, ACCEPT.		· -		

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line Pa **157** Li **14** Page 79 of 134 9/15/2017 11:41:04 AM

C/ 145 SC 145.2.8.5 Yseboodt, Lennart	<i>P</i> 157 Philips Lighting	L 14	# [i-102	Cl 145 SC 145.2.8 . Yseboodt, Lennart	5 P 158 Philips Lighting	L 10	# i-104		
Comment Type E	Comment Status D Con-2P-unb over one of the p	aira of the oar	Repeats	Comment Type TR	Comment Status A ed in Equation (145-12), is the m		Pres: Darshan1		
maximum unbalance c	ondition (see 145.2.8.5.1) in entioned do not use the word	the POWER_		effects that a PSE sup	ports on a pairset when powerin	ig a single-sig	gnature PD over 4 pairs.		
	Con-2P-unb over one of the p				f equations that define the value depends on VPSE and RChan) a				
maximum unbalance c	ondition (see 145.2.8.5.1) in	POWER_ON.	"		02.org/3/bt/public/mar17/yseboo				
Proposed Response REJECT.	Response Status Z				-unb is often lower than that of less this has the effect of 'clipping				
This comment was WITH	IDRAWN by the commenter.			The real issue arises i	n the PD section, where we requ	uire a PD nev	er to draw more than		
C/ 145 SC 145.2.8.5	P 157	L 29	# i-297	IPeak-2P-unb on any given pair. If that is a requirement (and it should be), then we can't have IPeak-2P-unb depend on					
Stover, David	Analog Devices	s Inc.			h parameters the PD knows not		-2P-und depend on		
Comment Type E For Equation (145-10), "v	<i>Comment Status</i> A when in 2-pair mode" is not a	ligned with the	<i>Editorial</i> e rest of the entries.		ost no gain for PSEs to be had t solution is to make IPeak-2P-u				
SuggestedRemedy				SuggestedRemedy					
Make alignment consiste	ent.			- Replace page 158, li	nes 12 through 44 by:				
Response ACCEPT.	Response Status C			IPeak-2P-unb = {ILIM-					
	D			Response	Response Status C				
C/ 145 SC 145.2.8.5 Stover. David	P 157 Analog Devices	L 39	# i-298	ACCEPT IN PRINCIP	LE.				
	5	S INC.		- Replace page 158, li	nes 12 through 44 by:				
Comment Type ER Reference to incorrect ed	Comment Status A		PSE Power	IPeak-2P-unb = {ILIM-	2P - 0.002}A				
SuggestedRemedy Replace "See (145-14)"	with "See (145-11)"								
Response ACCEPT.	Response Status C								

Pa **158** Li **10**

C/ 145 SC 145.2.8.5.1 P 158 L 45 # [i-105] Yseboodt, Lennart Philips Lighting	<i>Cl</i> 145 SC 145.2.8.5.1 <i>P</i> 158 <i>L</i> 46 # <u>i-425</u> Darshan, Yair					
Comment Type ER Comment Status A Editorial	Comment Type T Comment Status A Pres: Darshan1					
Subclause 145.2.8.5.1 title is "PSE PI pair-to-pair effective resistance and current unbalance". The main topic here is a current unbalance requirement. Make title consistent with PD title 148.3.8.0 SuggestedRemedy Change to: "PSE pair-to-pair current unbalance".	The changes we did when we move from "channel" to "Link section" breaks some of the work we did for pair to pair resistance unbalance. To fix it, we need to add a text that defines the equipment connector as part of the PSE PI and PD PI when tested for pair-to-pair resistance unbalance for compliance. In this way we don't break the link section definition due to the fact that the PSE load when PSE is tested for compliance and PD voltage source output resistance, Rsource, when PD is tested for compliance include the effect of the equivalent portion of the link section.					
Response Response Status C	SuggestedRemedy					
ACCEPT.	Adopt darshan_01_0917.pdf for detailed analysis and proposed baseline.					
ACCEF 1.	Response Response Status C					
CI 145 SC 145.2.8.5.1 P 158 L 45 # [i-424	ACCEPT IN PRINCIPLE.					
Darshan, Yair	adapt changes shown an alide 12 of dershap 01,0017 adf					
Comment Type T Comment Status A Pres: Darshan3	adopt changes shown on slide 12 of darshan_01_0917.pdf					
Icon-2P_unb values need to be verified when using Equation 145-15 (Rpse_min/max) and Equation 145-26 (Rpd_min/max) with the test verification models described in Table 145-17 and Rsource min/max requirements with their defined accuracies (+1/-%).	CI 145 SC 145.2.8.5.1 P 158 L 47 # i-392 Thompson, Geoffrey Individual					
	Comment Type ER Comment Status A Pres: Yseboodt2					
SuggestedRemedy	This seems like an attempt to control the system imbalance (which is controlled by the					
Adopt darshan_03_0917.pdf	combined specifications of the three elements, one of which is externally specified) from within the PSE spec.					
Response Response Status C	SuggestedRemedy					
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	This is all valuable tutorial material that would be valuable for further work on the topic so it should be moved (with suitable editing) to an informative annex.					
Adopt the changes proposed in darshan_03_0917_final.pdf	Response Response Status W					
This resolution is identical to comment #419.	ACCEPT IN PRINCIPLE.					
	Adopt yseboodt_02_0917_Figure_145_22.pdf					
	This resolution is identical to comment #110.					

Pa **158** Li **47**

C/ 145	SC 145.2.8.5.		L 4	# i-106		C/ 145	SC 145.2.8	.5.1	P 159	L 27	# i-426
Yseboodt, Lo		Philips Lighti	ng	_		Darshan, \		.	o		
unbalan	P-unb is the curr	Comment Status A rent in the pairset with the h gher than ICon / 2." ied.	iighest current ii	_	ditorial 1	of PSE and wl	omment is not a E resistive element is not a hen PSE connert	ents to form R ected to the PS	rrent balancing pse_min and R	ose_max that m	Pres: Darshan2 is about the typical use eet equation 145-15 7, will meet the values
	to:	nest pairset current in case	of maximum un	balance and will be)	In D3.0 Rpse_ (a) The	_min. If Rpse_m e internal PSE	n value of Rpse nin maximum va power supply o	alue is not limite pen load voltag	e to significantly	is function of the following issues: / increase in order to E Type under load.
Response ACCEP	т.	Response Status C				(b) po (c) Pe values contrib increa- test ve (d) the (e) The	wer loss at ext r Equation 145- s of Rpse_min (bution of Rpse t se of system u erification mode ere is no practic	reme values of 15, if Rpse_mii starting at 0.5 o o unbalance con balance at lon I in Table 145- al benefit to inco relevant to activ	Rpse_min which n is increased, obms at Class 7 ompared to the g cable which v 17. crease Rpse_m ve current balar	7-8 and 1 ohm a channel and PD iolates Icon-2P_ in to any value.	
		power same To: "R of the a) 1 of b) 0.5	e resistance in the ce in the powered pairs is used.								
							PT IN PRINCIF	Response PLE.	Status C		
						"Equat Class Add af	6, and 0.5 ohm fter line 53 in pa	only applicable f for Class 7 an age 195:	d Class 8.	up to a value of p to a value of 1	1 ohm for Class 5 and ohm."

Pa **159** Li **27**

	. 34 # i-427	C/ 145 SC 145.2.8.5.1 P 159 L 48 # i-299
Darshan, Yair		Stover, David Analog Devices Inc.
Comment Type T Comment Status A	Unbala	Comment Type T Comment Status A Unbalanc
In the text below: "A PSE shall not source more than ICon-2P-unb min on a **load** as shown in Figure 145-22, using values of Rload specified in Equation (145-16) and Equation (145-17).", No 145-22.	_min and Rload_max as	"The sum of RCh_unb_min from the positive pairs and RCh_unb_max from the negative pairs is RChan-2P as described in Figure 145-22 and as defined by the link section pair-to- pair resistance unbalance requirement for 4-pair operation in 145A.3." RChan-2P is not used in either of the cited reference. This paragraph adds no clarity or value. SuggestedRemedy
SuggestedRemedy		Remove quoted paragraph.
Change text to "A PSE shall not source more than ICon-2 connected to the PSE load as shown in Figure 145-22, us Rload_max as specified in Equation (145-16) and Equatio	ing values of Rload_min and	Response Response Status C ACCEPT.
Response Response Status C		C/ 145 SC 145.2.8.5.1 P 160 L 1 # i-108
ACCEPT IN PRINCIPLE.		Yseboodt, Lennart Philips Lighting
Adopt yseboodt_02_0917_Figure_145_22.pdf		Comment Type TR Comment Status A Pres: Darshan
This resolution is identical to comment #110.		Table 145-17 contains the values needed to determine Rload, which is the load with which PSE unbalance is checked.
	. 34 # i-107	Calculations show that when plugging in these numbers, some of the Classes fail to meet
Yseboodt, Lennart Philips Lighting		ICon-2P-unb. Eg, with an RPSE_min=0.3 ICon-2P-unb for Class 7 (low channel conditions) is not met:
Comment Type TR Comment Status A	Pres: Yseboo	
"A PSE shall not source more than I Con-2P-unb min on a load as shown in Figure 145-22, using values of R load_m Equation (145-16) and Equation (145-17)." - ICon-2P-unb is a minimum, no need to specify I Con-2P-	in and R load_max as defined	Class 7, low channel conditions, iport=1.195 i=0.784/0.412/0.784/0.412, VSupply=52.370 VPSEPI=52.003 RPSE_min = 0.250 and RPSE_max = 0.446 PPD = 62.0, VLoad = 51.08, Vpd[1-4] = 52.11 52.14 0.26 0.23 = 51.92 FAILS to meet ICon-2P-unb of 0.781
- We should make it obvious that this shall applies when c		Other values of RPSE cause more errors, but all in Class 7.
described in the next paragraphs.		SuggestedRemedy
SuggestedRemedy Change quoted text to:		Either we need to update ICon-2P-unb, or we need to update the values in Table 145-17. Input Yair is needed.
"A PSE shall not source more than I Con-2P-unb on any fixture described in Figure 145-22, using values of R load_		Response Response Status C
in Equation (145-16) and Equation (145-17)."		ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
Response Response Status C		
ACCEPT IN PRINCIPLE.		Adopt the changes proposed in darshan_03_0917_final.pdf
Adopt yseboodt_02_0917_Figure_145_22.pdf		This resolution is identical to comment #419.

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **160** Li **1**

	P 160	L 39	# i-422	C/ 145	SC 145.2.8.5	.1	P 160	L 45	# i-109
Darshan, Yair				Yseboodt,	Lennart		Philips Lighting	ng	
Comment Type T Cor	nment Status A		Pres: Yseboodt2	Comment	Туре Т	Comment	Status D		Pres: Yseboodt2
This comment is marked as I In the following text: "ICon-2P-unb and Equation (7 resistance RChan-2P from 0 PSEs that support channel co than 0.1 ?, the PSE should m (Rload_min - 0.5 * RChan-2P by using a lower RPSE_max o Lower RPSE _max values ma RPSE_min in Equation (145-7 The following may be improve 1. The "total" is not required.	45-15) are specified f 2 ? to 12.5 ? and wors mmon mode resistance eet ICon-2P-unb requi) and (Rload_max - 0 or higher RPSE_min ti ty be obtained by usin 5) in the form of RPS ed:	tt-case unbalanc ce less than 0.2 irements when c 5 * RChan-2P). ⁻ han required by g smaller consta E_max = ? * RP	e contribution by a PD. ?, or if RChan is less onnected to This can be achieved Equation (145-15). ant ? or higher SE_min + ?."	Equati a or hi b." V betwe Suggested Chang "This o	ion (145-15). Low gher R PSE_min /ery long/complica en Rpsemin and <i>IRemedy</i> ge to: can be achieved b ined in Equation	ver R PŠE _rr in Equation (ated way to s Rpsemax. by decreasing	nax values may (145-15) in the ay that it can b g the difference	be obtained by form of R PSE_i e achieved by d	SE_min than required by using smaller constant max = a x R PSE_min + ecreasing the difference E_min and R_PSE_max
To simplify and clarify the t ohm is used			ter cabling than 0.2	REJE	CT.				
3. To simplify the use of " RPSE_max = ? * RPSE_min + ?"				This comment was WITHDRAWN by the commenter.					
SuggestedRemedy				C/ 145	SC 145.2.8.5	1	P 161	L1	# i-110
Replaced the called out text w "The values for ICon-2P-unb a		etween RPSF m	ax and RPSE min	Yseboodt,		.1	Philips Lightin		# [-110
				Comment		Commont	Status A	-9	Pres: Yseboodt2
(Equation (145-15)) are valid given that RChan-2P (see 145.1.3) ranges from 0.2 ? to 12.5 ? and that the PD meets 145.3.8.10. In cases where RChan-2P is less than 0.2 ?, or						Comment	SIAIUS A		Pres. rsebooulz
								Fig. 1/15-31) it o	contains a large amount
RChan is less than 0.1 ?, PSI	E compliance with ICo	n-2P-unb can be	e evaluated using	Comp		22 with it's Pl	D counterpart (contains a large amount
	E compliance with ICo oth reduced by 0.5 * R	n-2P-unb can be Chan-2P. This c	e evaluated using compliance will require	Comp	aring Figure 145- ail which is not rel	22 with it's Pl	D counterpart (contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS	E compliance with ICo oth reduced by 0.5 * R	n-2P-unb can be Chan-2P. This c	e evaluated using compliance will require	Compa of deta Suggested	aring Figure 145- ail which is not rel	22 with it's Pl levant to the	D counterpart (evaluation of Ic		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS	E compliance with ICo oth reduced by 0.5 * R SE_max to RPSE_min	n-2P-unb can be Chan-2P. This c	e evaluated using compliance will require	Compa of deta Suggested	aring Figure 145- ail which is not rel <i>Remedy</i> yseboodt_02_09	22 with it's Pl levant to the	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max bo a reduction in the ratio of RPS Response Res	E compliance with ICo oth reduced by 0.5 * R SE_max to RPSE_min	n-2P-unb can be Chan-2P. This c	e evaluated using compliance will require	Comp of deta Suggestec Adopt	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max bo a reduction in the ratio of RPS Response Resp ACCEPT.	E compliance with ICo oth reduced by 0.5 * R BE_max to RPSE_min conse Status C	n-2P-unb can be Chan-2P. This c presented by E	e evaluated using compliance will require quation (145-15). "	Comp of deta Suggestec Adopt Response	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS Response Res ACCEPT. Cl 145 SC 145.2.8.5.1 Darshan, Yair	E compliance with ICo oth reduced by 0.5 * R BE_max to RPSE_min conse Status C	n-2P-unb can be Chan-2P. This c presented by E	e evaluated using compliance will require quation (145-15). "	Comp of deta Suggestec Adopt Response	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS Response Res ACCEPT. Cl 145 SC 145.2.8.5.1 Darshan, Yair	E compliance with ICo oth reduced by 0.5 * R SE_max to RPSE_min conse Status C <i>P</i> 160 mment Status A comment marked LC Equation (145-15) are	n-2P-unb can be Chan-2P. This c presented by E <i>L</i> 39 OWER02 if LOW	# <u>i-428</u> Pres: Yseboodt2 ER02 will be accepted. tal channel common	Comp of deta Suggestec Adopt Response	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS Response Response ACCEPT. Cl 145 SC 145.2.8.5.1 Darshan, Yair Comment Type T This comment will be OBE by In the text "ICon-2P-unb and mode pair resistance RChan-	E compliance with ICo oth reduced by 0.5 * R SE_max to RPSE_min conse Status C <i>P</i> 160 mment Status A comment marked LC Equation (145-15) are	n-2P-unb can be Chan-2P. This c presented by E <i>L</i> 39 OWER02 if LOW	# <u>i-428</u> Pres: Yseboodt2 ER02 will be accepted. tal channel common	Comp of deta Suggestec Adopt Response	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS Response Res ACCEPT. C/ 145 SC 145.2.8.5.1 Darshan, Yair Comment Type T Con This comment will be OBE by In the text "ICon-2P-unb and	E compliance with ICo oth reduced by 0.5 * R SE_max to RPSE_min conse Status C P 160 Mement Status A comment marked LC Equation (145-15) are 2P" the word "total" is and Equation (145-15) are spon (145-15) are specifi	n-2P-unb can be Chan-2P. This c presented by E <i>L</i> 39 DWER02 if LOW especified for tot not required. Re are specified for not required."	# [i-428 # [i-428 Pres: Yseboodt2 ER02 will be accepted. tal channel common move it.	Comp of deta Suggestec Adopt Response	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount
RChan is less than 0.1 ?, PSI Rload_min and Rload_max be a reduction in the ratio of RPS Response Resp ACCEPT. Cl 145 SC 145.2.8.5.1 Darshan, Yair Comment Type T Con This comment will be OBE by In the text "ICon-2P-unb and mode pair resistance RChan- SuggestedRemedy Change from "ICon-2P-unb and mode pair resistance RChan- To: "ICon-2P-unb and Equation resistance RChan-2P" the wo	E compliance with ICo oth reduced by 0.5 * R SE_max to RPSE_min conse Status C P 160 Mement Status A comment marked LC Equation (145-15) are 2P" the word "total" is and Equation (145-15) are spon (145-15) are specifi	n-2P-unb can be Chan-2P. This c presented by E <i>L</i> 39 DWER02 if LOW especified for tot not required. Re are specified for not required."	# [i-428 # [i-428 Pres: Yseboodt2 ER02 will be accepted. tal channel common move it.	Comp of deta Suggestec Adopt Response	aring Figure 145- ail which is not rel <i>IRemedy</i> yseboodt_02_09	22 with it's Pl levant to the 17_Figure_14	D counterpart (evaluation of Ic 45_22.pdf		contains a large amount

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Page, Line

Pa **161** Li 1

Page 84 of 134 9/15/2017 11:41:05 AM

C/ 145 SC 145.2.8.5.1 P 161 L 2 # [i-393] Thompson, Geoffrey Individual Individual	C/ 145 SC 145.2.8.5.2 P 161 L 18 # i-434 Darshan, Yair
Comment Type ER Comment Status A Pres: Yseboodt2 Figure 145-22. This figure is very valuable in understanding the overall problem of resistance imbalance in a PoE system, however it doesn't help with the problem of designing a PSE when one has no control of the link section or the PD. SuggestedRemedy Tutorial material that would be valuable for further work on the topic. It should be moved to an informative annex. Pres: Yseboodt2	Comment Type E Comment Status D Pres: Yseboods In the bottom of Figure 145-22, there is an arrow with a text "End-to-end pair-to-pair resistance". This text need to be accurate and reflect the following: a) It is End-to-end pair to pair effective resistance and not just resistance. b) It is the boundaries of where the system unbalance is defined. This helps to understand the boundaries of the PSE PI to the PSE power supply elements that affect the unbalance and the same for the PD and the link segment.
Response Response Status W ACCEPT IN PRINCIPLE. Adopt yseboodt_02_0917_Figure_145_22.pdf	 c) The term End to End effective resistance unbalance is describe in 145.2.8.5.1 e.g. P.158 L48 and many other places in the spec. SuggestedRemedy Change from "End-to-end pair-to-pair resistance" To: "End-to-end pair-to-pair effective resistance unbalance boundaries"
This resolution is identical to comment #110. C/ 145 SC 145.2.8.5.1 P 161 L 6 # [i-111] C/ Seboodt, Lennart Philips Lighting Philips Lighting Philips Lighting	Proposed Response Response Status Z REJECT.
Comment TypeTRComment StatusAEditorialFigures 145-22, Figure 145-31, Figure 145A-2, and Figure 145A-3 all depict some view on unbalance. A different notation for the names of the current is used in each.Editorial	This comment was WITHDRAWN by the commenter. C/ 145 SC 145.2.8.5.1 P 161 L 20 # i-429 Darshan, Yair Darshan, Yair Darshan, Yair Darshan, Yair Darshan, Yair
SuggestedRemedy Change Figures 145-22, Figure 145-31, Figure 145A-2, and Figure 145A-3 such that: - Currents are named "i1" through "i4". - i1 and i2 flow to the PD (positive) - i3 and i4 flow from the PD (negative) - where applicable, i1 and i3 represent Alt A / Mode A	Comment TypeEComment StatusAPres: YseboodsThe title of figure 145-22 is good but not sufficiently accurate. It is system effective resistance unbalance and not just system resistance unbalance. This is in sync with the title of the clause "145.2.8.5.1 PSE PI pair-to-pair effective resistance and current unbalance" and the text all over clause 145.2.8.5.1 and 145.3.8.10 (44 occurrences).
- where applicable, i2 and i4 represent Alt B / Mode B Update text that refers to Figure labelled currents to match. Response Response Status C	SuggestedRemedy Change from Figure 145-22PSE PI unbalance specification and system resistance unbalance" To: "Figure 145-22PSE PI unbalance specification and system effective resistance unbalance"
ACCEPT IN PRINCIPLE. Editorial license granted to adjust for changes to any of the figures made as a result of other comments.	Response Response Status C ACCEPT IN PRINCIPLE. Adopt yseboodt_02_0917_Figure_145_22.pdf
	This resolution is identical to comment #110.

Pa **161** Li **20**

C/ 145 SC 145.2.8.5.1 Darshan, Yair	P 161	L 24	# i-430	C/ 145 SC 145 Yseboodt, Lennart	5.2.8.5.1	P 161 Philips Lighti	L 26 ng	# <u>i-112</u>
Comment Type E Co	omment Status A		Editorial	Comment Type T	R Comr	ment Status A		Pres: Yseboodt
In the text "a) Use Rload_m resistance conditions.", it is			for low channel			ure 145-22, item b) ust the load to P Cla		
SuggestedRemedy				Which is wrong s	since the PSE I	oad also comprises	of the R Ch un	h resistors
Change to "a) Use Rload_m channel resistance conditior		ponents from Ta	able 145-17 for low	SuggestedRemedy			oro . (_oru.	
	sponse Status C			Replace by: "Adjust to load se	uch that a powe	er of PClass-PD is c	consumed at the	PD PI."
	Diai	1.00	"	Note: text may no	eed adjustment	t based on ysebood	t_02_0917_Figu	re_145_22.pdf
C/ 145 SC 145.2.8.5.2 Darshan, Yair	P 161	L 26	# i-431	Response ACCEPT IN PRI		onse Status C		
Comment Type E Co In the text "With the PSE po PI"	omment Status A wered on, adjust the lo	ad to PClass_PI	Pres: Yseboodt2 D.", missing "at the PD	Adopt yseboodt_	-	re_145_22.pdf		
SuggestedRemedy				This resolution is	identical to co	mment #110.		
Change to: "With the PSE p	owered on. adjust the F	PSE load to PCla	ass PD at the PD PI."	C/ 145 SC 145	5.2.8.5.1	P 161	L 28	# i-113
. .	sponse Status C		-	Yseboodt, Lennart		Philips Lighting	ng	
ACCEPT IN PRINCIPLE.	-,			Comment Type T Comment Status A Pres: Ysebou In the evaluation method for Figure 145-22, step 'e' (check the current), comes after the Rload_min/max exchange.				
Adopt yseboodt_02_0917_F	igure_145_22.pdf							
This resolution is identical to	comment #110.			SuggestedRemedy Swap steps d) ar	nd e) and adjus	t labels accordingly		
				Response ACCEPT IN PRI	,	onse Status C		
				Adopt yseboodt_	02_0917_Figu	re_145_22.pdf		
				This resolution is	identical to co	mment #110.		

Pa **161** Li **28**

.								
<i>Cl</i> 145 <i>SC</i> 145.2.8.5.2 Darshan, Yair	P 161	L 30	# i-432	C/ 145 Yseboodt,	SC 145.2.8.6 _ennart	P 161 Philips Lighting	L 42	# i-115
16) and Equation (145-17 components."	Comment Status A b) through e) for Rload_min) for high channel resistance			exceed Figure	text: "The maxir the per pairset i	Comment Status A num inrush current sourced b nrush template in Figure 145- ation (145-18) are referred in t ve one.	23 and Equat	ion (145-18)."
Equation (145-16) and Eq	s b) through e) for Rload_mi quation (145-17) for high cha <i>Response Status</i> C				e to: The maximu pairset inrush te	um inrush current sourced by t mplate in Equation (145-18). <i>Response Status</i> C	he PSE per p	pairset shall not exceed
Cl 145 SC 145.2.8.6 Stover, David	P 161 Analog Devices	L 33 s Inc.	# i-300	C/ 145 Yseboodt,	SC 145.2.8.6	P 161 Philips Lighting	L 45	# i-117
145.2.8.6 apply to any pa SuggestedRemedy Replace "POWER_UP" a respectively, in all locatio	Comment Status A on" and "power up" states for irset in one of these states. and "POWER_ON" with "a point ns within 145.2.8.6 except th	ower up state" a ne caption for Fi	nd "a power on state", gure 145-23. In Figure	We she that Fig	SE inrush maxim buld not refer to t jure 145-23 depi	Comment Status A num limit, I PSEIT-2P, is defin hings by relative position in th cts the Equation.		
	set in POWER_UP state" wi <i>Response Status</i> C	th "per pairset i	n a power up state".		e by:	um limit, I PSEIT-2P , is defir	ned in Equatio	on 145-18, and is shown
Cl 145 SC 145.2.8.5.1 Yseboodt, Lennart Comment Type ER It is unclear from Table 1 PSE unbalance.	<i>P</i> 161 Philips Lighting <i>Comment Status</i> A 45-17 and Figure 145-22, th		# <u>i-114</u> <i>Editorial</i> a test fixture to test	Response ACCEI	й.	Response Status C		
Another comment improv	es Figure 145-22, however a good of a test fixtu		ification.					

Change title of Table 145-17 to read: "PSE unbalance test fixture resistances".

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **161** Li **45**

C/ 145 SC 145.2.8.6 P 161 L 45 # [i-116 Yseboodt, Lennart Philips Lighting Philips Lighting Philips Lighting Philips Lighting	C/ 145 SC 145.2.8.8 P 162 L # i-22 Waters, Keith Schneider Electric Schneider Electric Schneider Electric Schneider Electric				
Comment Type TR Comment Status A PSE Inru-	h Comment Type TR Comment Status R Certification				
"The PSE shall limit I Inrush-2P and I Inrush during POWER_UP per the requirements of Table 145-16."	I have concerns that PSE section 145.2.8.8 does not show any testing or certification listing requirements. This is a potential product and fire safety issue and needs to be addressed.				
Nowhere in this subclause do we explain what these parameters are and how they relate to each other.	D SuggestedRemedy				
SuggestedRemedy	Add: Testing and a third party certification listing shall be required to verify the PSE operates per the requirements in this section.				
Insert the following text after the paragraph containing the quoted text:	Response Response Status W				
"IInrush-2P is the current to which the PSE limits it's pairset output current while in POWER_UP. IInrush is the total current to which the PSE limits it's output current while in	REJECT.				
POWER_UP. When connected to a single-signature PD, IInrush is the total inrush current limit, and IInrush-2P serves as the limit for 2-pair inrush, or as the inrush unbalance limit during 4-pair inrush.	This comment is out of scope.				
When connected to a dual-signature PD, only IInrush-2P is specified and serves as the inrush limit for each pairset independently."	The purpose of IEEE P802.3bt is to define interoperability, it is not to define product requirements. In respect to safety subclause 145.6.1 'General safety' of IEEE P802.3bt				
Response Response Status C	states 'All equipment subject to this clause shall conform to IEC 60950-1 or IEC 62368-1. In particular, the PSE shall be classified as a Limited Power Source in accordance with				
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	IEC 60950-1 or IEC 62368-1 Annex Q. Equipment shall comply with all applicable local and national codes related to safety.'. It is these referenced local and national codes that define the requirements, not IEEE P802.3bt. The need for certification is determined by the				
adopt changes shown in yseboodt_10_0917_inrush.pdf	marketplace or regulation, and may vary by geography.				

This resolution is identical to comment #291.

	C/ 145 SC 145.2.	••• •••	# i-301		
Vaters, Keith Schneider Electric	Stover, David	Analog Devices Inc.			
Comment Type TR Comment Status R Certification	Comment Type T	Comment Status A	PSE Inrus		
I have concerns that PSE section 145.2.8.7 does not show any testing or certification listing requirements. This is a potential product and fire safety issue and needs to be addressed. SuggestedRemedy	2P and Iport as sho linrush,max while Ip	fies the PSE inrush upperbound template; wn apply simultaneously. In Figure 145-23, ort-2P may load step up to 50A (>>linrush, of these requirements: Ilnrush,max.	, Iport is limited to		
at least 1 second width. Testing and a third party certification listing shall be required	SuggestedRemedy				
to confirm overload current protection will operate correctly.	Remove IPort axis f	rom Figure 145-23 or specify IPort behavio	or during load step.		
Response Response Status W	Response	Response Status C			
REJECT. This comment is out of scope.	ACCEPT IN PRINC ACCEPT IN PRINC				
The purpose of IEEE P802.3bt is to define interoperability, it is not to define product requirements. In respect to safety subclause 145.6.1 'General safety' of IEEE P802.3bt states 'All equipment subject to this clause shall conform to IEC 60950-1 or IEC 62368-1.	adopt changes shown in yseboodt_10_0917_inrush.pdf This resolution is identical to comment #291.				
In particular, the PSE shall be classified as a Limited Power Source in accordance with IEC 60950-1 or IEC 62368-1 Annex Q. Equipment shall comply with all applicable local and national codes related to safety.'. It is these referenced local and national codes that define	Cl 145 SC 145.2. Darshan, Yair	8.5.3 P 162 L 10	# i-433		
the requirements, not IEEE P802.3bt. The need for certification is determined by the marketplace or regulation, and may vary by geography.	Comment Type T Comment Status A Pres: Darshar The shape of the load need to be circle and not rectangular since it is				
C/ 145 SC 145.2.8.6 P 162 L 1 # [i-302] Stover, David Analog Devices Inc. Analog Devices Inc. Image: Comparison of the state of the	constant power sink sink	. All our spec is based on the fact that the	PD load is constant power		
	SuggestedRemedy				
Comment Type E Comment Status A Editorial	Adopt the changes	proposed in darshan_10_0917.pdf marked	in BLUE.		
51	Response	Response Status C			
Figure 145-23 is inserted between an equation and the variable definitions for that equation.		IPLE.			
Figure 145-23 is inserted between an equation and the variable definitions for that equation.	ACCEPT IN PRINC				
Figure 145-23 is inserted between an equation and the variable definitions for that equation. SuggestedRemedy Move Figure 145-23 below the variable definitions for Equation (145-18).		_0917_Figure_145_22.pdf			
Figure 145-23 is inserted between an equation and the variable definitions for that equation. SuggestedRemedy Move Figure 145-23 below the variable definitions for Equation (145-18).	Adopt yseboodt_02_				

C/ 145 SC 145.2.8.	6 P 162	L 28	# i-118	C/ 145	SC 145.2.8.6	<i>P</i> 162	L 32	# i-119	
Yseboodt, Lennart	Philips Lighting	g		Yseboodt,		Philips Lightin			
Comment Type ER	Comment Status A		PSE Inrush	Comment	Type TR	Comment Status A		PSE Inrush	
unbalance when oper Seems like a leftover	of I Inrush-2P includes the effer ating over 4 pairs." sentence from earlier inrush sp) for dual-signature, where unl	pecification. The	ere are only min values	a) Duri 2P req b) Duri 2P req c) Duri Inrush	ng POWER_UF uirement is 5 m/ ng POWER_UF uirement is 60 n ng POWER_UP requirement are	P, for pairset voltages betwee nA. I for pairset voltages above 3 as defined in Table 145-16.	n 0 V and 10 V, n 10 V and 30 \ 0 V, the minimu	the minimum I Inrush- /, the minimum I Inrush- m I Inrush-2P and I	
Response ACCEPT.	Response Status C				s what we want t in POWER_UP	to say is that these minimum?	capabilities app	bly for each powered	
				SuggestedRemedy					
				Replac	e quoted text by	<i>I</i> :			
				when \ During - 5mA	/PSE exceeds 3	he minimum supported currentsE <= 10V			
				Response		Response Status C			
				ACCEI ACCEI					
				Replac	e text on page 1	162 line 31-39 with:			
				when \ During -the mi when p -the mi	/PSE exceeds 3 POWER_UP, the power of the po	and linrush-2P current capab 80V. he minimum supported curren when powering a single-sigr signature PD is 5 mA for volt when powering a single-sigr signature PD is 60 mA for vo	nt is as follows: ature PD and th ages between (ature PD and th	ne minimum I_Inrush-2P) V and 10 V, ne minimum I_Inrush-2P	
				This re	solution is ident	ical to comment #486.			

PSE Inrush

C/ 145	SC 145.2.8.6	P 162	L 33	# i-486

Johnson, Peter

Comment Status A Comment Type т

(Re-filed comment from D 2.4) There is an inconsistency in the three minimum inrush current requirements a), b), and c) and Table 145-16. Conditions a) and b) specify "minimum linrush-2P" requirements with actual values while Table 145-16 is blank for minimum Inrush-2P given Single Signature PD. Are these figures really applicable to linrush-2P or are they applicable to linrush? Item c) says refer to Table 145-16 for minimum linrush-2P, but again, those boxes are blank for Single Signature.

SugaestedRemedv

Following modification has implementation implications but could resolve the confusion: a) ...voltages between 0 V and 10 V, the minimum I Inrush when powering a Single Signature PD and the minimum I Inrush-2P when powering a Dual Signature PD shall be 5 mA.

b) ... voltages between 10 V and 30 V, the minimum I Inrush when powering a Single Signature PD and the minimum I_Inrush-2P when powering a Dual Signature PD shall be 60 mA.

c) ... voltages above 30 V, the minimum I Inrush when powering a Single Signature PD and the minimum I_Inrush and I_Inrush-2P when powering a Dual Signature PD are specified in Table 145-16.

Response

Response Status C

ACCEPT IN PRINCIPLE.

Replace text on page 162 line 31-39 with:

"The minimum linrush and linrush-2P current capability as defined in Table 145-16 applies when VPSE exceeds 30V.

During POWER UP, the minimum supported current is as follows:

-the minimum I Inrush when powering a single-signature PD and the minimum I Inrush-2P when powering a dual-signature PD is 5 mA for voltages between 0 V and 10 V, -the minimum I Inrush when powering a single-signature PD and the minimum I Inrush-2P when powering a dual-signature PD is 60 mA for voltages between 10 V and 30 V."

C/ 145	SC 145.2.8.7	P 162	L 43	# i-120
Yseboodt, Le	ennart	Philips Lighting		
Comment Ty	pe ER	Comment Status A		Sliding

Topic:SLIDING Issue: we use the concept of 'sliding windows' in our draft very inconsistently, the SLIDING comments try to make the whole bunch consistent.

Aim: get everything in the form "measure xxx using a xx time sliding window".

"The cumulative duration of T CUT-2P is measured with a sliding window of at least 1 second width."

This one is pretty OK, minor harmonization needed (measured with => measured using).

SuggestedRemedy

"The cumulative duration of T CUT-2P is measured using a sliding window of at least 1 second width."

Response ACCEF	PT.		Response Status	С			
C/ 145	SC	145.2.8.8	P1	62	L 46	#	i-303
Stover, Dav	/id		Analo	g De	vices Inc.		
Comment	Гуре	TR	Comment Status	Α			PSE Powe
		Itiple "powe one of the		PSE.	The requirements ir	n 145.2.8	8.8 apply to
Suggested	Reme	dy					
165, re	place	"A PSE in t	he POWER_ON sta	ate m	tes," in Figures 145 ay remove power fro ve power from that p	om a pai	rset" with "A
Response			Response Status	С			

ACCEPT.

C/ 145 Yseboodt, L	SC 145.2.8.8 _ennart	P 162 Philips Lightir	L 54 ng	# [i-121	C/ 145 Yseboodt, I	SC 145.2.8.8 ennart		4 Lighting	5	# i-122
Comment 7 "When pairsets	connected to a s	Comment Status A single-signature PD, the PSE ent exceeds the "PSE upper	E should remove bound template	<i>PSE Power</i> e power from both " on either pairset."		SE upperbound	Comment Status template, I PSEUT-2F	P, is defined I	by the follo	PES Powe wing segments:"
one pai Per Equ pairs. N	irset only and the uation 145-8, the lot something we		oport the full ass	igned power over 2-		e by:	templates, I_PSEUT- g segments:"	Type3-2P and	I_PSEUT	-Type4-2P, are
don't vi	olate ICable by c	signing the PD to Class 4 in lelivering more power over 2		2-pair. That way we	Response ACCEF	·Τ.	Response Status	С		
	ne following state	ement to SEMI_PWRON_PF in(pse_allocated_pwr, 4)"	RI and SEMI_P\	WRON_SEC:	C/ 145 Anslow, Pe	SC 145.2.8.8		4 <i>L</i> Corporation	8	# i-18
Response ACCEF	ΥТ.	Response Status C					Comment Status D2.2 resulted in many		being rem	<i>Editoria</i> oved from the draft.
C/ 145 Stover, Dav Comment T		P 162 Analog Devic Comment Status A	L 54 es Inc.	# i-304 PSE Power	<i>Suggestedl</i> Remov	Remedy	g trailing zeros from the	e draft. In part	ticular:	
"Power "PSE u the "and	shall be remove pperbound temp d" can be read a	d from a pairset of a PSE bi late" in Figure 145-24, and I s the intersection (in this ca 45-24 OR 145-25 apply, de	Figure 145-25." se, the max) of	t current exceeds the Rogue comma. Also, the PSE upperbound		n 145-20 (7 ins		с		
SuggestedF Delete	-	e "and" with "or" in the refere	enced sentence.							
Response ACCEF	PT.	Response Status C								
C/ 145 Stover, Dav	SC 145.2.8.8 <i>i</i> id	P 164 Analog Devic	L 1 es Inc.	# [i-305						
Comment T Missing	51	Comment Status A een "Equation (145-19) Equa	ation (145-20)"	Editorial						
S <i>uggestedF</i> Insert n	Remedy nissing comma.									
Response ACCEP	- РТ	Response Status C								

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line Pa **164** Li **8**

CI 145 SC 145.2.8.8 P 164 L 32	# i-123	C/ 145	SC 145.2.8.	.8	P 165	L 7	# i-125
seboodt, Lennart Philips Lighting		Yseboodt, I	ennart	Р	hilips Lighting	g	
Comment Type TR Comment Status A	Sliding	Comment 7	ype E	Comment Sta	tus A		PSE Powe
Topic:SLIDING Issue: we use the concept of 'sliding windows' in our draft very inco comments try to make the whole bunch consistent.		"A PSE in the POWER_ON state may remove power from a pairset without regard to TLIN 2P when the pairset voltage no longer meets the VPort_PSE-2P specification." State name does not need extra word "state"					
Aim: get everything in the form "measure xxx using a xx time s	sliding window .	SuggestedRemedy					
"The PSE shall limit a pairset current to I LIM-2P for a duration order to account for PSE dV/dt transients at the pairset.	•			ON may remove po longer meets the			egard to TLIM-2P when ו."
The cumulative duration of T LIM-2P may be measured with a	sliding window."	Response		Response Sta	tus C		
Oh joy, a sliding window without any limitation on the width.		ACCEF	T IN PRINCIP	νLΕ.			
SuggestedRemedy Replace the last quoted sentence by: "The cumulative duration of T LIM-2P may be measured using least 1 second width."	sliding window of at	165, re PSE wi	blace "A PSE i th a pairset in	in the POWER_ON a power on state r	V state may r nay remove p	emove power f	5-24, 145-25. On page from a pairset" with "A t pairset"
Response Response Status C		I his re	solution is iden	ntical to comment #	\$303.		
ACCEPT IN PRINCIPLE.		C/ 145	SC 145.2.8.	.9	P 165	L 12	# i-126
Destace exclusion has		Yseboodt, I	ennart	Р	hilips Lighting	g	
Replace sentences by: "The PSE shall limit a pairset current to I LIM-2P for a duration of u	up to T LIM-2P. The	Comment T	ype E	Comment Sta	tus A		PSE Powe
cumulative duration of the current limit event may be measured usi at most 1 second width."	ng a sliding window of	"The specification for TOff in Table 145-16 shall apply to the discharge time from VPort_PSE-2P to VOff of a pairset with a test resistor of 320 kohm attached to that pairset. VPort_PSE-2P is a range. The actual starting value for Toff is given in the next sentence.					
C/ 145 SC 145.2.8.8 P 164 L 34	# i-124	Suggested	Remedv	-	-	-	
Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A	Editorial	"The sp	ecification for	TOff in Table 145- airset with a test re			rge time from operating d to that pairset."
"The PSE lowerbound template, I PSELT-2P, is defined by the following the second secon	owing segments:"	Response	·	Response Sta			·
Naving of these lowerbound templates has changed.		ACCEF	T IN PRINCIP	,	_		
SuggestedRemedy		Change	to: "The spe	cification for TOff i	n Table 145-	16 shall apply t	o the discharge time
Replace by: "The PSE lowerbound templates, I_PSELT-Type3-2P and I_PSELT by the following segments:"	-Type4-2P, are defined	from V that pa		nin to VOff of a pa	irset with a te	est resistor of 3	20 kohm attached to
Response Response Status C							
ACCEPT.							

Pa **165** Li **12**

C/ 145 SC 145.2.8.9 P 165 L 13 # i-127 Yseboodt, Lennart Philips Lighting P <	C/ 145 SC 145.2.8.10 P 165 L 19 # i-306 Stover, David Analog Devices Inc. Figure 1000 Figure 10000 Figure 1000 Figure					
Comment Type E Comment Status A Editorial	Comment Type T Comment Status A PSE Power					
"In addition, it is recommended that the pairset be discharged when turned off." In other places we refer to this as "power not applied" or "power removed".	"The specification for VOff in Table 145-16 shall apply to the PI voltage in the IDLE State". First, State is not proper case. Next, this requirement should apply to the pairset voltage for the respective PSE Alternative when in the IDLE_PRI or IDLE_SEC states.					
SuggestedRemedy	SuggestedRemedy					
"In addition, it is recommended that the pairset be discharged when power is removed." Response Response Status C	Replace "State" with "state". Add the following statement: "The specification for VOff in Table 145-16 shall apply to the pairset voltage for the Primary or Secondary Alternative when in the IDLE_PRI or IDLE_SEC state, respectively."					
ACCEPT IN PRINCIPLE.	Response Response Status C					
Suggest the following remedy instead: "In addition, it is recommended that the pairset be discharged when voltage is not applied".	ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.					
Cl 145 SC 145.2.8.10 P 165 L 19 # [i-128] //seboodt, Lennart Philips Lighting Philips Lighting Comment Type TR Comment Status A PSE Power "The specification for V Off in Table 145-16 shall apply to the PI voltage in the IDLE State."	Replace by: "The voltage at the PI shall be equal or less than V_Off, as defined in Table 145-16, when the PSE is in DISABLED, IDLE, TEST_ERROR_BOTH, or ERROR_DELAY. The voltage at the corresponding pairset shall be equal or less than V_Off, as defined in Table 145-16, when the PSE is in IDLE_PRI, WAIT_PRI, ERROR_DELAY_PRI, IDLE_SEC, WAIT_SEC, or ERROR_DELAY_SEC."					
Slew of issues: - 'IDLE' not 'IDLE State'. - Doesn't take 4-pair / pairsets into account	This resolution is identical to comment #128.					
- There are more states than IDLE where this applies	Cl 145 SC 145.2.8.12 P 165 L 33 # i-286					
uggestedRemedy	Stewart, Heath Analog Devices Inc.					
Replace by: "The voltage at the PI shall be equal or less than V_Off, as defined in Table 145-16, when the PSE is in DISABLED, IDLE, TEST_ERROR_BOTH, ERROR_DELAY. The voltage at the corresponding pairset shall be equal or less than V_Off, as defined in Table 145-16, when the PSE is in IDLE_PRI, WAIT_PRI, ERROR_DELAY_PRI, IDLE_SEC, WAIT_SEC, or ERROR_DELAY_SEC." Response Status C	Comment TypeTComment StatusDPSE Power145.6.1 states "All equipment subject to this clause shall conform to IEC 60950-1 or IEC 62368-1. In particular, the PSE shall be classified as a Limited Power Source in accordance with IEC 60950-1 or IEC 62368-1 Annex Q." However elsewhere in 145, limited power source requirements are redundantly stated. For many reasons it is normal to avoid redundantly specifying requirements called out in referenced standards.					
ACCEPT IN PRINCIPLE.	SuggestedRemedy					
Replace by: "The voltage at the PI shall be equal or less than V_Off, as defined in Table 145-16, when the PSE is in DISABLED, IDLE, TEST_ERROR_BOTH, or ERROR_DELAY. The voltage at the corresponding pairset shall be equal or less than V_Off, as defined in	Remove subclause 145.2.8.12 Page 163 Figure 145-25 remove lines related to I_LPS and P_Type,max/V_PSE. Upperbound template will thus have a value of 1.3A from 4s to infinity. Page 164 remove lines 21 and 29 (both reference I_LPS) Page 244 Line 17 Remove PSE82.					
Table 145-16, when the PSE is in IDLE_PRI, WAIT_PRI, ERROR_DELAY_PRI, IDLE_SEC, WAIT_SEC, or ERROR_DELAY_SEC."	Proposed Response Response Status Z					
	REJECT.					
	This comment was WITHDRAWN by the commenter.					
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/g COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/wi SORT ORDER: Page, Line						

C/ 145 SC 145.2 Yseboodt, Lennart	.8.12 P 165 Philips Light	L 37 ing	# i-129	C/ 145 Stover, David	SC 145.2.8.1		66 og Devices	L 7 s Inc.	# i-307
Comment Type TR	Comment Status A	0	Editorial	Comment Typ	e TR	Comment Status	Δ		PES Pow
Topic:SLIDING Issue: we use the comments try to m	concept of 'sliding windows' in o ake the whole bunch consistent thing in the form "measure xxx		onsistently, the SLIDING	"When co pairset". C dual-signa	nnected to a contract of the state of the st	dual-signature PD, P	SEs shall		WER_ON state for a I_SEC are defined for
Ain. get ever		using a xx time		SuggestedRe	medy				
	shall not source more power th any sliding window with a width			•	shall reach th state for a pa		for a pair	set" with "sha	Il reach the respective
SuggestedRemedy				Response		Response Status	С		
"Type 4 PSEs sha	l not source more power than P sliding window with a width up to		fined in Table 145-16		IN PRINCIPL IN PRINCIPL				
Response ACCEPT.	Response Status C				nen connecte	d to a single-signatu ion on the last pairse			ER_ON within Tpon
C/ 145 SC 145.2	.8.13 <i>P</i> 166	L 6	# i-130	PSEs sha	Il reach the re	espective power on s	tate for a	pairset within	Tpon after completing
Yseboodt, Lennart	Philips Light	ing		detection	on the same	pairset."			
Comment Type E	Comment Status A		Pres: Stewart1	This resol	ution is identi	cal to comment #130).		
	ected to a single-signature PD,			C/ 145	SC 145.2.10	P1	66	L 43	# li-308
	ing detection on the last pairset the POWER_ON state for a			Stover, David		Analo	g Devices	s Inc.	
detection on the sa	me pairset." not be using word "state".			Comment Typ	e T	Comment Status	Α		PSE Mł
SuggestedRemedy	not be using word state .		"If any of these conditions exist for longer than its related time limit, the power is removed from the PI." Not a true statement (for example, DC MPS on a single pairset of a dual-signature PD). Also, this statement adds little value, as the power removal specifics are defined explicitly in the PSE inrush and PSE MPS sections already.						
	ected to a single-signature PD,								
PSEs shall reach I	etection on the last pairset. Whe OWER_ON for a pairset within			SuggestedRe	<i>medy</i> he quoted sta	atement			
same pairset."							•		
Response	Response Status C			Response		Response Status	C		
ACCEPT IN PRIN	JIPLE.			ACCEPT.					

Change to:

"PSEs, when connected to a single-signature PD, shall reach POWER_ON within Tpon after completing detection on the last pairset. When connected to a dual-signature PD, PSEs shall reach the respective power on state for a pairset within Tpon after completing detection on the same pairset."

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa 166 Li **43**

Page 95 of 134 9/15/2017 11:41:05 AM

C/ 145 SC 145.2.11	P 166	L 47	# i-309		C 145.2.5.7	P 168	L 40	# i-417
Stover, David	Analog Device	es inc.		Darshan, Yair				
signature PD or a dual-s TMPDO values as define Type; it is a function of F SuggestedRemedy Replace statement with	Comment Status A ne connected Type of PD an ignature PD, shall use the a ed in Table 145-16." PD DC PD assigned Class. Also mis "A PSE, depending on the P he applicable IHold, IHold-2	pplicable IHold MPS behavior ssing an oxford 2D assigned Cl	I, IHold-2P, TMPS and is not a function of PD comma. ass and PD signature	power is ap PDs may re their nomina The use of interpreted staggered p suggested t	Single-signa plied to eithe quire being al power leve "simultaneou it as both pa powering is n to remove " s	Comment Status D sure PDs that request Class or PD Mode A, PD Mode B, or supplied over Mode A and M el." Isly" in this text is that we ar rs where powered on simult ot allowed which obviously v imultaneously" in the first or th Mode A and Mode B" in t	or both Modes s Node B simultand e working over 4 aneously i.e. at was not the inter ccurrence and re	imultaneously. All other eously to operate at I-pairs. Some readers the same time i.e. nt. To clarify it, it is eplace "
Response ACCEPT. Cl 145 SC 145.3.2 Yseboodt, Lennart	Response Status C P 168 Philips Lightin	L 31	# i-131	SuggestedRem Change tex if power is a	edy t to:" Single- applied to eit	signature PDs that request (ner PD Mode A, PD Mode B ver both Mode A and Mode	Class 4 or less s , or both Modes	hall be able to operate . All other PDs may
Comment Type TR This subclause deals with handle and operate under	Comment Status A	configurations a		Proposed Resp REJECT. This commo		Response Status Z	ər.	
SuggestedRemedy Adopt yseboodt_01_091		· · · · · · · · · · · · · · · · · · ·		This commo	ent was with	drawn before the comment r	esolution meetir	ng.
Response ACCEPT IN PRINCIPLE	Response Status C							
	 7_pdinputpower.pdf (v120)							

Pa **168** Li **40**

C/ 145 SC 145.2.5.		L 40	# i-202	C/ 145 SC 145.		P 168	L 43	# i-132
Peker, Arkadiy	Microsemi Cor	poration		Yseboodt, Lennart		Philips Lighting		
Comment Type TR	Comment Status A		Pres: Yseboodt1	Comment Type T	Comment S	tatus A		PD Type
power is applied to eit	gnature PDs that request Class her PD Mode A, PD Mode B, o g supplied over Mode A and Mo	r both Modes si	imultaneously. All other	"NOTEPDs that standard."	implement only Mod	e A or Mode B a	re specifically	not allowed by this
their nominal power le				"implementing a p	airset" is ambiguous	5.		
	eously"" in this text is that we a			SuggestedRemedy				
staggered powering is	pairs where powered on simulta not allowed which obviously w "" simultaneously"" in the first o	as not the inten	nt. To clarify it, it is	"NOTEPDs that standard."	support only Mode A	or Mode B are s	specifically no	t allowed by this
	"both Mode A and Mode B"" in			Response	Response Si	tatus C		
SuggestedRemedy				ACCEPT.				
	gle-signature PDs that request either PD Mode A, PD Mode B,			C/ 145 SC 145.	334	P 170	L 10	# i-133
	over both Mode A and Mode E			Yseboodt, Lennart		Philips Lighting	2.10	" 1100
level."""				Comment Type TF		1 0 0		PD S
Response	Response Status C			21				FD 3
ACCEPT IN PRINCIP	,	lass 4 or less s	hall be able to operate	Credit to Ken Ben See bennet_01_0	net for finding this is 917_vmarkth.pdf for	sue. full problem des		-
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to a require being supplied level."	LE.	or both Modes. 3 to operate at t	. All other PDs may their nominal power	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.5 It is compounded	net for finding this is 917_vmarkth.pdf for here is no mention in	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar	' PD should im nark transition k_Th in the co	nplement hysteresis for is due to the voltage onstants section,
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to a require being supplied level."	LE. e-signature PDs that request C either PD Mode A, PD Mode B, d over both Mode A and Mode E	or both Modes. 3 to operate at t	. All other PDs may their nominal power	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.5 It is compounded	net for finding this is 917_vmarkth.pdf for here is no mention in s it is possible to get 5V caused by the cla by the PD state diag	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar	' PD should im nark transition k_Th in the co	nplement hysteresis for is due to the voltage postants section,
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to e require being supplied level." This is in clause 145.3	LE. e-signature PDs that request C either PD Mode A, PD Mode B, I over both Mode A and Mode E 3.2, not in clause 145.2.5.7 as c	or both Modes. 3 to operate at t comment states <i>L</i> 43	All other PDs may their nominal power	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.5 It is compounded implying the value SuggestedRemedy - Move VReset_P	net for finding this is 917_vmarkth.pdf for here is no mention in s it is possible to get 5V caused by the cla by the PD state diag cannot change whil D, VReset_Th, VMa	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar e the state diagra rk_th, VOff_PD, a	n PD should im nark transition rk_Th in the co am is running.	nplement hysteresis for as due to the voltage onstants section,
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to a require being supplied level." This is in clause 145. Cl 145 SC 145.3.2	LE. e-signature PDs that request C either PD Mode A, PD Mode B, d over both Mode A and Mode E 3.2, not in clause 145.2.5.7 as o P 168	or both Modes. 3 to operate at t comment states <i>L</i> 43	All other PDs may their nominal power	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.5 It is compounded implying the value SuggestedRemedy - Move VReset_P (145.3.3.3) sectio - Add the following "Appropriate hyste	net for finding this is 917_vmarkth.pdf for here is no mention in s it is possible to get V caused by the cla by the PD state diag cannot change whil D, VReset_Th, VMai n to the Variable (14: g text after the third p eresis in the VMark_1	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar e the state diagra rk_th, VOff_PD, i 5.3.3.4) section. baragraph in 145 th threshold volta	n PD should im nark transition k_Th in the co am is running. and VOn_PD .3.6.1.1: age is required	nplement hysteresis for as due to the voltage onstants section, from the Constants d to avoid erroneous
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to e require being supplied level." This is in clause 145.3 Cl 145 SC 145.3.2 Abramson, David Comment Type ER extra comma in text.	LE. e-signature PDs that request C either PD Mode A, PD Mode B, d over both Mode A and Mode B 3.2, not in clause 145.2.5.7 as o <i>P</i> 168 Texas Instrume	or both Modes. 3 to operate at t comment states <i>L</i> 43	All other PDs may their nominal power s. # i-327	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.4 It is compounded implying the value SuggestedRemedy - Move VReset_P (145.3.3.3) sectio - Add the following "Appropriate hyste transitions betwee	net for finding this is 917_vmarkth.pdf for here is no mention in s it is possible to get V caused by the cla by the PD state diag cannot change whil D, VReset_Th, VMai n to the Variable (14: g text after the third p eresis in the VMark_ton mark and class sta	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar e the state diagra rk_th, VOff_PD, i 5.3.3.4) section. baragraph in 145 th threshold volta	n PD should im nark transition k_Th in the co am is running. and VOn_PD .3.6.1.1: age is required	nplement hysteresis fo as due to the voltage onstants section, from the Constants
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to e require being supplied level." This is in clause 145.3 Cl 145 SC 145.3.2 Abramson, David Comment Type ER extra comma in text. SuggestedRemedy	LE. e-signature PDs that request C either PD Mode A, PD Mode B, d over both Mode A and Mode B 3.2, not in clause 145.2.5.7 as o <i>P</i> 168 Texas Instrume	or both Modes. 3 to operate at t comment states <i>L</i> 43 ents Inc	All other PDs may their nominal power # <u>i-327</u> <i>Editorial</i>	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.5 It is compounded implying the value SuggestedRemedy - Move VReset_P (145.3.3.3) sectio - Add the following "Appropriate hyste transitions betwee a mark voltage or Response	net for finding this is 917_vmarkth.pdf for here is no mention in s it is possible to get V caused by the cla by the PD state diag cannot change whil D, VReset_Th, VMai n to the Variable (14: g text after the third p eresis in the VMark_ton mark and class sta	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar e the state diagra rk_th, VOff_PD, 5.3.3.4) section. baragraph in 145 th threshold volta ates when the PS	n PD should im nark transition k_Th in the co am is running. and VOn_PD .3.6.1.1: age is required	nplement hysteresis fo as due to the voltage onstants section, from the Constants d to avoid erroneous
ACCEPT IN PRINCIP Change text to:" Singl if power is applied to e require being supplied level." This is in clause 145.3 Cl 145 SC 145.3.2 Abramson, David Comment Type ER extra comma in text. SuggestedRemedy Remove comma in se	LE. e-signature PDs that request C either PD Mode A, PD Mode B, d over both Mode A and Mode E 3.2, not in clause 145.2.5.7 as o P168 Texas Instrume Comment Status A	or both Modes. 3 to operate at t comment states <i>L</i> 43 ents Inc	All other PDs may their nominal power # <u>i-327</u> <i>Editorial</i>	Credit to Ken Ben See bennet_01_0 Short summary: T V_Mark_th. Without hysteresis drop of around 0.5 It is compounded implying the value SuggestedRemedy - Move VReset_P (145.3.3.3) sectio - Add the following "Appropriate hyste transitions betwee a mark voltage or	net for finding this is 917_vmarkth.pdf for here is no mention in s it is possible to get by caused by the cla by the PD state diag cannot change whil D, VReset_Th, VMain to the Variable (14: g text after the third p eresis in the VMark_there in mark and class sta- vica versa."	sue. full problem des n our spec that a spurious class/n ss current. ram listing VMar e the state diagra rk_th, VOff_PD, 5.3.3.4) section. baragraph in 145 th threshold volta ates when the PS	n PD should im nark transition k_Th in the co am is running. and VOn_PD .3.6.1.1: age is required	nplement hysteresis for as due to the voltage onstants section, from the Constants d to avoid erroneous

Pa **170** Li **10**

C/ 145 SC 145.3.3.4 P 170 L 25 # [i-134 Yseboodt, Lennart Philips Lighting	C/ 145 SC 145.3.3.4 P 170 L 38 # i-135 Yseboodt, Lennart Philips Lighting
Comment Type TR Comment Status A PD SD Variable nopower is used in state diagram, but not listed in variable list.	Comment Type T Comment Status A Editori Variable pd_autoclass_enabled is not consistent with e.g. pse_dll_enable.
SuggestedRemedy Add variable nopower to variable list as follows: "nopower: A variable that indicates the PD has been in NOPOWER, which indicates VPD was below VOff_PD while being powered, since the last time V_PD was below V_Reset for at least T_Reset. Values: FALSE: PD has not been in NOPOWER TRUE: PD has been in NOPOWER"	SuggestedRemedy Change variable pd_autoclass_enabled to pd_autoclass_enable throughout draft. Response Response Status C ACCEPT. C/ 145 SC 145.3.3.4 P 170 L 48 # i-136 Yseboodt, Lennart Philips Lighting
Response Response Status C ACCEPT.	Comment Type T Comment Status A PD S Variable pd_current_limit in the PD state diagram. The description of TRUE/FALSE says "The PD is (not) required to control the input current.
C/ 145 SC 145.3.3.4 P 170 L 26 # i-325 Abramson, David Texas Instruments Inc Texas Instruments I	What this is really about is _limiting_ the input current.
Comment Type TR Comment Status A PD SD There should be a definition of the variable "nopower" here. There is no definition even though the variable is used in multiple places inside the PD state diagrams. SuggestedRemedy Add "nopower" to the variable list with the definition of "A control variable that indicates the PD has entered NOPOWER. PD may show a valid or invalid detection signature, and may or may not draw mark current, draw any class current, and show MPS." Response Response Status C Add variable nopower to variable list as follows: "nopower: A variable that indicates the PD has been in NOPOWER, which indicates VPD was below Voff_PD while being powered, since the last time V_PD was below V_Reset for at least T_Reset. Values: Values:	SuggestedRemedy Replace 'control' in the text with the TRUE/FALSE values by 'limit'. Response Response Status C ACCEPT IN PRINCIPLE. Delete pd_current_limit. Reason: In all cases pd_current_limit is either redundant or misleading to pd_max_power usage: In INRUSH: pd_max_power <= inrush (no limit) pd_current_limit <= false (no limit) In POWER_DELAY: pd_max_power <= min(3,pd_req_class) pd_current_limit <= true (limit to I_Inrush_PD(-2P)) in POWERED: pd_max_power <= min(pse assigned class, pd_req_class)
—	in POWERED: pd_max_power <= min(pse_assigned_class, pd_req_class) pd_current_limit <= false (no limit)

Pa **170** Li **48**

Cl 145 SC 1 Yseboodt, Lennart	45.3.3.4	P 172 Philips Lightin	L 5	# i-137		C/ 145 Stover, Da		145.3.3.7		P 174 Analog Devic	L 1 es Inc.	ŧ	# i-310
Comment Type	T Co	omment Status A			PD SD	Comment	Type	TR	Comment S	Status D			Pres: Stover1
Variable prese "Controls pres Valu	enting the dete les:	ection signature (see 14	, ,			pd_acs examp	s_req fl ole, if po	d_acs_req	is set TRUE a		he has unintenc sequently reset ALSE.		
valio eithe	l: A valid PD d	PD detection signature etection signature is to id or non-valid PD detection	be applied to t	he PI over each p		Suggested See st		<i>dy</i> 01_0917.pd	f				
PI."						Proposed I	Respor	nse	Response S	Status Z			
Why	/ does valid sa	y 'over each pairset', bu	ut invalid does	not ?		REJEC	CT.						
SuggestedRemed	/					This co	ommen	nt was WIT	HDRAWN by	the commente	er.		
Change to:	0 0	ature, all of these shoul	,	•		This co	ommer	nt was with	drawn before	the comment i	esolution meet	ing.	
"Controls pres Valu	•	ection signature (see 14	15.3.4) by the F	'D over each pair	set.	C/ 145	SC	145.3.3.7		P 174	L 23	#	# i-138
inva	lid: A non-valio	PD detection signature				Yseboodt,	Lennar	rt		Philips Lightir	g		
		etection signature is to id or non-valid PD deter			o the	Comment	Type	TR	Comment S	Status A			Pres: Yseboodt7
PI."			citori signature	may be applied t		The va	ariable	pd_acs_red	q indicates if a	a PD saw a lor	ig class event a	and must	do Autoclass.
Response ACCEPT IN P		sponse Status C									3.3.4, moreove ass_enabled" te		
Change to:	onting the det	action aignoture (acc 14	15 2 1) by the F								g. pd_acs_req rom IDLE_ACS		
Valu		ection signature (see 14	15.3.4) by the F	D.		Suggested	Remed	dy					
		PD detection signature			ts.	Adopt	yseboo	odt_07_091	7_pdautoclas	ssfix.pdf			
		etection signature is to id or non-valid PD dete			to each	Response ACCE		PRINCIPLE	Response S	Status C			

Adopt yseboodt_07_0917_pdautoclassfix.pdf (v105)

Pa **174** Li **23**

C/ 145 SC 145.3	.3.7 P 175	5 L 32	# [i-139	C/ 145	SC 145.3.4	P 182	L 18	# <u>i-140</u>
Yseboodt, Lennart	Philips I	Lighting		Yseboodt,	Lennart	Philips Lightir	ng	
Comment Type TR	Comment Status	N Contraction of the second seco	PD SD	Comment	Туре Е	Comment Status A		Editoria
VOnPD *". We're already "on"	the transition from POWEF here, so we should only ch vith other POWERED state	neck against Voff.	ED reads "Vpd >=	compli detect	ant, while a PD on."	er by presenting a detection s that presents the signature of	Table 145-21 i	s assured to fail
SuggestedRemedy Change as follows:				preser		nce is odd: first part uses 'PD	requesting', se	cond part uses PD that
- POWER_DELAY	==> POWERED change to POWER_UPDATE change				that requests po	ower by presenting a detection PD that presents the signatu		
Do the same for du	ial-signature.			detect		T B that procente the eighted		
Response ACCEPT.	Response Status C	;		Response ACCE	PT.	Response Status C		
C/ 145 SC 145.3	.3.7 <i>P</i> 175	5 L 38	# i-326	C/ 145	SC 145.3.4	P 182	L 26	# i-141
Abramson, David	Texas li	nstruments Inc		Yseboodt,	Lennart	Philips Lightin	ng	
Comment Type TR	Comment Status F	ł	PD SD	Comment	Type TR	Comment Status D		Withdraw
	wer" should be set back to NRUSH from NOPOWER.	FALSE in the INRUS	SH state as the PD can		arameter name a	PD detection signature, first p also mentions: "(at any 1 V or		
Add "nopower <= F	ALSE" to INRUSH			This te	ext comes straig	ht out of 802.3af.		
Response REJECT.	Response Status (\$		10.1V	per the conditio on the PD side	A resistance is a resistance ar ns. of the spec, the 1V chord is a		
The nopower provi	des an exception to skip th	rough the power dela	y state.	Suggested				
				Proposed REJE		Response Status Z		
				This c	omment was W	THDRAWN by the commente	er.	
				This c	omment was wit	hdrawn before the comment r	esolution meeti	ng.
								-

Pa **182** Li **26**

<i>CI</i> 145 Yseboodt, L	SC 145.3.5 ennart	P 183 Philips Lighting	L 20	# i-142	<i>Cl</i> 145 Darshan, Y	SC 145.3. air	i	P 183	L 24	# i-436
Comment T	ype E	Comment Status R		PD Signatures	Comment	Гуре Т	Comment St	atus R		Pres: Ysebood
		titles are singular. e configurations"		, , , , , , , , , , , , , , , , , , ,	Table 1	145-20, on a g	iven Mode		-	nature, as defined in
SuggestedF	Remedy					o voltage or c on signature c	urrent is applied to	o the other M	ode, and shall p	resent an invalid
Change	e to "PD signatu	re configuration"						0.1 V and 57	7 V is applied to	the other Mode. These
Response REJEC	Т.	Response Status C			require apply to		and Mode B."			
being re	econfigured on t	he clause title is misleading. he fly or something. The plur and this is where to find their P183	al version impli	es that there are more	betwee Mode A any vol V from	n 10.1 V and A and Mode B tage X in the the voltage a	57 V is applied to ." doesn't guarante range of 2.7V to 5	the other Mo ee (especially 7V that is ap air that is be	de. These requing between 10.1 plied to the 1st plied to	ode when any voltage rements apply to both V and 57 V") that for pair and is higher by 1 I be result with invalid
Yseboodt, L	ennart	Philips Lighting	I		Suggested		that is being detec	ieu.		
Comment T	ype TR	Comment Status R		Pres: Yseboodt8	••	•	nle-signature PD s	hall present	a valid detection	signature, as defined
present 57 V is	an invalid dete applied to the o	hen no voltage or current is an ction signature on that Mode v ther Mode. These requiremen	when any voltages to both the second se	ge between 10.1 V and n Mode A and Mode B."	detection that Mo require	on signature o ode when any ments	voltage between 1			resent an invalid the other Mode. These
	uirement only h entirely operates	olds for corrupting voltages al	oove 10.1V, wh	ereas connection	apply to	o both Mode A	and Mode B."			
See http		2.org/3/bt/public/may17/ysebo	odt_09_0517_:	signature.pdf for	145-20	, on a given M	lode when no volta	age or curren	it is applied to th	, as defined in Table ie other Mode, and shall
SuggestedF	Remedy									ge between Vx and 57 m the voltage applied to
		of 145.3.5 to read:					se requirements a			
		shall present a valid detectior hen no voltage or current is ap			Response		Response Sta	atus U		
present	a valid detection	on signature on that Mode whe	n any voltage	between 3.7 V and 57 V	REJEC	CT.				
NOTE -	A detection sig	Mode. These requirements ap inature is only considered vali- tage range of 2.7 V to 10.1 V.	d when it meets		There	was no conse	nsus for change.			
Response		Response Status U								
REJEC	Т.									
There w	vas no consens	us for change.								
		J								

Pa **183** Li **24**

C/ 145 SC 145.3.6 Yseboodt, Lennart	P 183 Philips Lighting	L 34	# i-144	Cl 145 SC 1 Yseboodt, Lennart	45.3.6.1	P 184 Philips Lightii	L 51	# i-147
·				-	- 0-	mment Status A	ig	
Comment Type E All but a few subclause 145.3.6 = "PD classifica SuggestedRemedy Change to "PD classific	ations"		Editorial	"During Multip DO_CLASS_E DO_CLASS_E	e-Event Physic VENT1 and DO VENT3, DO_C	cal Layer classification O_CLASS_EVENT2 a CLASS_EVENT4, DO_	nd class_sig_B CLASS_EVEN	
Response ACCEPT.	Response Status C						sification' is redu	indant. The reference to
C/ 145 SC 145.3.6	P 183	L 44	# i-145	SuggestedRemedy	,			
Yseboodt, Lennart	Philips Lighting	I		Replace by:				
Comment Type E "The requested class of classification."	Comment Status A the PD is the Class the PD a	dvertises durii	<i>Editorial</i> ng Physical Layer	and class_sig_	B during DO_(VENT5, and D	A during DO_CLASS CLASS_EVENT3, DO O_CLASS_EVENT6, 145-23."	_CLASS_EVEN	Τ4,
				Response	Res	ponse Status C		
Capitalize Class. Also,	expand a little bit.			ACCEPT IN P	RINCIPLE.			
SuggestedRemedy				ACCEPT IN P	RINCIPLE.			
	f the PD is the Class the PD a ents the amount of power the F			Change to: "P	Ds shall prese	nt class_sig_A during	DO CLASS EV	/ENT1 and
Response ACCEPT.	Response Status C	Diequires io		DO_CLASS_E DO_CLASS_E	VENT2 and cla VENT4, DO_C and Figure 145	ass_sig_B during DO_ CLASS_EVENT5, and	CLASS_EVEN DO_CLASS_E\	ГЗ,
C/ 145 SC 145.3.6 Yseboodt, Lennart	P 184 Philips Lighting	L 35	# [i-146			comment #148.		
Comment Type ER	Comment Status A		Editorial					
145-23 physically sit in	o the PD classification section 145.3.6. ne Multiple-Event subclause w		e sense to have Table					
SuggestedRemedy								
Table 145-23." to read:	before Table 145-24							
Response	Response Status C							

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **184** Li **51**

Yseboodt, Lennart	Philips Lightin	a	# i-148		Jones, Cha	3		Cisco System	s. Inc.	# <u>i-340</u>	
Comment Type ER	Comment Status A	9	Ľ	Editorial	Comment T			Comment Status A	0,0	Fo	litorial
"During Multiple-Event DO_CLASS_EVENT1 DO_CLASS_EVENT3 DO_CLASS_EVENT6 145-23."	Physical Layer classification and DO_CLASS_EVENT2 ar , DO_CLASS_EVENT4, DO_ , with the corresponding class tion, we don't actually refer to	nd class_sig_B CLASS_EVENT ification signatu	ent class_sig_A du during I5, and ures specified in Ta	uring able	the sen line 7) t at line 8 l also, g no char The rea	ence at lin o make one . see prope ave a seco ge to the v	e paragosed cl osed cl ond opt vording chang	ould be merged with the first graph. The third paragraph ' hange where I've made the tion that combines to one pr has occured, this is purely ge is the arrangement now i	would then be tl edit. aragraph and re [,] editorial.	ne third paragraph (or he remainder of the porders the sentence	on text es.
uggestedRemedy					Suggested	Remedy					
DO_CLASS_EVENT1 DO_CLASS_EVENT3 DO_CLASS_EVENT6 corresponding classific Response ACCEPT IN PRINCIPI Change to: "PDs shal DO_CLASS_EVENT2 DO_CLASS_EVENT4	Physical Layer classification and DO_CLASS_EVENT2 ar , DO_CLASS_EVENT4, DO_ , as shown in Figure 145-26 a cation signatures specified in <i>Response Status</i> C LE. I present class_sig_A during I and class_sig_B during DO_ , DO_CLASS_EVENT5, and I ure 145-28, with the correspo	nd class_sig_B CLASS_EVENT nd Figure 145-2 Table 145-23." DO_CLASS_EV CLASS_EVENT DO_CLASS_EV	during F5, and 28, with the /ENT1 and F3, /ENT6, as shown i	in	Single-s request signatu in Table The PD PD on t pairset. class si Alternat The PD PD on t	ed Class, a res accordi 145-25. requested hat pairset A dual-sig gnature on e option fo requested hat pairset	as defing to the class . Dual- Dual- nature the und class . Class . Single	all advertise class signature ned in Table 145-24. Dual-s he PD Type and PD reques on a pairset is the maximul signature PDs may advertis PD that is powered over on powered pairset. anging: on a pairset is the maximul e-signature PDs shall adverted class, as defined in Ta	signature PDs s sted Class on ea m amount of po se different class aly one pairset s m amount of po tise class signa	hall advertise class ach pairset, as defin wer requested by th s signatures on eac hall present a valid wer requested by th tures according to t	ne h h ne he
/ 145 SC 145.3.6.1 seboodt, Lennart	I P 185 Philips Lightin	L 1 g	# [i-149		advertis pairset, signatu	e class sig as defined es on eacl	nature in Tab n pairse	s according to the PD Type ble 145-25. Dual-signature F et. A dual-signature PD tha	and PD reques PDs may advert t is powered over	sted Class on each ise different class	
Comment Type E	Comment Status A		E	Editorial	•	a valid cia	Ŭ	nature on the unpowered pa	iirset.		
	itoclass shall present class si /ENT_AUTO as defined in 14		defined in Table 14	15-23,	Response ACCEF	T IN PRIN		Response Status C			
Why is 0 quoted? Clas quoted.	ss signature 0 is defined in Ta	ble 145-23 and	does not need to	be	Before	The PD re	queste	ed Class on a pairset", add	d "For dual-sign	ature PDs,"	
	itoclass shall present class si /ENT_AUTO as defined in 14		efined in Table 14	5-23,	PDs, th by the F	e PD reque	ested C	Ds shall advertise class sig Class on either pairset is the			
Response	Response Status C				1 Coourin	ig toxt onlo		u.			
ACCEPT.					request	ed Class, a	as defir	all advertise class signature ned in Table 145-24. For sir the maximum amount of po	ngle-signature P	Ds, the PD request	
								advertise class signatures pairset, as defined in Table			he
	ed ER/editorial required GR/ spatched A/accepted R/reje					U/unsatisf	ied Z/v	Pa 18 withdrawn Li 7	5	Page 103 (9/15/2017	

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

PD requested Class on a pairset is the maximum amount of power requested by the PD on that pairset. Dual-signature PDs may advertise different class signatures on each pairset. A dual-signature PD that is powered over only one pairset shall present a valid class signature on the unpowered pairset.	Cl 145 SC 145.3.6.1 P 186 L 32 # i-153 Yseboodt, Lennart Philips Lighting Philips Lighting P D D
C/ 145 SC 145.3.6.1 P 185 L 13 # [i-150] Yseboodt, Lennart Philips Lighting Philips Lighting Philips Lighting Philips Lighting	Comment Type TR Comment Status A PD Reset In Table 145-26, Item 6, we find V_Reset_PD which is a range between 0V and 2.81V. The additional information points to 145.3.8.1, which says nothing about this parameter.
Comment Type TR Comment Status A PD SD "The default value of pse_power_level is 3, which corresponds with one class event."	VReset_PD isn't mentioned abywhere in the document, with the exception that it is used in the state diagram. Specifically, there is a global arc into IDLE with VPD < V_Reset_PD * other_conditions.
The notion of 'default values' in state diagrams is removed. Sentence no longer adds value. SuggestedRemedy Remove quoted sentence. Response Response Status C ACCEPT.	Because V_Reset_PD is a range, consistent with other parameters that are a range, this means the PD can choose any voltage between 0V and 2.81V and use this as the reset threshold. This is wrong - the PD should return to IDLE and stay there whenever the voltage is less than 2.81V. SuggestedRemedy
C/ 145 SC 145.3.6.1 P 185 L 19 # i-151 Yseboodt, Lennart Philips Lighting Philips Lighting Comment Type TR Comment Status A PD SD "The default value of pse_power_level_mode(X) is 3, which corresponds with one class event." The notion of 'default values' in state diagrams is removed. Sentence no longer adds value. SuggestedRemedy	 Change the definition of VReset_PD in 145.3.3.3 to read as follows: "VReset_PD max: The maximum PD reset voltage (see Table 145-26). Change all occurences of "VReset_PD" to "VReset_PD max" in the state diagrams in 145.3.3.7 Change the additional information in Table 145-26, item 6 to read "See 145.3.6.1" (PD Multiple-Event class signature) Append a paragraph to 145.3.6.1 that reads as follows: "V_Reset_PD, as defined in Table 145-26, is the voltage range in which the PD transitions to IDLE, thereby resetting the class event count." Make the same changes for dual-signature as appropriate.
Remove quoted sentence. <i>Response</i> ACCEPT. Response Status C	Response Response Status C ACCEPT IN PRINCIPLE.
Cl 145 SC 145.3.6.1 P 185 L 34 # i-152 Yseboodt, Lennart Philips Lighting Editorial Comment Type E Comment Status A Editorial First column "PD Type" in Table 145-24 needs to be left aligned, also for Table 145-25 SuggestedRemedy Left align PD Type column. Response Response Status C ACCEPT. C C	 Change the definition of Vreset_PD in 145.3.3.3 to read as follows: "Vreset_PD max: The maximum PD reset voltage (see Table 145-26). Change all occurences of "Vreset_PD" to "Vreset_PD max" in the state diagrams in 145.3.3.7 Change the additional information in Table 145-26, item 6 to read "See 145.3.6.1" (PD Multiple-Event class signature) Append a paragraph to 145.3.6.1 that reads as follows: "V_Reset_PD, as defined in Table 145-26, is the voltage range in which the PD remains in IDLE." Make the same changes for dual-signature as appropriate. Editor to make sure Vreset_PD Max is in the constants list (overrides any comment that suggests otherwise).

Pa **186** Li **32**

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PD Reset

C/ 145 SC 145.3.8 P 187 L 1 # [i-154] Yseboodt, Lennart Philips Lighting Philips Li	C/ 145 SC 145.3.6.2 P 187 L 13 # [i-329 Abramson, David Texas Instruments Inc
Comment Type ER Comment Status A Editorial Table 145-28, the big PD Table, nearly every parameter has the value specified 'per the assigned Class'. Exceptions: V_Tran_lo-2P, Voverload-2P, Tinrush_PD, Tdelay-2P, Islewrate, VNoise_PD, Von_PD, Voff_PD, TClass_PD, and Vbfd.	Comment Type ER Comment Status A Editoria "The PD shall not draw more power than the power consumed during the time from TAUTO_PD1 to TAUTO_PD2" TAUTO_PD1 to TAUTO_PD2" We have a name for that amount of power, its called Pautoclass_PD as defined in the previous sentence.
All of the exceptions apply to both Type 3 and Type 4. All of the others are determined by Class. We don't need the PD Type column in this Table at all, it doesn't tell us anything new, nor has it any technical significance.	SuggestedRemedy Change sentence to: "The PD shall not draw more than Pautoclass_PD at any point" Response Response Status C ACCEPT IN PRINCIPLE.
SuggestedRemedy Remove PD Type column from Table 145-28. Response Response Status C ACCEPT IN PRINCIPLE.	Also fixing Vreset.replace sentence with: The PD shall not draw more power than Pautoclass_PD at any point until VPD falls below Vreset_PD max, unless the PD successfully negotiates a higher power level, up to the PD requested Class, through Data Link Layer classification as defined in 145.5.
Remove column. Create two rows for Voverload-2P, one for Type 3 and one for Type 4. C/ 145 SC 145.3.6.2 P 187 L 7 # i-155	Cl 145 SC 145.3.8 P 188 L 20 # i-311 Stover, David Analog Devices Inc. Analog Devices Inc. PD Power Comment Type E Comment Status A PD Power Parameter "Vtran_lo-2P" is defined in Table 145-28, but never referenced in the document.
Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A Editorial "A PD that implements Autoclass shall change its current during the first class event to	SuggestedRemedy Delete "Vtran_lo-2P" from Symbol column of Item 2. Response Response Status C
class signature '0' no earlier than TACS min and no later than TACS max, as defined in Table 145-27." Why is 0 quoted? Class signature 0 is defined in Table 145-23 and does not need to be quoted.	ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
SuggestedRemedy Change to: "A PD that implements Autoclass shall change its current during the first class event to class signature 0 no earlier than TACS min and no later than TACS max, as defined in Table 145-27."	Replace add. Info by: "See 145.3.8.1." This resolution is identical to comment #156.
Response Response Status C ACCEPT.	

Pa **188** Li **20**

Table 145-28, Item 2, V_Tran_Io-2P says in the additional information "For time duration defined in 145-28, Items 10, 11 Describe input average power by class, labels it PClass_PD is a constant, and a limit. Items 8 and 9 correctly convey this. Items 10, 11 in general pointing to the PSE section inside of the PD section for parameters is bad. SuggestedRemedy - Replace add. Info by: "See 145.3.8.1." - Add the following to 145.3.8.1." - Replace add. Info by: "See 145.3.8.1." - Druing a voltage transient, VPD may fail as low as VTran_Io-2P for up to 250 microseconds." - Replace add. Info by: "See 145.3.8.1." - Replace add. Info by: "See 145.3.8.1." C - C1 145 SC 145.3.8 P 188 L 51 # [+157] - Table 145-28, parameter Table 145-28, parameter sthat deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. SuggestedRemedy - Response Response Status C - SuggestedRemedy Response Response Status C - Response Status C - Response Status C - Response Response Response Status C - Response Response Status C - Response Response Status C - Sugg		
Table 145-28, item 2, V_Tran_lo-2P says in the additional information "For time duration defined in 145.28.3". "Table 145-28, item 10, 11 Describe input average power by class, labels it PClass_P 2P, and specifies it with a value in the Max Column, inferring that it has a range. It is not immediately apparant that this applies to transients of no more than 250 microseconds. "PClass_PD is a constant, and a limit. Items 8 and 9 correctly convey this. Items 10, 11 Describe input average power by class, labels it PClass_PD." SuggestedRemedy - Replace add. Info by: "See 145.3.8.1." "Interms 10, 11, change the description to "Maximum" input average power" And the billowing to 145.3.8.1." Note: if the other comment on KTran/VTran is accepted, the parameter name is VTran_PD-2P rather than VTran_lo-2P. Response Response Status C Replace add. Info by: "See 145.3.8.1." C REJECT. The group feels the standard is clear as is and the suggested change makes it less clear as is and the suggested change makes it less clear as is constant. Name that insecution 145.3.8.2 spells this requirement out directly. C1 145 SC 145.3.8 P188 L 51 # [157] Yeaboodt, Lennant Philips Lighting Comment Type T Comment Status A PD. Comment Type Comment Status A Editorial SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy		
defined in 145.2.8.3*. 2P), and specifies it with a value in the Max Column, inferring that it has a range. 11 is not immediately apparant that this applies to transients of no more than 250 microseconds. 2P), and specifies it with a value in the Max Column, inferring that it has a range. SuggestedRemedy - Replace add, info by: "See 145.3.8.1." - Add the following to 145.3.8.1." - Add the following to 145.2.8.3.1." - Add the following to 145.3.8.1." - May the tother comment on KTran/VTran is accepted, the parameter name is VTran_PD-2P. - Printer than VTran_Io-2P. Response Response Status C ACCEPT IN PRINCIPLE. C1 145 SC 145.3.8 P 188 L 51 # [157] Yesboodt, Lennart Philips Lighting C//// 145 SC 145.3.9 P 189 L 42 # [437] Comment Type E Comment Status A Editorial SuggestedRemedy SuggestedRemedy Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix deesn't make to a sense. Editorial SuggestedRemedy SuggestedRemed	Comment Type ER Comment Status A PD Power	Comment Type T Comment Status R PD Pow
In general pointing to the PSE section inside of the PD section for parameters is bad. SuggestedRemedy Replace add, info by: "See 145.3.8.1." 'During a voltage transient, VPD may fall as low as VTran_to-2P for up to 250 microseconds." Note: if the other comment on KTran/VTran is accepted, the parameter name is VTran_PD- 2P rather than VTran_to-2P. Response Response Status C ACCEPT IN PRINCIPLE. C/ 145 SC 145.3.8 P188 L 51 # i=157 C/ 145 SC 145.3.8 P188 L 51 # i=157 C/ 145 SC 145.3.8 P188 L 51 # i=157 C/ 145 SC 145.3.8 P188 L 51 # i=157 C/ 145 SC 145.3.8 P188 L 51 # i=157 C/ 145 SC 145.3.8 P188 L 51 # i=157 The group feels the standard is clear as is and the suggested change makes it less cle Also, the text in section 145.3.8.2 spells this requirement out directly. C/ 145 SC 145.3.9 P189 L 42 # i=437 Darshan, Yair C/ 145 SC 145.3.9 P18	defined in 145.2.8.3".	"Table 145-28, items 10, 11 Describe input average power by class, labels it PClass_PD(-2P), and specifies it with a value in the Max Column, inferring that it has a range.
 Replace add. info by: "See 145.3.8.1." Add the following to 145.3.8.1." During a voltage transient, VPD may fall as low as VTran_Io-2P for up to 250 microseconds." Note: if the other comment on KTran/VTran is accepted, the parameter name is VTran_PD-2P rather than VTran_Io-2P. Response Response Status C ACCEPT IN PRINCIPLE. Replace add. Info by: "See 145.3.8.1." C1 145 SC 145.3.8 P 188 L 51 # i-157 rseboodt, Lennart Philips Lighting Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. SuggestedRemedy Response Response Status C ACCEPT. ACCEPT. * 1) In items 10, 11, change the description to "Maximum" input average power" Art of the text in section 145.3.8.2 spells this requirement out directly. * 1) In items 10, 11, change the description to "Maximum" input average power" Art of the other comment on KTran/VTran is accepted, the parameter name is VTran_PD-2P. * Response Tesponse Status C ACCEPT IN PRINCIPLE. Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. SuggestedRemedy Response Response Status C ACCEPT. * ACCEPT IN PRINCIPLE. Change from 74.8W to 74.9W * Accept IN PRINCIPLE. Change from 74.8W to 74.9W 		PClass_PD is a constant, and a limit. Items 8 and 9 correctly convey this. Items 10, 11 are ambiguous, and may result in misinterpretations of PClass_PD."
 - Add the following to 145.3.8.1: "During a voltage transient, VPD may fall as low as VTran_lo-2P for up to 250 microseconds." Note: if the other comment on KTran/VTran is accepted, the parameter name is VTran_PD- 2P rather than VTran_lo-2P. Response Response Status C ACCEPT IN PRINCIPLE. Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make to much sense. SuggestedRemedy Response Response Status C ACCEPT. Charge from 74.8W to 74.9W 	SuggestedRemedy	SuggestedRemedy
Note: if the other comment on KTran/VTran is accepted, the parameter name is VTran_PD- 2P rather than VTran_Io-2P. Response Status C Response Response Status C ACCEPT IN PRINCIPLE. CI 145 SC 145.3.8 P 188 L 51 # [-157] Yseboott, Lennart Philips Lighting C/ 145 SC 145.3.8 P 188 L 51 # [-157] Socomment Type E Comment Status A Editorial This comment marked CLASS8_PPD. Table 145-28 item 12, Ppeak_PD: It should be '(1.05'71.3=74.865==>74.9W. SuggestedRemedy Rename Tdelay-2P. SuggestedRemedy Option 1 (Recommended): Change from 74.8W to 74.9W Option 2: Keeponse Status C SuggestedRemedy Response Status C ACCEPT IN PRINCIPLE. C ACCEPT IN PRINCIPLE. C Response Response Status C ACCEPT IN PRINCIPLE. C C ACCEPT IN PRINCIPLE. Change from 74.8W to 74.9W C ACCEPT IN PRINCIPLE. C C ACCEPT IN PRINCIPLE.	- Add the following to 145.3.8.1: "During a voltage transient, VPD may fall as low as VTran_lo-2P for up to 250	 "1) In items 10, 11, change the description to ""Maximum""input average power"" And 2) Either Merge the min and max cells for items 10, 11, or set both the min and the max values to the same PClass_PD value"
Accept in Principal delay throughout Clause 145. Response Response Status Cl 145 SC 145.3.8 P188 L 51 L 1157 Yseboodt, Lennart Philips Lighting Comment Type E Comment Type E Comment Type E Comment Type Comment Status Accept. Editorial Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make to o much sense. SuggestedRemedy SuggestedRemedy Response Status C Response Response Status C ACCEPT. Totaleay throughout Clause 145. C Accept. C Accept N	microseconds."	Response Response Status C
Response Response Status C ACCEPT IN PRINCIPLE. Replace add. Info by: "See 145.3.8.1." Cl 145 SC 145.3.8 P 188 L 51 # 1-437 Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. SuggestedRemedy SuggestedRemedy SuggestedRemedy Response Response Status C ACCEPT. ACCEPT. Change from 74.8W to 74.9W		REJECT.
Replace add. Info by: "See 145.3.8.1." Cl 145 SC 145.3.8 P 188 L 51 # i-157 Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A PD Comment Type E Comment Status A Editorial This comment marked CLASS8_PPD. Table 145-28 item 12, Ppeak_PD: It should be 1(1.05*71.3=74.865==>74.9W. SuggestedRemedy Cotion 1 (Recommended): Change from 74.8W to 74.9W. SuggestedRemedy Response Status C Response Response Status C ACCEPT. Change from 74.8W to 74.9W Change from 74.8W to 74.9W	Response Response Status C	The group feels the standard is clear as is and the suggested change makes it less clear. Also, the text in section 145.3.8.2 spells this requirement out directly.
Cl 145 SC 145.3.8 P 188 L 51 # i-157 Yseboodt, Lennart Philips Lighting Editorial Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. SuggestedRemedy Option 1 (Recommended): SuggestedRemedy Rename Tdelay-2P to Tdelay throughout Clause 145. Response Response Status C Response Response Status C ACCEPT. Change from 74.8W to 74.9W C	ACCEPT IN PRINCIPLE.	CI 145 SC 145.3.9 P 189 L 42 # i-437
Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. Editorial Editorial Comment status A Editorial For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. This comment marked CLASS8_PPD. Table 145-28 item 12, Ppeak_PD: It should be "(1.05*71.3=74.865==>74.9W). SuggestedRemedy Option 1 (Recommended): Change from 74.8W to 74.9W Option 2: Keep it 74.8W Response Response Status C ACCEPT. Change from 74.8W to 74.9W C ACCEPT. Comment Status C Change from 74.8W to 74.9W C	Replace add. Info by: "See 145.3.8.1."	Darshan, Yair
Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. Editorial Editorial Comment and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. This comment marked CLASS8_PPD. Table 145-28 item 12, Ppeak_PD: It should be "(1.05*71.3=74.865==>74.9W). SuggestedRemedy Comment Tdelay-2P to Tdelay throughout Clause 145. Comment Tdelay-2P to Tdelay throughout Clause 145. Cename Tdelay-2P to Tdelay throughout Clause 14	C/ 145 SC 145.3.8 P 188 L 51 # (i-157	Comment Type T Comment Status A PD Pow
Comment Type E Comment Status A Editorial Table 145-28, parameter Tdelay-2P. SuggestedRemedy Option 1 (Recommended): For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. Option 1 (Recommended): SuggestedRemedy Change from 74.8W to 74.9W Option 2: Rename Tdelay-2P to Tdelay throughout Clause 145. Kesponse Response Status C ACCEPT. Change from 74.8W to 74.9W C	Yseboodt, Lennart Philips Lighting	This comment marked CLASS8_PPD. Table 145-28 item 12, Ppeak_PD: It should be 74.9 (1.05*71.3=74.865==>74.9W.
For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense. Option 1 (Recommended): Change from 74.8W to 74.9W Option 2: Keep it 74.8W SuggestedRemedy Rename Tdelay-2P to Tdelay throughout Clause 145. Response Response Status C ACCEPT. ACCEPT. Change from 74.8W to 74.9W C		
Rename Tdelay-2P to Tdelay throughout Clause 145. Response Response Status C Response Response Status C ACCEPT. ACCEPT.	For parameters that deal with time and are not exclusive to dual-signature, the "-2P" suffix doesn't make too much sense.	Change from 74.8W to 74.9W Option 2:
Response Response Status C ACCEPT. Change from 74.8W to 74.9W		·
	Response Response Status C	
Alco change Deless, DD 2n class 1 value to 2.94	ACCEPT.	Change from 74.8W to 74.9W
Also change Fclass_FD-2p class 1 value to 3.04.		Also change Pclass_PD-2p class 1 value to 3.84.

Pa **189** Li **42**

C/ 145 SC 145.3.8.2 P 191 L 27 # i-330 Abramson, David Texas Instruments Inc Texas Instruments Inc Texas Instruments Inc Texas Instruments Inc
al Comment Type TR Comment Status A PD Power "The maximum average power, PClass_PD or PClass_PD-2P in Table 145-28 or PDMaxPowerValue in 145.5.3.3.3, including any peak power drawn per 145.3.8.4 shall be calculated over a 1 second sliding window."
What/Who is this a requirement on? The PSE? The guy in the lab who is measuring it during QC? SuggestedRemedy
Change to: "The maximum average power, PClass_PD or PClass_PD-2P in Table 145-28 or PDMaxPowerValue in 145.5.3.3.3, including any peak power drawn per 145.3.8.4 is calculated over a 1 second sliding window."
Response Response Status C ACCEPT IN PRINCIPLE.
"The maximum average power, Pclass_PD or Pclass_PD-2P in Table 145-28 or PDMaxPowerValue in 145.5.3.3, including any peak power drawn per 145.3.8.4, is averaged using a sliding window with a width of 1 second."
e

Response Status C

ACCEPT.

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **191** Li **27**

C/ 145 SC 145.3.8.2 P 191 L 27 # i-159 Yseboodt, Lennart Philips Lighting Philips L	C/ 145 SC 145.3.8.2 P 191 L 32 # [i-342] Jones, Chad Cisco Systems, Inc. Eisco Systems, Inc. Ei
Yseboodt, Lennart Philips Lighting Comment Type ER Comment Status A Sliding Topic:SLIDING Issue: we use the concept of 'sliding windows' in our draft very inconsistently, the SLIDING comments try to make the whole bunch consistent. Aim: get everything in the form "measure xxx using a xx time sliding window". "The maximum average power, P Class_PD or P Class_PD-2P in Table 145-28 or PDMaxPowerValue in 145.5.3.3.3, including any peak power drawn per 145.3.8.4 shall be calculated over a 1 second sliding window." SuggestedRemedy "The maximum average power, P Class_PD or P Class_PD-2P in Table 145-28 or PDMaxPowerValue in 145.5.3.3.3, including any peak power drawn per 145.3.8.4 shall be measured using a 1 second sliding window." Response Response Response Status C ACCEPT IN PRINCIPLE. C "The maximum average power, P Class PD or Pclass PD-2P in Table 145-28 or	Jones, Chad Cisco Systems, Inc. Comment Type ER Comment Status A Editorial unneeded comma: PDs that have successfully completed DLL classification, shall not exceed a power consumption of SuggestedRemedy Editorial change to: PDs that have successfully completed DLL classification shall not exceed a power consumption of C Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. Replace by: "Single-signature PDs that have successfully completed DLL classification shall not exceed a power consumption of PDMaxPowerValue as defined in 145.5.3.4. Dual-signature PDs that have successfully completed DLL classification shall not exceed a power consumption of PDMaxPowerValue_mode(X) on Mode X as defined in 145.5.3.7." This resolution is identical to comment #160.
PDMaxPowerValue in 145.5.3.3.3, including any peak power drawn per 145.3.8.4, is averaged using a sliding window with a width of 1 second." This resolution is identical to comment #330. C/ 145 SC 145.3.8.2 P 191 L 27 # i-341 Jones, Chad Cisco Systems, Inc.	Cl 145 SC 145.3.8.2 P 191 L 32 # i-160 Yseboodt, Lennart Philips Lighting Philips Lighting Comment Type TR Comment Status A "PDs that have successfull completed DLL classification, shall not exceed a power consumption of PDMaxPowerValue as defined in 145.5.3.3.3." Power
Comment Type ER Comment Status A sliding missing comma in this text: including any peak power drawn per 145.3.8.4 [comma] shall be calculated over a 1 second sliding second sliding SuggestedRemedy change to: including any peak power drawn per 145.3.8.4 shall be calculated over a 1 second sliding Response Response Status C	Needs update for dual-signature. Note that subclause reference is wrong also. SuggestedRemedy Replace by: "Single-signature PDs that have successfully completed DLL classification, shall not exceed a power consumption of PDMaxPowerValue as defined in 145.5.3.4. Dual-signature PDs that have successfully completed DLL classification, shall not exceed a power consumption of PDMaxPowerValue_mode(X) on Mode X as defined in 145.5.3.7."
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. "The maximum average power, Pclass_PD or Pclass_PD-2P in Table 145-28 or PDMaxPowerValue in 145.5.3.3.3, including any peak power drawn per 145.3.8.4, is averaged using a sliding window with a width of 1 second." This resolution is identical to comment #330.	Response Response Status C ACCEPT IN PRINCIPLE. Replace by: "Single-signature PDs that have successfully completed DLL classification shall not exceed a power consumption of PDMaxPowerValue as defined in 145.5.3.4. Dual-signature PDs that have successfully completed DLL classification shall not exceed a power consumption of PDMaxPowerValue_mode(X) on Mode X as defined in 145.5.3.7."

TYPE: TR/technical required ER/editorial required GR/gener	al required T/technical E/editorial G/general	Pa 191	Page 108 of 134
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	Li 32	9/15/2017 11:41:05 AM
SORT ORDER: Page, Line			

Yseboodt, Lennart	3.8.2.1	P 191 Philips Lighting	L 37	# i-161	C/ 145 Johnson, F	SC 145.3.8.3 eter	B P 192	L 11	# i-488
Comment Type TR	Commen	nt Status A		PD Power	Comment	Гуре Т	Comment Status R		PD Inrusi
"For Class 6 and C the PD regarding a			additional inform	nation is available to		it text is "A PD r v for large value	nay limit the inrush current s"	below I_Inrush_P	D and I_Inrush_PD-2P
Applies to ASSIGN	IED Class.				This in	stance is part of	a broader problem where o	certain parameter	s in certain tables have
SuggestedRemedy							no MIN, and are treated as e. If the parameter is truly		
Change:							d MAX columns of the table		
"For single-signatu	re PDs assigned	d to Class 6 or Class	s 8, when addit	ional"	Suggested	Remedy			
Response	Response	e Status C			00		tance is to use I_Inrush_PI	D(max) and L Inri	ish PD-2P(max)
ACCEPT.					Response				
C/ 145 SC 145.3	9 2 1	P 191	L 42	# i-162	REJEC	·ד	Response Status C		
Yseboodt, Lennart	.0.2.1	Philips Lighting	L 42	# 1-162	REJEC	/1.			
	_						consistant with the rest of t		
Comment Type TR		nt Status A		PD Power	issue v	with the draft as	a whole if they would like th	e convention cha	inged.
"For Class 5 dual- regarding actual lir	0 /	hen additional infor	mation is availa	able to the PD	C/ 145	SC 145.3.8.3	<i>P</i> 192	L 21	# i-489
regarding actual in		515101100			Johnson, F	eter			
Applies to ASSIGN	IED Class.				Comment	Гуре Т	Comment Status R		PD Inrusi
SuggestedRemedy							nall draw less than I_Inrush	PD and L Inrush	
Change: "For dual-signature	PDs assigned t	to Class 5, when ad	ditional"				til T_delay-2P(min), when		
Response ACCEPT.	Response	e Status C			T_Inru low thr	sh_PD(max). B eshold (e.g. 100	s neither the PD nor the PS ut it also suggests that a PI mA) must then drop below t by this paragraph?	O that implements	s current limiting at a
					Suggested	Remedy			
					l canno paragra I_Inrus	ot propose a sol aph. I would wa	ution here without a better u ant to be sure that the parag ush_PD-2P or that the inten	graph is either co	rrectly using
					Response		Response Status C		
					REJEC	CT.			
					There	s no remedy pro	ovided by the comment.		
							t after Tinrush_PD(max) the linrush_PD(-2p). After T_d		ts current controlled so

Pa **192** Li **21** Page 109 of 134 9/15/2017 11:41:05 AM

C/ 145 SC 145.3.8.3 P 192 L 29 # i-438 Darshan, Yair	C/ 145 SC 145.3.8.4 P 192 L 48 # i-164 Yseboodt, Lennart Philips Lighting Philips Lighting
Comment Type E Comment Status A Editoria In the text "Dual-signature PDs assigned to Class 1, 2, or 3 shall conform to PClass_PD-2P and PPeak_PD-2P within TInrush_PD max as defined in Table 145-16 on	"Peak operating power shall not exceed P Peak_PD."
that pairset.", It is Table 145-28 and not Table 145-16. SuggestedRemedy Change to "Table 145-28".	It is not stated that this applies to single-signature PDs only. SuggestedRemedy "Peak operating power for single-signature PDs shall not exceed P Peak_PD."
Response Response Status C ACCEPT.	Response Response Status C ACCEPT IN PRINCIPLE.
C/ 145 SC 145.3.8.3 P 192 L 35 # [i-163] Yseboodt, Lennart Philips Lighting Philips Lighting PD Powe Comment Type E Comment Status A PD Powe	The shall is already contained in the Table 145-28. Replace sentence with: "Ppeak_PD is the maximum peak operating power and applies to single-signature PDs."
"CPort in Table 145-28 is the PD input capacitance during the POWER_UP and POWER_ON states that a PSE sees as load when operating one or both pairsets, when connected to a single-signature PD. CPort-2P in Table 145-28 is the PD input capacitance during the POWER_UP and POWER_ON states that a PSE sees as load on each pairset	CI 145 SC 145.3.8.4 P 192 L 52 # i-165 Yseboodt, Lennart Philips Lighting Philips Lighting
independently, when connected to a dual-signature PD."	Comment Type TR Comment Status A PD Powe "Peak operating power shall not exceed P Peak_PD-2P."
State names do not need the word "state" Also, for Cport-2P, we need the dual-signature state names.	It is not stated that this applies to dual-signature PDs only.
SuggestedRemedy Change to:	SuggestedRemedy "Peak operating power for dual-signature PDs shall not exceed P Peak_PD-2P."
"CPort in Table 145-28 is the PD input capacitance during POWER_UP and POWER_ON that a PSE sees as load when operating one or both pairsets, when connected to a single-signature PD. CPort-2P in Table 145-28 is the PD input capacitance during	Response Response Status C ACCEPT IN PRINCIPLE.
POWER_UP_PRI, POWER_UP_SEC, POWER_ON_PRI, and POWER_ON_SEC that a PSE sees as load on each pairset independently, when connected to a dual-signature PD."	The shall is already contained in the Table 145-28.
Response Response Status C	Replace sentence with: "Ppeak_PD-2P is the maximum peak operating power on a pairset

Pa **192** Li **52**

<i>Cl</i> 145 <i>SC</i> 145.3.8.4 Yseboodt, Lennart	P 193 L 29 Philips Lighting	# li-166	Cl 145 SC 145.3.8.4 Darshan, Yair	P 193	L 31	# i-439
comments try to make the Aim: get everything	Comment Status A opt of 'sliding windows' in our draft very inc he whole bunch consistent. g in the form "measure xxx using a xx time	sliding window".	powers of Class 1 throu missing for this clause. SuggestedRemedy	Comment Status A ns in Table 145-28 are used gh Class 8." . The equations	s are not in Tab	le 145-28 and are
with a width of 1 s." SuggestedRemedy Change to normal text:	cycle of the peak current is calculated usin eak current is measured using a sliding w <i>Response Status</i> C		peak powers of Class 1 To: "Equations 145-X a powers of Class 1 throu 2. Add the following tex PPeak_PD = 1.05 * PD PPeak_PD-2P = 1.05 * Where PDMaxPowerValue as PDMaxPowerValue_mo <i>Response</i> ACCEPT IN PRINCIPL 1. Change from "The ec peak powers of Class 1 To: "Equation 145-X an powers of Class 1 throu 2. Add the following tex Ppeak_PD = { 1.29 * PDMaxPowerVal 1.05 * PDMaxPowerVal 1.05 * PDMaxPowerVal 3 (145-X) Where PDMaxPowerValue is d Ppeak_PD-2P = { 1.29 * PDMaxPowerVal 1.11 * PDMaxPowerVal 1.05 * PDMaxPowerVal	nd Equation 145-Y are used gh Class 8." t and equations at the end of MaxPowerValue (145-X) PDMaxPowerValue_mode(X) defined in Table 145-22 ode(X) as defined in Table 14 <i>Response Status</i> C E. quations in Table 145-28 are through Class 8." d Equation 145-Y are used to gh Class 8." t and equations at the end of ue (Class 1, 2) ue (Class 5-8) lefined in Table 145-22 ue_mode(X) (Class 1, 2) ue_mode(X) (Class 3, 4)	to approximate f this paragraph X) (145-Y) 45-22 e used to approx to approximate to f this paragraph	the ratiometric peak : imate the ratiometric the ratiometric peak

Pa **193** Li **31**

Darshan, Yair	P 193	L 34	# i-440	C/ 145 Bennet, Ker	SC 145.3.8.4	1	P 193	L 41	# i-483
	mment Status A		PD Power	Comment T		Comment S	tatus A		PD Power
In the text "These equations r Data Link Layer classification PDMaxPowerValue and for A Missing "or PDMaxPowerValu SuggestedRemedy	nay be used to calcula by substituting PClas utoclass by substitutin	s_PD or PClass	r PPeak_PD-2P for _PD-2P with	"This co Pport_F ""Pport_	omment addres PD-2P). One ex	es all stateme ample is: ""the ut average pow	nts in this par peak power s	shall not exceed	rence Pport_PD (and PPort_PD for"". ference the MAXIMUM
Change from: "These equation	ons may be used to ca	alculate Poeak F	PD or Ppeak PD-2P for	Suggested	Remedy				
Data Link Layer classification PDMaxPowerValue and for A	by substituting Pclass	s_PD or Pclass_	PD-2P with		ch occurrence o _max" suffix.	Pport_PD and	Pport_PD-2F	P, either preceed	it with "maximum", or
To: "These equations may be Layer classification by substit DMaxPowerValue_mode(X) a Pautoclass_PD."	uting Pclass_PD or Po	class_PD-2P wit	h PDMaxPowerValue or	For eac				P, either preceed	it with "maximum", or
Response Res	oonse Status C			add a "	_max" suffix.				
ACCEPT IN PRINCIPLE.				Editoria	al license given t	o make sure m	aximum is ap	propriate for eac	ch occurance.
Change from: "These equation				C/ 145	SC 145.3.8.6		P 194	L 4	# i-484
Data Link Layer classification PDMaxPowerValue and for A To: "These equations may be Layer classification by substit or DMaxPowerValue_mode(X PAutoclass_PD."	utoclass by substitutin used to calculate PPe uting PClass_PD or P	ig PClass_PD wi eak_PD or PPea Class_PD-2P wi	ith PAutoclass_PD." k_PD-2P for Data Link ith PDMaxPowerValue	of PD T subclau	<i>Type</i> T Entence starting Types and Cport Use"". These ar	values that ""Ir informative st	signature PD atrinsically me atements, and	eet the requirement d are not entirely	"" leads into a listing ents in this correct:
PDMaxPowerValue and for A To: "These equations may be Layer classification by substit or DMaxPowerValue_mode(X PAutoclass_PD." C/ 145 SC 145.3.8.4.1	utoclass by substitutin used to calculate PPe uting PClass_PD or P and for Autoclass by P 193	ig PClass_PD wi eak_PD or PPea Class_PD-2P wi v substituting PC L 39	ith PAutoclass_PD." k_PD-2P for Data Link ith PDMaxPowerValue	Comment T "The se of PD T subclau 1) A typ	Type T entence starting Types and Cport use"". These ar the 4 PD with 360	with ""A single- values that ""Ir informative st ouF can be ass	signature PD htrinsically me atements, and	eet the requirement d are not entirely	"" leads into a listing ents in this correct: o Type 3 limits. The
PDMaxPowerValue and for A To: "These equations may be Layer classification by substit or DMaxPowerValue_mode(X PAutoclass_PD." C/ 145 SC 145.3.8.4.1 Yseboodt, Lennart	utoclass by substitutin used to calculate PPe uting PClass_PD or P and for Autoclass by	ig PClass_PD wi eak_PD or PPea Class_PD-2P wi v substituting PC L 39	ith PAutoclass_PD." k_PD-2P for Data Link ith PDMaxPowerValue lass_PD with	Comment 7 "The se of PD T subclau 1) A typ Type 3 2) It's c	Type T entence starting Types and Cport use"". These ar one 4 PD with 360 limit is 180uF, s onceivable for a	with ""A single- values that ""Ir e informative st OUF can be ass o the Type 4 lir ny of the cases	signature PD trinsically me atements, and igned a class nit of 360uF is that a transie	eet the requirement d are not entirely corresponding to s not true in this	"" leads into a listing ents in this correct: o Type 3 limits. The
PDMaxPowerValue and for A To: "These equations may be Layer classification by substit or DMaxPowerValue_mode(X PAutoclass_PD." C/ 145 SC 145.3.8.4.1 Yseboodt, Lennart	utoclass by substitutin used to calculate PPe uting PClass_PD or P and for Autoclass by P193 Philips Lightir mment Status A	ng PClass_PD wi eak_PD or PPea Class_PD-2P wi v substituting PC <i>L</i> 39	ith PAutoclass_PD." ak_PD-2P for Data Link ith PDMaxPowerValue lass_PD with # <u>i-167</u> PD Power	Comment T "The se of PD T subclau 1) A typ Type 3 2) It's c fault in	Type T entence starting Types and Cport use"". These ar be 4 PD with 36 limit is 180uF, s onceivable for a a PD for reasor	with ""A single- values that ""Ir e informative st OUF can be ass o the Type 4 lir ny of the cases	signature PD trinsically me atements, and igned a class nit of 360uF is that a transie	eet the requirement d are not entirely corresponding to s not true in this	"" leads into a listing ents in this correct: o Type 3 limits. The case.
PDMaxPowerValue and for A To: "These equations may be Layer classification by substit or DMaxPowerValue_mode(X PAutoclass_PD." C/ 145 SC 145.3.8.4.1 Yseboodt, Lennart Comment Type TR Con "For Class 6 and Class 8 sing Applies to assigned Class.	utoclass by substitutin used to calculate PPe uting PClass_PD or P and for Autoclass by P193 Philips Lightir mment Status A	ng PClass_PD wi eak_PD or PPea Class_PD-2P wi v substituting PC <i>L</i> 39	ith PAutoclass_PD." ak_PD-2P for Data Link ith PDMaxPowerValue lass_PD with # <u>i-167</u> PD Power	Comment T "The se of PD T subclau 1) A typ Type 3 2) It's c fault in SuggestedF Delete	Type T entence starting ypes and Cport use"". These ar one 4 PD with 360 limit is 180uF, s onceivable for a a PD for reasor Remedy	with ""A single- values that ""Ir informative st buF can be ass o the Type 4 lir ny of the cases s other than just at line 4 ("A sin	signature PD trinsically me atements, and igned a class nit of 360uF is that a transie to that a transie to Cport."	eet the requiremend d are not entirely corresponding to s not true in this ent could cause	"" leads into a listing ents in this correct: o Type 3 limits. The case.
PDMaxPowerValue and for A To: "These equations may be Layer classification by substit or DMaxPowerValue_mode(X PAutoclass_PD." Cl 145 SC 145.3.8.4.1 Yseboodt, Lennart Comment Type TR Con "For Class 6 and Class 8 sing	utoclass by substitutin used to calculate PPe uting PClass_PD or P and for Autoclass by P 193 Philips Lightir mment Status A le-signature PDs and	ng PClass_PD wi eak_PD or PPea Class_PD-2P wi or substituting PC <i>L</i> 39 ng for Class 5 dual	ith PAutoclass_PD." ak_PD-2P for Data Link ith PDMaxPowerValue class_PD with # [i-167 PD Power -signature PDs,"	Comment T "The se of PD T subclau 1) A typ Type 3 2) It's c fault in SuggestedF Delete	Type T entence starting Types and Cport use"". These ar one 4 PD with 360 limit is 180uF, s onceivable for a a PD for reason Remedy the text starting or the list of PD	with ""A single- values that ""Ir informative st buF can be ass o the Type 4 lir ny of the cases s other than just at line 4 ("A sin	signature PD htrinsically me atements, and igned a class nit of 360uF is that a transie t Cport."	eet the requiremend d are not entirely corresponding to s not true in this ent could cause	ents in this o correct: o Type 3 limits. The case. a power surge and/or

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **194** Li **4**

C/ 145 SC 145.3.8.6 P 194 L 30 # [i-315] Stover, David Analog Devices Inc. Analog Devices Inc. Image: Comparison of the state of th	C/ 145 SC 145.3.8.6 P 194 L 37 # [i-338] Lemahieu, Joris ON Semiconductor
Comment Type TR Comment Status A PD Po	
*** Comment submitted with the file 94179800003-i_tr_3.png attached ***	The PD state diagram states that does not need to implement a current limit in the
Math for TR3 doesn't pencil out given the input cap requirements listed in this section. So attachment for simulation showcasing the problem statement. As a result, I_TR_LIM,max	POWERED state. (pd_current_limit <= FALSE)
for assigned Class >= 5 needs slightly increased.	This new ITR_LIM spec now seems to indicate the opposite.
SuggestedRemedy	SuggestedRemedy
Modify I_TR3,max for single-signature PDs assigned Class >= 5 from "3" to "3.1"	Suppress the ITR_LIM requirement:
Response Response Status C	 Delete "the peak current shall not exceed ITR_LIM, as defined in Table 145-30, and" Delete Table 145-30
ACCEPT IN PRINCIPLE.	Response Response Status C
Change sentence from: When transient TR3 is applied, the peak current shall not excee ITR_LIM, as defined in Table 145-30, and the PD shall meet the operating power limits after 4 ms.	ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
To: When transient TR3 is applied, the PD shall meet the operating power limits within 4 ms.	Change sentence from: When transient TR3 is applied, the peak current shall not exceed ITR_LIM, as defined in Table 145-30, and the PD shall meet the operating power limits after 4 ms.
Delete table 145-30	To: When transient TR3 is applied, the PD shall meet the operating power limits within 4 ms.
Add footnote to "Source Resistance" in Table 145-29 that says "The source resistance is the effective 4-pair resistance."	Delete table 145-30
	Add footnote to "Source Resistance" in Table 145-29 that says "The source resistance is the effective 4-pair resistance."
	This resolution is identical to comment #315.
	C/ 145 SC 145.3.8.6 P 194 L 40 # i-168
	Yseboodt, Lennart Philips Lighting
	Comment Type E Comment Status A Editor
	"These requirements apply to each pairset individually if the PD is a dual-signature PD."
	SuggestedRemedy Shorter: Change to: "These requirements apply to each pairset individually for a dual-signature PD."
	Response Response Status C ACCEPT.

Pa **194** Li **40**

C/ 145 SC 145.3.8.7 P 195 L 11 # i-343 Jones, Chad Cisco Systems, Inc. Cisc	C/ 145 SC 145.3.8.8 P 195 L 18 # i-169 Yseboodt, Lennart Philips Lighting
Comment Type E Comment Status A PD Power	Comment Type E Comment Status A PD C
Chair notes lines 11- 15, this is not information that helps ensure interoperability. It may cause more confusion to the reader than help. This was discussed in previous meetings but deferred to 3.0.	"After entering a DO_CLASS state, the PD Physical Layer class signature shall be valid within TClass_PD as defined in Table 145-28 and remain valid for the remainder of the class event."
SuggestedRemedy	State name can be more specific.
delete: Limits are provided to preserve data integrity. To meet EMI standards, lower values may be needed. NOTEThe worst-case condition is when both PSE and PD generate the	SuggestedRemedy
maximum noise allowed by Table 145-16 and Table 145-28, which may cause a higher noise level to appear at the PI than the standalone case as specified by this clause.	Change to: "After entering a DO_CLASS_EVENT state, the PD Physical Layer class signature shall
Response Response Status C	valid within TClass_PD as defined in Table 145-28 and remain valid for the remainder of the class event."
ACCEPT.	Response Response Status C
C/ 145 SC 145.3.8.8 P 195 L 17 # i-331	ACCEPT.
Abramson, David Texas Instruments Inc	C/ 145 SC 145.3.8.10 P 195 L 42 # i-171
Comment Type ER Comment Status A Editorial	Yseboodt, Lennart Philips Lighting
Why is classification stability time in the PD power section? Why not in the classification section?	Comment Type E Comment Status A Edite Equation 145-26, uses Ohm symbol inside equation which is not needed.
Move 145.3.8.8 to 145.3.6.1.2. Also move item 19 in Table 145-28 to Table 145-26	SuggestedRemedy Remove Ohm symbol inside of Eq. 145-26.
Response Response Status C	Response Response Status C
ACCEPT IN PRINCIPLE.	ACCEPT.
Move 145.3.8.8 to 145.3.6.1.2 after making all other changes to 145.3.8.8. Also move item 19 in Table 145-28 to Table 145-26.	
	C/ 145 SC 145.3.8.10 P 195 L 42 # i-170 Yseboodt, Lennart Philips Lighting Philips
	Comment Type TR Comment Status A PD Po Equation 145-26, for R_PD_min and _max, refers to eg. 'for PD Type 3, Class 6'.
	Since unbalance requirements change with ICon-2P-unb, ans thus with assigned Class, the equation should make this obvious.
	SuggestedRemedy
	Replace in Equation 145-26: "for PD Type 3, Class 5" with "for assigned Class 5" "for PD Type 3, Class 6" with "for assigned Class 6" "for PD Type 4, Class 7" with "for assigned Class 7" "for PD Type 4, Class 8" with "for assigned Class 8"
	Response Response Status C
	ACCEPT.
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/ COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/w SORT ORDER: Page, Line	

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	boodt, Lennart		Dhiling Links	4	
Comment Type TR Comment Status A Pres: Yseboodt3 Cor			Philips Ligh	ting	
	51	ER	Comment Status A		Sliding
Icon-2p-unb has no maximum; this statement ("Single-signature PDs shall not exceed ICon- 2P-unb for longer than TCUT-2P min and 5% duty cycle") does not enforce any current limitation on the PD.	comments try to	the conceptor th	ot of 'sliding windows' in c e whole bunch consisten	t.	
SuggestedRemedy	Alm: get e	everytning	in the form "measure xxx	using a xx time s	sliding window".
Change "Icon-2p-unb" to "Icon-2p-unb,min"			ycle of the peak current is	s calculated using	g any sliding window
Response Response Status C	with a width of 1				
	gestedRemedy	/			
ACCEPT IN PRINCIPLE.	Change to norm		al aurrant is massived u		dow with a width of 1
Adopt yseboodt_03_0917_unbalancemargin.pdf with the following changes:	second."	e or the pea	ak current is measured u	sing a sliding win	dow with a width of T
1. Use the lcon-2p-unb numbers from darshan_03_0917_final.pdf for lunbalance-2p and Res	oonse		Response Status C		
Icon-2p-unb 2. Put proposed subclause 145.1.1.3 content in PSE and PD unbalance section, rename	ACCEPT.				
as appropriate.					
C/ ·		45.3.8.10	P 196	L 41	# i-332
This resolution is identical to comment #101. Abr	amson, David		Texas Instru	uments Inc	
Cl 145 SC 145.3.8.10 P 196 L 7 # i-487 Cor	nment Type	E	Comment Status A		Editorial
Johnson, Peter Comment Type T Comment Status A Pres: Darshan15			er description of the theve makes no sense.	enin equivalent we	e are using (Vsource +
	gestedRemedy	/			
and 5 % duty cycle, and shall not exceed IPeak-2P-unb, as defined in Equation (145-12)	Change all occu	urances of	f Vin in section 145.3.8.1	0 (and any relate	d annexes) to Vsource
on any pair" fails to account for the fact that there are many combinations of PSE voltage	ponse		Response Status C		
and PD class where IPeak-2P_unb is a value LESS than ICon-2P-unb. It makes no sense that peak power must be less than continuous power.	ACCEPT.				
Suggested Remedy					
This creates a fundmental dilemma because IPeak-2P_unb is a function of V_PSE and therefore only the PSE knows what IPeak-2P_unb current is, not the PD. To be universal, PD current balance, both instantaneous and average, must therefore be restricted to Icon-2P-unb. Language would be: "Single-signature PDs shall not exceed ICon-2P-unb on any pair"					
Response Response Status C					
ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.					
- Replace page 158, lines 12 through 44 by:					
IPeak-2P-unb = {ILIM-2P - 0.002}A					
This resolution is identical to comment #104.					

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **196** Li **41** Page 115 of 134 9/15/2017 11:41:05 AM

C/ 145 SC 145.3.8.10 P 197 L 1 # [i-173] Yseboodt, Lennart Philips Lighting Philips	C/ 145 SC 145.3.9 P 198 L 10 # i-287 Stewart, Heath Analog Devices Inc. Image: Comparison of the second s
Comment TypeTRComment StatusAPres: Darshan3Calculations using the model in Figure 145-31, Equation 145-27, and Equation 145-26 show that pair currents often exceed ICon-2P-unb, even though line 39 on page 195 promises: "PDs that meet Equation (145-26) intrinsically meet unbalance requirements."	Comment Type E Comment Status A PD MF All other tables carefully describe whether an item or row is attributable to single-signature or dual-signature PDs. Table 145-31 does not follow this convention
I guess that changes in earlier drafts to power parameters require us to update the magic numbers in Equation 145-26. SuggestedRemedy Don't know how to fix this Yair ? Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. Adopt the changes proposed in darshan_03_0917_final.pdf	SuggestedRemedy Change Table 145-31 as follows Item 1 Change "Class 1 to 4" to "Single-signature PD, Class 1 to 4" Change "Class 5 to 8" to "Single-signature PD, Class 5 to 8" Change "Class 1 to 5" to "Dual-signature PD, Class 1 to 5" Response Response Status C ACCEPT IN PRINCIPLE. - change description of item 1 to read: "Total input current per the assigned Class, for single-signature PDs" - change description of item 2 to read: "Input current on each
This resolution is identical to comment #419.	powered pairset for dual-signature PDs".
Cl 145 SC 145.3.9 P 197 L 16 # [i-333] Abramson, David Texas Instruments Inc	Yseboodt, Lennart Philips Lighting
Comment Type TR Comment Status A PD MPS "A PD shall have TMPS_PD measured with a series resistance representing the worst case cable resistance between the measurement point and the PD PI." Sentence places requirement on measurer rather than PD, needs to be reworded. SuggestedRemedy Replace with: "A PD shall meet the TMPS_PD requirement with a series resistance representing the worst case cable resistance between the measurement point and the PD PI." Response Response Status C ACCEPT IN PRINCIPLE. Replace with: "A PD shall meet the TMPS_PD requirement with a series resistance representing the worst case cable resistance between the measurement point and the PD PI."	Comment Type E Comment Status A PD MF "NOTEPDs may not be able to meet the IPort_MPS or IPort_MPS-2P specification in Table 145-31 during the maximum allowed port voltage droop (VPort_PSE-2P max to VPort_PSE-2P min with series resistance RCh). Such a PD should increase its IPort min or IPort-2P or make other such provisions to meet the Maintain Power Signature." Should not be IPort min but just IPort. SuggestedRemedy Change "IPort min" to "IPort". Response Response Status C ACCEPT. C

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **198** Li **25**

<i>Cl</i> 145 <i>SC</i> 145.4.1 Thompson, Geoffrey	P 199 Individual	L 10	# i-380	<i>Cl</i> 145 Thompson	SC 145.4.2 , Geoffrey	P 200 Individual	L 29	# i-381
requirements (and ref there should be eleme item is independently Alternatively, the requ	Comment Status D system requirements and eler erences to element requirement ent specifications in 145.2, 148 developed and sold it support irements could be stated as g e. PSE, PD, link section) so the	ents) should appe 5.3 and link segments s meeting the sy- eneral requirements	ear here. Conversely nent so that when each stem requirement. ents with no reference	Suggested	xt is PSE speci <i>Remedy</i> he text to the P <i>Response</i>	Comment Status D fication text, not system requir SE specification clause, 145.2 Response Status Z		AE
SuggestedRemedy								
See comment.					omment was W	ITHDRAWN by the commente	er.	
Proposed Response REJECT.	Response Status Z			Cl 145 Thompson	SC 145.4.2 , Geoffrey	P 200 Individual	L 29	# i-382
	ITHDRAWN by the commenter	er.		Comment Systen	51	Comment Status R specifications should be specifications	cified here.	AE
C/ 145 SC 145.4.2 Vaters, Keith	Schneider Ele	<i>L</i> ectric	# [i-23		e the opening to	ext to read: "Each conductor p fault tolerance requirements of		section or a PI of a PoE
Commont Tuno TD			Contification	-,				
I have concerns that s	Comment Status R section 145.4.2 does not show uirements in regard to fault to essed.		Certification	Response REJEC We sp	CT. ecify everything	Response Status U at the PI, we can't put require		luctor pairs of the link
I have concerns that s certification listing req fire safety issue and needs to be addr	section 145.4.2 does not show uirements in regard to fault to			Response REJEC	CT. ecify everything	Response Status U		luctor pairs of the link
I have concerns that s certification listing req fire safety issue and needs to be addre uggestedRemedy	section 145.4.2 does not show uirements in regard to fault to	lerance. This is a	a potential product and	Response REJEC We sp section C/ 145	CT. ecify everything n. SC 145.4.2	Response Status U at the PI, we can't put require	ements on conc	luctor pairs of the link # <u>i-246</u>
I have concerns that s certification listing req fire safety issue and needs to be addr SuggestedRemedy Add to standard: Tes	section 145.4.2 does not show uirements in regard to fault to essed.	lerance. This is a	a potential product and	Response REJEC We sp section	CT. ecify everything n. SC 145.4.2	Response Status U at the PI, we can't put require	ements on conc	
I have concerns that s certification listing req fire safety issue and needs to be addr SuggestedRemedy Add to standard: Tes	section 145.4.2 does not show juirements in regard to fault to essed. ting and a third party certificat	lerance. This is a	a potential product and	Response REJEC We sp section C/ 145	CT. ecify everything SC 145.4.2 n, George	Response Status U at the PI, we can't put require	ements on conc	
I have concerns that s certification listing req fire safety issue and needs to be addre SuggestedRemedy Add to standard: Tes Response REJECT. This comment is out of	section 145.4.2 does not show uirements in regard to fault to essed. ting and a third party certificat <i>Response Status</i> W of scope.	lerance. This is a	a potential product and e required.	Response REJEC We sp section Cl 145 Zimmerma Comment Not all the app	CT. ecify everything SC 145.4.2 n, George <i>Type</i> T the relevant ph propriate specify	Response Status U at the PI, we can't put require P 200 Aquantia, ADI	ements on conc <i>L</i> 30 I, Comm eet the fault tole	# <u>i-246</u> AE erance requirements of
I have concerns that so certification listing req fire safety issue and needs to be addre SuggestedRemedy Add to standard: Tes Response REJECT. This comment is out of The purpose of IEEE	section 145.4.2 does not show uirements in regard to fault to essed. ting and a third party certificat <i>Response Status</i> W of scope. P802.3bt is to define interoped	lerance. This is a ion listing shall b rability, it is not to	a potential product and e required.	Response REJEC We sp section Cl 145 Zimmerma Comment Not all the app	CT. ecify everything SC 145.4.2 n, George <i>Type</i> T the relevant ph propriate specify 126 which are	Response Status U at the PI, we can't put require P 200 Aquantia, ADI Comment Status A y clauses are listed - "shall me ying clause. (See 14.3.1.2.7, 2	ements on conc <i>L</i> 30 I, Comm eet the fault tole	# <u>i-246</u> AE erance requirements of
I have concerns that s certification listing req fire safety issue and needs to be addre <i>SuggestedRemedy</i> Add to standard: Tes <i>Response</i> REJECT. This comment is out of The purpose of IEEE requirements. In resp states 'All equipment In particular, the PSE IEC 60950-1 or IEC6 national codes related	section 145.4.2 does not show uirements in regard to fault to essed. ting and a third party certificat <i>Response Status</i> W of scope. P802.3bt is to define interopei ect to safety subclause 145.6. subject to this clause shall con shall be classified as a Limite 2368-1 Annex Q. Equipment s d to safety.'. It is these reference	lerance. This is a ion listing shall b rability, it is not to 1 'General safety nform to IEC 609 d Power Source shall comply with ced local and nat	a potential product and e required. o define product of IEEE P802.3bt 50-1 or IEC 62368-1. in accordance with all applicable local and tional codes that define	Response REJEC We sp section Cl 145 Zimmerma Comment Not all the app 55 and Suggested Chang require "shall n	CT. ecify everything SC 145.4.2 n, George Type T the relevant ph propriate specify 126 which are <i>Remedy</i> e (end of) first s ments of the ap neet the fault to	Response Status U at the PI, we can't put require P 200 Aquantia, ADI Comment Status A y clauses are listed - "shall me ying clause. (See 14.3.1.2.7, 2	ements on conc <i>L</i> 30 I, Comm eet the fault tole 25.4, and 40.8.3 all meet the fau See 14.3.1.2.7,	# <u>i-246</u> AE erance requirements of 3.4.)" Missing clauses It tolerance 25.4, and 40.8.3.4.)" to
I have concerns that s certification listing req fire safety issue and needs to be addre <i>SuggestedRemedy</i> Add to standard: Tes <i>Response</i> REJECT. This comment is out of The purpose of IEEE requirements. In resp states 'All equipment In particular, the PSE IEC 60950-1 or IEC6 national codes related the requirements, not	section 145.4.2 does not show juirements in regard to fault to essed. ting and a third party certificat <i>Response Status</i> W of scope. P802.3bt is to define interoper ect to safety subclause 145.6. subject to this clause shall cor shall be classified as a Limite 2368-1 Annex Q. Equipment s	lerance. This is a ion listing shall b rability, it is not to 1 'General safety of Power Source shall comply with ced local and nat certification is de	a potential product and e required. o define product of IEEE P802.3bt 50-1 or IEC 62368-1. in accordance with all applicable local and tional codes that define	Response REJEC We sp section Cl 145 Zimmerma Comment Not all the app 55 and Suggested Chang require "shall n	CT. ecify everything SC 145.4.2 n, George Type T the relevant ph propriate specify 126 which are <i>Remedy</i> e (end of) first s ments of the ap neet the fault to	Response Status U at the PI, we can't put require P 200 Aquantia, ADI Comment Status A y clauses are listed - "shall me ying clause. (See 14.3.1.2.7, 2 added in 802.3bt sentence in 145.4.2 from: "sha opropriate specifying clause. (Serance requirements of the a	ements on conc <i>L</i> 30 I, Comm eet the fault tole 25.4, and 40.8.3 all meet the fau See 14.3.1.2.7,	# <u>i-246</u> AE erance requirements of 3.4.)" Missing clauses It tolerance 25.4, and 40.8.3.4.)" to

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 U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **200** Li **30** Page 117 of 134 9/15/2017 11:41:05 AM

C/ 33 SC 33.4.2	P 200	L 30	# i-247	C/ 145 SC 145.4.3 P 201 L 19 # i-383
Zimmerman, George	Aquantia, ADI,	Comm		Thompson, Geoffrey Individual
Comment Type T	Comment Status A		AE	
requirements of the a	uses need to be added to the list ppropriate specifying clause. (So nd 126 which are added in 802.3	ee 14.3.1.2.7,		Is this a PSE spec or a PD spec? Which PI is it measured at. Is this a controlling spec (it has a "shall") or a resultant spec that is a check of other specs? If this is not met where do you go to fix it?
SuggestedRemedy				SuggestedRemedy
tolerance requiremen 40.8.3.4.)" to "shall m	It and change (end of) first sente ts of the appropriate specifying of eet the fault tolerance requirement	clause. (See 1 ents of the app	4.3.1.2.7, 25.4, and	Define what portion of the system this applies to and where to measure it. If it is an element spec then move it into the element that it is related to. If it is a system check spec then remove the shall and refer to the controlling element specs that will remedy any failure.
	.7, 25.4, 40.8.3.4, 55.8.2.3, and	120.8.2.4		Response Response Status C
Response	Response Status C			ACCEPT IN PRINCIPLE.
ACCEPT.				Change sentence on page 199, line 3 from: "This clause defines additional electrical
C/ 145 SC 145.4.2	P 201	L 1	# i-175	specifications for both the PSE and PD."
Yseboodt, Lennart	Philips Lighting			to: "This clause defines additional electrical specifications for the PSE and PD that apply to
Comment Type E	Comment Status A		Editori	
Figure 145-32 referer	ice broken.			CI 145 SC 145.4.4 P 202 L 26 # i-384
SuggestedRemedy				Thompson, Geoffrey Individual
Fix the reference.				Comment Type ER Comment Status D AES
Response	Response Status C			This is a PSE output specification thus should be part of the PSE spec.
ACCEPT.				SuggestedRemedy
				Move this requirement to cl. 145.2.
				Proposed Response Response Status Z
				REJECT.
				This comment was WITHDRAWN by the commenter.
				Cl 145 SC 145.4.5 P 204 L 44 # i-385
				Thompson, Geoffrey Individual
				Comment Type ER Comment Status D This is a PSE output specification thus should be part of the PSE spec.
				SuggestedRemedy Move this requirement to cl. 145.2.
				Proposed Response Response Status Z REJECT.
				This comment was WITHDRAWN by the commenter.
•		•		G/general Pa 204 Page 118 of 134 //written C/closed U/unsatisfied Z/withdrawn Li 44 9/15/2017 11:41:0

C/ 145 SC 145.4.6	P 205	L 31	# i-386			C 145.4.7	P 205	L 51	# i-387	7
Thompson, Geoffrey	Individual				Thompson, Ge	offrey	Individual			
Comment Type ER	Comment Status D			AES	Comment Type	ə TR	Comment Status A			AE
This is a PSE output sp SuggestedRemedy Move this requirement	becification thus should be part to cl. 145.2.	rt of the PSE spe	ec.		have a mo Expressing	re complete g it in terms	his is a spec for the cabling or a requirement and be moved to of the "PHY" and the "MDI" ca at to be done for a midspan sy	the PSE or lin uses further co	k segment claus	se.
Proposed Response	Response Status Z				SuggestedRen	nedy				
REJECT.					Clarify and	l place as ap	opropriate.			
This comment was WI	THDRAWN by the commenter				Response ACCEPT I		Response Status C LE.			
across frequency. E_ SuggestedRemedy delete formula (145-31 change text on line 38		ne formula defin dual frequencies nax		AES arying	This claus (that is, PS system. Additionall "Additional Additionall	e defines ac SE, cabling, y, there sho electrical s y, there sho	ACE THE FIRST SENTENCE Iditional electrical specification PD and related PHYs) and the uld be a forward pointer to 145 pecifications that apply to the uld be a forward pointer to 145	s for a fully con prefore to each 5.4 at the end o PSE are in 145 5.4 at the end o	element of such of 145.2: 5.4." of 145.3:	
to "shall not exceed 1 MHz and shall not exce	requirements Equation (145-3 0 mV peak-to-peak when mea eed 1mV peak-to-peak when n E-T, 10 MHz to 250 MHz for 5	sured in the bar neasured in the	nd from 1 MHz to band from 10 MH	Iz to	Cl 145 S Thompson, Ge	SC 145.4.8 offrey	pecifications that apply to the I P 206 Individual	L 11	4." # [i-388	
Response ACCEPT.	Response Status C				Comment Type This claus mid-spans	e is a PSE s	Comment Status D spec that belongs in a further s	ubsection of th	ne PSE sub-clau	AE se for
					SuggestedRen Move to ap		ew midspan sub-clause within	145.2		
					Proposed Res REJECT.	ponse	Response Status Z			
					This comm	nent was WI	THDRAWN by the commente	r.		

Pa **206** Li **11**

C/ 145 SC 145.4 Yseboodt, Lennart	1.8 <i>P</i> 206 Philips Lightin	L 14	# i-176	<i>Cl</i> 145 Thompson	SC 145.4. Geoffrey	9	P 206 Individual	L 22	# i-389
Comment Type ER		5	AES	Comment	,	Comme	nt Status D		AES
"Alternative A Mids	span PSEs that support 100BASE (see 145A.1) less than or equal to		ce link-section intra-pair	This cl	ause is prope	erly a set of spe			of a PSE option, as
145.4.9.3."				Suggested	Remedy				
The words 'link see	ction' are redundant in this senten	ce.		Move t	o appropriate	e new midspan	sub-clause within	145.2	
SuggestedRemedy				Proposed I	Response	Respons	e Status Z		
	span PSEs that support 100BASE 5A.1) less than or equal to I unb (REJEC This co		WITHDRAWN	by the commente	er.	
Response	Response Status C	,		C/ 145	SC 145.4		P 208	L 9	# i-226
ACCEPT.				Mcclellan,	-	9.1.1	Marvell Semi	-	# 1-220
C/ 145 SC 145.4	1.9 P 206	L 22	# i-391	Comment	Гуре Е	Comme	nt Status R		AES
Thompson, Geoffrey	Individual								ntical to 33.4.9.1.x and
Comment Type TR	Comment Status R		AES				same requirement of duplicating text a		and 145.4.9.2.x should
	an aspects of the spec to two sim			Suggested					
	cceptance test for a permanent lin st for a cord that meets standards		nidspan can have on	For ea	ch subclause		nd 145.4.9.2.x dele ents in 33.4.9.1.x a		xt and formulas and
SuggestedRemedy				Response		•	e Status C	and 00.4.0.2.X.	
Prune the text so t control.	hat the cabling acceptance tests (to be called out	by reference) are the	REJEC	CT.	Respons			
Response	Response Status U			clause	33 might get	deprecated in	the future.		
REJECT.				C/ 145	SC 145.4	9.1.1	P 208	L 31	# i-220
No consensus for	change.			Mcclellan,	Brett		Marvell Semi	conducto	
C/ 145 SC 145.4	4.9 <i>P</i> 206	L 22	# i-390	Comment	Type TR	Comme	nt Status A		AES
Thompson, Geoffrey	Individual				oss for PSE nectors.	midspan is 40	dB at 100MHz, ho	owever 2.5/5GB	ASE-T budgets 43dB
Comment Type ER	Comment Status R		AES	Suggested					
Much of the text in	this clause is superficial, unneces	sary and/or red	lundant.	00	e "40" to "43"				
SuggestedRemedy				Response		Respons	e Status W		
Clean up the text a midspans.	and remove any text that is not an	additional requ	rement specific to	ACCEI	PT.				
Response	Response Status U								
REJECT.									
No consensus for	change.								
			,,				_		
	quired ER/editorial required GR/g					/	Pa 20		Page 120 of 134

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Li 31

34 9/15/2017 11:41:05 AM

C/ 145 SC 145.4.9.1.1 P 208 L 31 # i-237 Zimmerman, George Aquantia, ADI, Comm Image: Advanta and the second an	C/ 145 SC 145.4.9.1.3 P 209 L 41 # i-221 Mcclellan, Brett Marvell Semiconducto
Comment Type T Comment Status A NEXT loss on PSE midspan for 2.5G/5GBASE-T should be based on Category 5e, not on Clause 40 requirements which predate Category 5e. same change made in another comment in clause 33.4.9.1.1) SuggestedRemedy Change "40" to "43" in equation 145-32	Comment Type TR Comment Status A AES The return loss limit at 20MHz violates the RL spec in 126.7.2.3 for 2.5G and 5G (17dB). SuggestedRemedy create a separate table entry for 2.5GBASE-T with the following limits based on Cat5E: 1 MHz <f<=31.5 mhz<="" td=""> 30 dB 31.5 MHz 10 MHz 20-20log10(f/100)</f<=31.5>
Response Response Status C ACCEPT IN PRINCIPLE.	Response Response Status W ACCEPT.
change "40" to "43" This resolution is identical to comment #220.	C/ 145 SC 145.4.9.1.3 P 209 L 42 # i-222 Mcclellan, Brett Marvell Semiconducto Marvell Semiconducto Marvell Semiconducto Marvell Semiconducto
Cl 145 SC 145.4.9.1.3 P 209 L 37 # i-240 Zimmerman, George Aquantia, ADI, Comm Account and the second and	Comment Type TR Comment Status A AES at 100MHz the limit of 14dB is only 4dB margin vs the 2.5/5G spec SuggestedRemedy Example 1448 create a separate table entry for 5GBASE-T with the following limits based on Cat6: 1 MHz <f<=50 mhz<="" td=""> 30 dB 50 MHz<f<=250 mhz<="" td=""> 24-20log10(f/100) Example 1448 Example 1448 Response Response Status W ACCEPT IN PRINCIPLE. create a separate table entry for 5GBASE-T with the following limits based on Cat5E: 1 MHz<f<=31.5 mhz<="" td=""> 30 dB 31.5 MHz 30 dB 31.5 MHz 20-20log10(f/100) C/ 145 SC 145.4.9.1.3 P 209 L 45 # [-19</f<=31.5></f<=250></f<=50>
Change 5GBASE-T row return loss value (100 MHz<= f<= 250 MHz) from 14 dB to 20 dB Proposed Response Response Status Z REJECT.	Anslow, Peter Ciena Corporation Comment Type E Comment Status A Editorial
This comment was WITHDRAWN by the commenter.	Minus signs should be an en-dash (Ctrl-q Shift-p) SuggestedRemedy Change to an en-dash: bottom row of Table 145-35 Table 145-37 Table 145-38 Response Response Status C ACCEPT.

Pa **209** Li **45**

C/ 145 SC 145.4.9.2 P 210 L 19 # [i-336 Maguire, Valerie The Siemon Company	C/ 145 SC 145.4.9.2.3 P 210 L 41 # i-20 Anslow, Peter Ciena Corporation Ciena Corporation Ciena Corporation Ciena Corporation
Comment Type T Comment Status A AES	Comment Type T Comment Status A AES
Support of 2.5GBASE-T with category 5e and support of 5GBASE-T with category 6 is only in the case that the cabling meets the additional requirements specified in clause 126.7 of 802.3bz.	This says "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 5 through 10 in 145.4.9.1)" but there are only 5 variants in 145.4.9.1
	SuggestedRemedy
SuggestedRemedy	Change "variants 5 through 10 in 145.4.9.1" to "variants 3 through 5 in 145.4.9.1"
Add a footnote referencing back to the 2.5GBASE-T and 5GBASE-T column rows that	Response Response Status C
says, "For defined uses cases (refer to IEEE Std 802.3bz(TM)-2016). Category 6A cord in ISO/IEC 11801-1 or ANSI/TIA-568-C.2 recommended."	ACCEPT IN PRINCIPLE.
Response Response Status C ACCEPT IN PRINCIPLE.	Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in
Adopt zimmerman_3bt_02_0917.pdf	145.4.9.1 and 145.4.9.2) are additionally"
C/ 145 SC 145.4.9.2.3 P 210 L 41 # [i-223	This resolution is identical to comment #177.
Mcclellan, Brett Marvell Semiconducto	C/ 145 SC 145.4.9.2.3 P 210 L 41 # [i-177
Comment Type ER Comment Status A AES	Yseboodt, Lennart Philips Lighting
(variants 5 through 10 in 145.4.9.1) there are only 5 variants	Comment Type ER Comment Status A AES
SuggestedRemedy change "(variants 5 through 10 in 145.4.9.1)" to "(variants 3 through 5 in 145.4.9.1)"	"Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 5 through 10 in 145.4.9.1) are additionally required to meet the following parameters for coupling signals between ports relating to different link segments."
Response Response Status C	Variant list has been split.
ACCEPT IN PRINCIPLE.	SuggestedRemedy
Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in 145.4.9.1 and 145.4.9.2) are additionally"	Change as follows: "Midspan PSEs intended for operation with 2.5G/5G/10GBASE-T (variants 3 through 5 in 145.4.9.1 and 145.4.9.2) are additionally"
	Response Response Status C
This resolution is identical to comment #177.	

Pa **210** Li **41**

C/ 145 SC 145.4.9.2.4 P 210 L 51 # i-224	C/ 145 SC 145.4.9.2.4 P 210 L 51 # i-243						
Mcclellan, Brett Marvell Semiconducto	Zimmerman, George Aquantia, ADI, Comm						
Comment Type T Comment Status A AES	Comment Type T Comment Status A AES						
"for all specified frequencies", The frequency range in Table 145-37 exceeds the frequency requirements for 2.5GBASE-T and 5GBASE-T and may be reduced.	"for all specified frequencies", The frequency range in Table 145-37 exceeds the frequency requirements for 2.5GBASE-T and 5GBASE-T and may be reduced. (same change in						
SuggestedRemedy	33.4.9.2.4 in another comment))						
delete "for all specified frequencies" insert "For other than 5GBASE-T or 10GBASE-T operation, PSANEXT loss for Midspan PSE devices shall meet the values determined by Table 145-37 from 1 MHz to 100 MHz. For 5GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet the	While we were trying to manage simplicity with too many midspan variations, we gave the midspan Cat 6a connector PSANEXT requirements for 2.5G/5GBASE-T. This isn't an error, but more style. A more inclusive specification would only have the required frequencies.						
values determined by Table 145-37 from 1 MHz to 250 MHz. For 10GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet the values determined by	SuggestedRemedy						
Table 145-37 from 1 MHz to 500 MHz." Delete the frequency column of Table 145-37	Identical changes in 145.4.9.2.4: delete "for all specified frequencies" insert "For other than 5GBASE-T or 10GBASE-T operation, PSANEXT loss for Midspan						
Response Response Status C ACCEPT IN PRINCIPLE. Identical changes in 145.4.9.2.4: delete "for all specified frequencies" insert "For other than 5GBASE-T or 10GBASE-T operation, PSANEXT loss for Midspan PSE devices shall meet the values determined by Table 145-37 from 1 MHz to 100 MHz. For 5GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet the values determined by Table 145-37 from 1 MHz to 250 MHz. For 10GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet the values determined by Table 145-37 from 1 MHz to 250 MHz.	PSE devices shall meet the values determined by Table 145-37 from 1 MHz to 100 MHz. For 5GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet t values determined by Table 145-37 from 1 MHz to 250 MHz. For 10GBASE-T capable midspans, PSANEXT loss for Midspan PSE devices shall meet the values determined by Table 145-37 from 1 MHz to 500 MHz." Delete the frequency column of Table 145-37 <i>Response</i> ACCEPT.						
Table 145-37 from 1 MHz to 500 MHz." Delete the frequency column of Table 145-37	C/ 145 SC 145.4.9.2.4 P 211 L 5 # i-192 Lewis, Jon Dell EMC						
This resolution is identical to comment #243.	Comment Type E Comment Status A Editor In Table 145-37PSANEXT Loss the text "1 MHz f 500 MHz" is at a different vertical position in the table cell than the text "70.5 - 20 log10 (f/100)"						
	SuggestedRemedy Vertically center the text in both columns to the same height						

Pa **211** Li **5**

C/ 145 SC 145.4.9		L 11	# i-225	C/ 145	SC 145.4.9.	2.5 P 211	L 19	# i-245
Vcclellan, Brett	Marvell Semi	conducto		Zimmerma	n, George	Aquantia, A	ADI, Comm	
Comment Type T	Comment Status A		AES	Comment	Туре Т	Comment Status A		AES
	encies", The frequency rangents for 2.5GBASE-T and 5GBA					ed frequencies", The frequencies for 2.5GBASE-T and 5G		
SuggestedRemedy				Suggested	Remedy			
PSE devices shall me For 5GBASE-T capal for Midspan PSE dev 250 MHz. For 10GBA shall meet the values	a 5GBASE-T or 10GBASE-T o beet the values determined by T ble midspans, PSAFEXT loss ices shall meet the values det SE-T capable midspans, PSA determined by Table 145-38 f column of Table 33-20c	able 145-38 fro ermined by Tab FEXT loss for N	m 1 MHz to 100 MHz. le 145-38 from 1 MHz to /lidspan PSE devices	insert ' PSE d For 5G values midspa Table	evices shall me BASE-T capat determined by ans, PSAFEXT 145-38 from 1 I	5GBASE-T or 10GBASE-T et the values determined b le midspans, PSAFEXT los Table 145-38 from 1 MHz t loss for Midspan PSE devid MHz to 500 MHz." column of Table 145-38	by Table 145-38 from ss for Midspan PS to 250 MHz. For 10	om 1 MHz to 100 MHz. E devices shall meet the OGBASE-T capable
Response	Response Status C			Response		Response Status C		
ACCEPT.				ACCEI	PT.			
C/ 145 SC 145.4.9	.2.5 <i>P</i> 211	L 19	# i-193	C/ 145	SC 145.5	P 212	L 0	# i-374
_ewis, Jon	Dell EMC			Thompson	, Geoffrey	Individual		
Comment Type E	Comment Status A		Editorial	Comment	Type TR	Comment Status R		Management
position in the table c SuggestedRemedy	AFEXT Loss the text "1 MHz f ell than the text "67 - 20 log10 ext in both columns to the san	(f/100)"	a different vertical	knew c include Scope	of) had impleme e it in cl. 145, th : "The scope of	cl. 145 to cl. 33.5. Althoug inted MDIO in cl. 33 device ere is a clear requirement i this project is to augment t ower and associated power	s and, therefore, the sand, the project pape he capabilities of the sand	ney didn't want to rwork to do so. See he IEEE Std 802.3
Response	Response Status C			Suggested	Remedy		-	
ACCEPT.	,			00	,	optional equivalent to cl. 33	.5 in cl. 145.	
				Response		Response Status C		

REJECT.

A specific remedy is needed.

Geoff, we are not required to do everything in the scope of the project. The scope is there to limit us from doing things outside of it.

Pa **212** Li **0**

Cl 145 So Thompson, Geo	C 145.5 offrey	P 212 Individual	L 0	# i-376	Cl 145 SC 145. Thompson, Geoffrey	5 P 212 Individual	L 25	# i-377
Comment Type	TR	Comment Status R		Management	Comment Type TR	Comment Status R		Pres: Yseboodt5
knew of) ha	ad implemented	145 to cl. 33.5. Although th d MDIO in cl. 33 devices ar	nd, therefore, tl	hey didn't want to	The entire text for or by reference to	"Management function requirement cl. 33.5.	s" is missing,	either as complete text
		is a clear requirement in th s will be backwards compa			SuggestedRemedy			
	anagement pa			: 002.3-2012 PDS.	Add text to specify	y how to control and/or read the mar	nagement fun	ctions to the draft.
SuggestedRem	nedy				Response	Response Status C		
Define a pa	arallel and optic	onal equivalent to cl. 33.5 i	n cl. 145.		REJECT.			
Response REJECT.	I	Response Status C			A specific and cor	nplete remedy is needed.		
This does r		perability in any way, since				ak interoperability in any way, since e MDI. It is an interface between a M		
					C/ 145 SC 145.	5 P 212	L 30	# i-178
	C 145.5	P 212	L 0	# i-375	Yseboodt, Lennart	Philips Lighting		
Thompson, Geo	onrey	Individual						
					Comment Type TF	Comment Status A		DLL
There is no knew of) ha include it in Scope: "5 0	parallel in cl. 1 ad implemented n cl. 145, there	Comment Status R 145 to cl. 33.5. Although th d MDIO in cl. 33 devices an is a clear requirement in th atibility: All enhancements 3."	nd, therefore, the project pape	hey didn't want to rwork to do so. See	"Single-signature support Data Link optional for all oth Incorrect statemen	PDs advertising a Class 4 signature Layer classification (see 145.3.6). E er devices." nt about dual-sig devices.	Data Link Laye	d dual-signature PDs er classification is
There is no knew of) ha include it in Scope: "5 0 Std 802.3-2	o parallel in cl. 1 ad implemented o cl. 145, there Criteria - Comp 2012 Clause 33	45 to cl. 33.5. Although th d MDIO in cl. 33 devices an is a clear requirement in th atibility: All enhancements	nd, therefore, the project pape	ed that no one (that they hey didn't want to rwork to do so. See	"Single-signature support Data Link optional for all oth Incorrect statemen	PDs advertising a Class 4 signature Layer classification (see 145.3.6). E er devices."	Data Link Laye	d dual-signature PDs er classification is
knew of) ha include it in Scope: "5 C Std 802.3-2 SuggestedRem	o parallel in cl. 1 ad implemented o cl. 145, there Criteria - Comp 2012 Clause 33 nedy	45 to cl. 33.5. Although th d MDIO in cl. 33 devices an is a clear requirement in th atibility: All enhancements	nd, therefore, the project pape will be backwa	ed that no one (that they hey didn't want to rwork to do so. See	"Single-signature support Data Link optional for all oth Incorrect statemen Also, it is better to	PDs advertising a Class 4 signature Layer classification (see 145.3.6). E er devices." nt about dual-sig devices.	Data Link Laye	d dual-signature PDs er classification is
There is no knew of) ha include it in Scope: "5 C Std 802.3-2 SuggestedRem Define a pa Response REJECT.	o parallel in cl. 1 ad implemented cl. 145, there Criteria - Comp 2012 Clause 33 nedy arallel and optic	145 to cl. 33.5. Although th d MDIO in cl. 33 devices an is a clear requirement in th atibility: All enhancements a." onal equivalent to cl. 33.5 in Response Status C	nd, therefore, the project pape will be backwa	ed that no one (that they hey didn't want to rwork to do so. See	"Single-signature support Data Link optional for all oth Incorrect statemen Also, it is better to signature'. SuggestedRemedy Replace by: "Single-signature Class 4 or higher	PDs advertising a Class 4 signature Layer classification (see 145.3.6). E er devices." nt about dual-sig devices.	Data Link Laye se the old terr and dual-signat ayer classifica	d dual-signature PDs er classification is m 'advertise class ture PDs that request
There is no knew of) ha include it in Scope: "5 C Std 802.3-2 SuggestedRem Define a pa Response REJECT.	o parallel in cl. 1 ad implemented cl. 145, there Criteria - Comp 2012 Clause 33 nedy arallel and optic	145 to cl. 33.5. Although th d MDIO in cl. 33 devices an is a clear requirement in th atibility: All enhancements 3."	nd, therefore, the project pape will be backwa	ed that no one (that they hey didn't want to rwork to do so. See	"Single-signature support Data Link optional for all oth Incorrect statemen Also, it is better to signature'. SuggestedRemedy Replace by: "Single-signature Class 4 or higher	PDs advertising a Class 4 signature Layer classification (see 145.3.6). E er devices." Int about dual-sig devices. Int about dual-sig devices.	Data Link Laye se the old terr and dual-signat ayer classifica	d dual-signature PDs er classification is m 'advertise class ture PDs that request

Pa **212** Li **30**

	# i-179	C/ 145	SC 145.5.3.	3.3	P 217	L 19	# li-461	
Yseboodt, Lennart Philips Lighting		Darshan, Y				•		
Comment Type E Comment Status A Variable naming convention in the DLL section has lost cohesion due to m There is a mix of CamelCase, lower_case_underscore, AND_ALL_CAPS.			51	the exit from		D_POWER_REC	DLL QUEST in the part"	
Specifically, the use the ALL_CAPS variable names can lead to confusion names when they are used in text.	a with state	SuggestedRemedy Change from "MirroredPDRequestedPowerValue NE TempVar" To: (MirroredPDRequestedPowerValue NE TempVar)						
SuggestedRemedy Rename DLL variables per the following rules, for Clause 145 only: - Use CamelCase for variables linked to Clause 30 objects - Use lower_case_underscore for DLL state diagram internal variables and	d constants	Response Response Status C ACCEPT.						
0		C/ 145	SC 145.5.3.	4.4	P 220	L 48	# i-181	
This will mostly affect the ALLCAPS variables that will be turned into lower	rcase.	Yseboodt,	Lennart		Philips Lightin	ng		
ACCEPT IN PRINCIPLE. Implement suggested remedy after all other changes have been made to (DLL).	clause 145.5	The Cr "Avoid meanir	: and/or hicago Manual this Janus-face ng.	of Style says t ed term. It can	often be replace	out the use of 'an ed by 'and' or 'or'	' with no loss in	
	# i-180				r both'. But also	think of other po	ssibilities."	
Yseboodt, Lennart Philips Lighting Comment Type E Comment Status Consection mission between two workships A	Editorial	"This fu		es the power i	requirements of t d power value."	the PD based or	n local system changes	
Space is missing between two variable names. Alignment on PSE_INITIAL_VALUE values is not enough to the right.		Suggested	Remedy					
SuggestedRemedy			unction evaluatinges in the PSE			the PD based or	n local system changes	
Add space or tab between variable names. Also more tabs before the PSE_INITAL_VALUE values.		Response		Response	Status C			
Response Response Status C ACCEPT.		ACCEI	PT.					

Pa **220** Li **48**

C/ 145 SC 145.5.3.6.3 P 226 L 2 # i-441 Darshan, Yair	Cl 145 SC 145.5.3.6.3 P 226 L 5 # i-442 Darshan, Yair
Comment Type T Comment Status A Pres: Yseboodt4 This comment is marked LLDP?_ADHOC_1. In the LLDP adhoc we made some changes to the PSE DLL state machine to reflect the changes made in the concept of how to fill in the TLV values of the pse_allocated_power and pse_allocated_power_alt(X) fields. SuggestedRemedy Adopt yseboodt_04_0917_LLDP.pdf Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. Adopt yseboodt_04_0917_LLDP.pdf (v153) Adopt yseboodt_04_0917_LLDP.pdf	Datasitati, Tail Comment Type T Comment Status A Pres: Yseboodt4 This comment is marked LLDP?_ADHOC_2. This comment and proposed remedy depend on the outcome of the LLDP adhoc recommendations regarding the question if pse_dll_ready_alt(X) need to be specified per alternative as currently is or need to be pse_dll_ready. In case that it is going to be pse_dll_ready, see the proposed remedy. SuggestedRemedy 1. Change from: " (!pse_dll_enable_alt(X) + !pse_dll_ready_alt(X)) * (sig_type = dual)" To: (!pse_dll_enable_alt(X) + !pse_dll_ready * (sig_type = dual) 2. In page 224 line 41 to change the pse_dll_ready_alt(X) variable definition to: "pse_dll_ready Main implementation-specific control variable that indicates that the PSE has initialized Data Link Layer classification. This variable maps into the aLldpXdot3LocReady attribute (30.12.2.1.20).
This resolution is identical to comment #38.	 Values: FALSE: Data Link Layer classification has not completed initialization. TRUE: Data Link Layer classification has completed initialization. 3. Delete aLldpXdot3LocReadyA and aLldpXdot3LocReadyB from Table 30-7. 4) Delete 30.12.2.1.18a aLldpXdot3LocReadyA content. 5) Delete 30.12.2.1.18b aLldpXdot3LocReadyB content. 6) In Table 145-50 page 222 in the PSE section: Change from "aLldpXdot3LocReadyA" to "aLldpXdot3LocReady" and from "pse_dll_ready_alt(X=A)" to "pse_dll_ready)". 7) In Table 145-50 page 222 in the PSE section: Delete "aLldpXdot3LocReadyB" and "pse_dll ready alt(X=B)".
	Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE. Adopt yseboodt_04_0917_LLDP.pdf (v153) This resolution is identical to comment #38.

Pa **226** Li **5**

C/ 145 SC 145.5.3.7.3 P 228 L 38 # [i-182	C/ 145 SC 145.5.3.7.4 P 229 L 5 # i-444
Yseboodt, Lennart Philips Lighting	Darshan, Yair
Comment Type ER Comment Status A Editorial TOPIC: and/or The Chicago Manual of Style says the following about the use of 'and/or': "Avoid this Janus-faced term. It can often be replaced by 'and' or 'or' with no loss in meaning. Where it seems needed, try 'or or both'. But also think of other possibilities."	Comment Type T Comment Status A Pres: Yseboods This comment is marked LLDP?_ADHOC_4. In the condition (!pd_dll_enable_mode(X) + !pd_dll_ready_mode(X)) to the IDLE state the pd_dll_ready_mode(X) need to be pd_dll_ready In order to allow progressing to the INITIALIZE state in case PD want power on the unpowered pairset. SuggestedRemedy
In the 'pd_power_review_mode(X)' function: "This function evaluates the power requirements of the PD based on local system changes and/or changes in the PSE allocated power value."	 Change from: "(!pd_dll_enable_mode(X) + !pd_dll_ready_mode(X))" To: (!pd_dll_enable_mode(X) + !pd_dll_ready) In page 228 line 28 to change the pd_dll_ready_mode(X) variable definition to: "pd_dll_ready
SuggestedRemedy "This function evaluates the power requirements of the PD based on local system changes or changes in the PSE allocated power value."	An implementation-specific control variable that indicates that the PD has initialized Data Link Layer classification. This variable maps into the aLldpXdot3LocReady attribute (30.12.2.1.20).
Response Response Status C ACCEPT.	Values: FALSE: Data Link Layer classification has not completed initialization. TRUE: Data Link Layer classification has completed initialization." 3) In Table 145-40 page 222, PD section: Change from "aLldpXdot3LocReadyA" to
C/ 145 SC 145.5.3.7.4 P 229 L 2 # i-443 Darshan, Yair	"aLldpXdot3LocReady" and from "pd_dll_ready_mode(X=A)" to "pd_dll_ready)". 4. In Table 145-40 page 222, PD section delete the row "aLldpXdot3LocReadyB", "pd_dll_ready_mode(X=B)"
Comment Type T Comment Status A Pres: Yseboodt4	Response Response Status C
This comment is marked LLDP?_ADHOC_3. In the LLDP adhoc we made some changes to the PD DLL state machine to reflect the changes made in the concept of how to fill in the TLV values of the pd_requested_power and pd_requested_power_mode(X) fields.	ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.
SuggestedRemedy	Adopt yseboodt_04_0917_LLDP.pdf (v153)
Adopt yseboodt_04_0917_LLDP.pdf	This resolution is identical to comment #38.
Response Response Status C ACCEPT IN PRINCIPLE. ACCEPT IN PRINCIPLE.	
Adopt yseboodt_04_0917_LLDP.pdf (v153)	
This resolution is identical to comment #38.	

Pa **229** Li **5**

-	15.5.4.1	P 230	L 36	# i-183		C/ 145	SC 145.5.4	.2	P 231	L 1	# i-184	
Yseboodt, Lennart		Philips Lighti	ng			Yseboodt,			Philips Lighti	ng		
Comment Type		nment Status A			Editorial	Comment	51		t Status A			ditorial
change in the P allocation, the lo PSE_POWER_ a new power allo the PD or if PSE_NEW_VAI MIRROR_UPD/ where PSE_NE PDRequestedP/ If the PSE's pre the PD to chang power allocation The PSE examines the re allocation value PSE_NEW_VAI PSE_NEW_VAI is assigned to P and returns to th	"During normal operation, the PSE is in the RUNNING state. If the PSE wants to initiate a change in the PD allocation, the local_system_change is asserted and the PSE enters the PSE_POWER_REVIEW state, where a new power allocation value, PSE_NEW_VALUE, is computed. If the PSE is in sync with the PD or if PSE_NEW_VALUE is smaller than PSEAllocatedPowerValue, it enters the MIRROR_UPDATE state where PSE_NEW_VALUE is assigned to PSEAllocatedPowerValue. It also updates PDRequestedPowerValueEcho and returns to the RUNNING state. If the PSE's previously stored MirroredPDRequestedPowerValue changes, a request by the PD to change its power allocation is recognized. It entertains this request only when it is in sync with the PD.					 "During normal operation, the PD is in the RUNNING state. If the PD's previously stored MirroredPSEAllocatedPowerValue is changed or local_system_change is asserted by the PD so as to change its power allocation, the PD enters the PD_POWER_REVIEW state. In this state, the PD evaluates the change and generates an updated power value called PD_NEW_VALUE. If PD_NEW_VALUE is less than PDMaxPowerValue, it updates PDMaxPowerValue in the PD_POWER_REALLOCATION1 state. The PD then finally enters the MIRROR_UPDATE state where PD_NEW_VALUE is assigned to PDRequestedPowerValue. It also updates PSEAllocatedPowerValueEcho and returns to the RUNNING state. In the above flow, if PD_NEW_VALUE is greater than PDMaxPowerValue, the PD waits until it is in sync with the PSE and the PSE grants the higher power value. When this condition arises, the PD enters the PD POWER_REALLOCATION2 state. In this state, the PD assigns PDMaxPowerValue to PDRequestedPowerValue and returns to the RUNNING state." 					the PD ON1 o to ss he	
Don't use the w	ord "state" whe	en using state name.				Suggestea						
SuggestedRemedy		Ū.				Replac	e 'the YYY sta	te' by 'YYY'.				
Replace 'the YY	Y state' by 'Y	ΥY'.				Response Response Status C						
Response	Resp	onse Status C				ACCE	PT.					
ACCEPT.						Cl 145 Lemahieu,	SC 145.7.3 Joris	.3	P 250 ON Semicon	L 16 iductor	# i-339	
						Comment Error	Type E	Commen	t Status A			PICS
						Suggested Chang		R2 applied' to "	Transient TR3 a	applied'.		
						Response		Response	Status C			

ACCEPT.

C/ 145A SC 145A.2 P 261 L 39 Yseboodt, Lennart Philips Lighting	# i-185	C/ 145A SC 145A.3 P 262 L 21 # i-445 Darshan, Yair
Comment Type E Comment Status A Rdiff is defined in equation 145A-3 but nowhere used. SuggestedRemedy Remove equation 145A-3 + the sentence above. Response Response Status C ACCEPT IN PRINCIPLE. Operation using 4-pair requires Rdiff to be less than 100 mO or Rch_ %, whichever results in the greater absolute unbalance. Rdiff is defin		Comment Type E Comment Status A Ann In the text "The end to end pair-to-pair effective current unbalance is equal" there is no need to use "effective for the current unbalance due to the fact that "current" is always effective value which is incorrect for resistance unbalance in which we use "effective resistance unbalance" Ann SuggestedRemedy Change from "The end to end pair-to-pair effective current unbalance is equal" To "The end to end pair-to-pair current unbalance is equal"
3. 2/ 145A SC 145A.2 P 262 L 14 Seboodt, Lennart Philips Lighting Comment Type E Comment Status A "NOTEEach conductor in this Figure is the equivalent of two conductor	# i-186 Annex	Response Response Status C ACCEPT IN PRINCIPLE. Change from "The end to end pair-to-pair effective current unbalance is equal" To "The end to end pair-to-pair current unbalance is equal" Also, editor to unify use of "end to end" and "end-to-end" throughout the draft.
It's a drawing of a resistor, not a conductor. SuggestedRemedy Change to: "NOTEEach resistor in this Figure represents two conductors of a para Response Response Status C ACCEPT.	air in parallel."	C/ 145A SC 145A.3 P 262 L 25 # i-187 Yseboodt, Lennart Philips Lighting Annotation Comment Type E Comment Status A Annotation "Current unbalance can occur in positive and negative powered pairs when a PSE uses all four pairs to deliver power to a PD." We use the terms 'source power' (7x) and 'deliver power' (2x). SuggestedRemedy Replace "deliver power" by "source power" in the quoted sentence. Posponeo Componeo Componeo
		Response Response Status C ACCEPT.

Pa **262** Li **25**

C/ 145A SC 145A.2 P 262 L 33 # [i-188 Yseboodt, Lennart Philips Lighting Philips Li	C/ 145A3 SC 145A3.1 P 262 L 51 # i-447 Darshan, Yair
Comment Type E Comment Status A Annex	Comment Type E Comment Status A Pres; Darshar
"Equation (145-15) is described in 145.2.8.5.1, specified for the PSE, assures that end to end pair-to-pair effective resistance unbalance will be met in the presence of all compliant unbalanced loads (Rload_min and Rload_max) attached to the PSE PI." Current unbalance should be met, not effective resistance unbalance.	In the text: "The effective resistance is the measured voltage Veff, divided by the current through the path e.g. the effective value of RPSE_min for i1 is RPSE_min=Veff1 / i1 as shown in Figure 145A-2.". The effective resistance of what?
SuggestedRemedy	SuggestedRemedy Change the mentioned text to (**):
Change to: "Equation (145-15) is described in 145.2.8.5.1, specified for the PSE, assures that pair-to- pair current unbalance requirements will be met in the presence of all compliant	"The effective resistance **Rpse_min or RPSE_max** is the measured voltage Veff, divided by the current through the path e.g. the effective value of RPSE_min for i1 is RPSE_min=Veff1 / i1 as shown in Figure 145A-2.
unbalanced loads (Rload_min and Rload_max) attached to the PSE PI."	Response Response Status C
Response Response Status C ACCEPT.	ACCEPT.
C/ 145A SC 145A.3 P 262 L 44 # [i-446 Darshan, Yair	
Comment Type T Comment Status A Annex	
In the text "If pair-to-pair balance is actively controlled in a manner that changes effective resistance to achieve balance, then the current unbalance measurement method described in 145.2.8.5.1 is suitable." the use of "suitable" is not sufficiently strong to say that there is not other choice in this use case but to use the method in 145.2.8.5.1. (by the way, the use of "should" is allowed and is being used more than 33 occurrences in 802.3bt)	
SuggestedRemedy	
Change from: "If pair-to-pair balance is actively controlled in a manner that changes effective resistance to achieve balance, then the current unbalance measurement method described in 145.2.8.5.1 is suitable."	
To: "If pair-to-pair balance is actively controlled in a manner that changes effective resistance to achieve balance, then the current unbalance measurement method described in 145.2.8.5.1 should be used."	

Response

Response Status C

ACCEPT.

Pa **262** Li **51**

C/ 145A3 SC 145 Parshan, Yair	3.2	P 262	L 52	# i-448	C/ 145A3 Darshan, Y	SC 145A3. air	2	P 263	L 5	#	i-449	
Comment Type T	Comment St	atus A		Pres: Darshan7	Comment	Гуре Т	Comment S	Status A			Pres: Darshan7	
is missing from 14	ocedure of the meas 45A.3	urements of I	Rpse_min and F	?pse_max	a) It ne	eds to be in s	some improvem ync with Figure 1 der to allow settin	45-22 regarding	the separation	of Rloa	d_min/max to	
 SuggestedRemedy Add the following text after line 54 in page 262: "Rpse_min and RPSE_max effective resistance verification procedure is described below: 1) With the PSE powered on and connected to a constant power sink in the PD section through the elements shown in Figure 145A-2, which is set to Pclass_PD measured at the PD PI, measure the currents i1, i2, i3 and i4 and the voltages Veff1, Veff2, Veff3 and Veff4. 						 its components in order to allow setting Pclass_PD at the PD PI. B) To describe the PSE load in a clear way. C) Adding the borders of the link section d) defining from what Rpse_min and Rpse_max consist of? e) Clear definition of the measurements point of Veff_i f) To correct the left border of the End to End pair to pair resistance arrow. 						
2) Calculate the RPSE_min and RPSE_max values of each pair of the same polarity by					Suggested	-				.,		
calculating the foll For the positive pa					•	e Figure 145A	-2 with the new		shan_07_0917.p	Ddf		
R1=RPSE_min=V	eff1/i1				Response		Response S	tatus C				
R2=RPSE_max=\ For the negative p					ACCE	PT IN PRINCI	PLE.					
R3=RPSE_min=V R4=RPSE_max=V	eff3/i3				Adopt yseboodt_02_0917_Figure_145_22.pdf							
3) Verify that on ea	ach pair of the same	polarity, RPS	SE_min and RPS	SE_max meets	This resolution is identical to comment #110.							
Equation 145-15. 4) Repeat steps 1 RCh_unb_max, R	to 3 with the RCh_ur PD_max. "	nb_min, RPD	_min swapped I	ocation with	C/ 145A Yseboodt, I	SC 145A.4 Lennart		P 263 Philips Lighting	L 32	#	i-189	
Response ACCEPT IN PRIN	Response Sta CIPLE.	atus C			Comment T Missing		Comment S en "(e.g. V f1 -V		on mode effectiv	re"	Editorial	
Add the following	ext after line 54 in pa	age 262:			Suggested	Remedy						
				ire is described below:	Add sp	ace.						
shown in Figure 14 currents i1, i2, i3 a 2) Calculate the R calculating the foll For the positive pa R1=RPSE_min=V	 With the PSE powered on and connected to a constant power sink through the elements shown in Figure 145A-1, which is set to Pclass_PD measured at the PD PI, measure the currents i1, i2, i3 and i4 and the voltages Veff1, Veff2, Veff3 and Veff4. Calculate the RPSE_min and RPSE_max values of each pair of the same polarity by calculating the following: For the positive pairs: R1=RPSE_min=Veff1/i1 R2=RPSE_max=Veff2/i2 		Response ACCEF	РТ.	Response S	tatus C						
R3=RPSE_min=V R4=RPSE_max=V 3) Verify that RPS	/eff4/i4	ax meets Eq	uation 145-15 o	n each pair of the same								
polarity. 4) Repeat steps 1 and RPD_max. "	to 3 with RCh_unb_r	min and RPD	_min exchanged	d with RCh_unb_max								
Delete Figure 145. 110.	A-2 and replace refe	rences with n	ewly introduced	figure from comment								

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Page, Line

Pa **263** Li **32** Page 132 of 134 9/15/2017 11:41:06 AM

ACCEPT IN PRINCIPLE. This comment of the comment is followed by staggered detection for a single-signature PD and parallel detection for a dual-signature PD." This comment was WITHDRAWN by the commenter. To: Connection Check is followed by staggered detection for a single-signature PD." This comment was WITHDRAWN by the commenter. This resolution is identical to comment #253. P 266 L 20 # i-190 Cl 145B SC 145B.1.2 P 266 L 20 # i-190 Yseboodt, Lennart Philips Lighting Philips Lighting Staggered power on" which is correct per the drawing description however per the definition of CC_DET_SEQ=1 for dual-signature in page 109 line 43, CC_DET_SEQ is about Connection check and detection sequences while if it is staggered power on or not in dual-signature PD, is not the main issue to emphasis. SuggestedRemedy Add space. SuggestedRemedy Add space. This result is dual, staggered detection and staggered power on"	<i>Cl</i> 145B <i>SC</i> 145B.1.1 Darshan, Yair	P 266	L 7	# i-450	C/ 145B SC 145B Darshan, Yair	P 267	L7	# i-451	
detection nor staggered power on. that the second alternative This drawing should be detected since it doesn't fit to the definition of CC_DET_SEQ=0 for dual-signature in page 109 line 41. that the second alternative SuggestedRemedy Options: Detect Figure 1455-3 since it doesn't fit the definitions in Page 109 line 41 for dual-signature. Detect Figure 1455-3 since it doesn't fit the definitions in Page 109 line 41 for dual-signature. 2. Update the definition for CC_DET_SEQ=0 for dual-signature to parallel and staggered detection nor a single-signature PD and parallel detection for a single-signature PD and parallel detection for a dual-signature PD. This comment was WITHDRAWN by the commenter. C/ 145B SC 145B.1.2 P 267 L 11 # [±452] Darshan, Yair Comment Yape SuggestedRemedy Comment Yape or Yape Yape Comment Yape A Builtistates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up time definition of CC_DET_SEQ=1, when the connection check result is single. The power up time and parallel or staggered detection for a single-signature PD. This the second alternative Made parallel Yape T Comment Yape T	Comment Type T	Comment Status A		Annex	Comment Type T	Comment Status D		Pres: Darshan11	
Suggested/Reindey points: 1. Delete Figure 145-3 since it doesn't fit the definitions in Page 109 line 41 for dual- signature. 2. Update the definition for CC_DET_SEQ=0 for dual-signature to parallel and staggered detection and verify that state machine support it. Suggested/Reindey Response Response Status C ACCEPT IN PRINCIPLE. Change "Connection Check is followed by staggered detection for a dual-signature PD." This comment was WITHDRAWN by the commenter. C/ 145B SC 145B.1.2 P 266 L 20 # [+190] The resolution is identical to comment #253. Comment Type E Comment Status A Editorial Concection Check is single. The power up timing may not be aligned as shown in the Figure." Space missing between the two sentences. Editorial Editorial Suggested/Reinedy Add space. Response Status C C_DET_SEQ=1, do_cxn_chk result is dual, staggered power on" Suggested/Reinedy Suggested/Reinedy Adceptore Response Status C Response Response Status Z Response Response Status Z	detection nor staggered This drawing should be	d power on. deleted since it doesn't fit to			that the second alter DETECTION starts limited just to this us	native only after the Power up of the se case. The detection can sta	primary alternativ arts also after the	ve which is OK but not detection of the primary	
 1. Delete Figure 145-3 since it doesn't fit the definitions in Page 109 line 41 for dual-signature. 2. Update the definition for CC_DET_SEQ=0 for dual-signature to parallel and staggered detection and verify that state machine support it. Response Response Status C ACCEPT IN PRINCIPLE. Change "Connection Check is followed by staggered detection for a single-signature PD." This resolution is identical to comment #253. C/ 145B SC 145B.1.2 P 266 L 20 # 190 Yeboodt, Lennart Philips Lighting Comment Type E Comment Status A Editoriat "Figure 145B-4 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check and detection sequences while if it is staggered power on" which is sorrect per the drawing description however per the definition of CC_DET_SEQ=1 to dual-signature PD, is not the main issue to emphasis. SuggestedRemedy Add space. Response Response Status C ACCEPT. 							g (143-0A), of ula	wing that shows all	
detection and verify that state machine support it. Proposed Response Response Status C Response Response Status C Response Status C ACCEPT IN PRINCIPLE. This comment was WITHDRAWN by the commenter. Change "Connection Check is followed by staggered detection for a single-signature PD." This comment was WITHDRAWN by the commenter. C1 145B SC 145B.1.2 P 266 L 20 # [190] This resolution is identical to comment #253. Comment Type E Comment Status D Pres: Darshan11 The title of Figure 145B-6 is "Figure 145B-6-PSE implementing CC_DET_SEQ=1, do_cxn_chk result is dual, signature PD, is not the main issue to emphasis. SuggestedRemedy Ysepoost, Lennart Philips Lighting Editorial "Figure 145B-4 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up timing may not be aligned as shown in the Figure." SuggestedRemedy Add space. Response Status C Response Status C Response Response Status C Response Status Z Response Response Status C Response Status Z ACCEPT. Proposed Response Response Status Z	1. Delete Figure 145-3 signature.		0		,	0917.pdf			
Response Response Status C ACCEPT IN PRINCIPLE. Change "Connection Check is followed by staggered detection for a single-signature PD." This connection Check is followed by staggered detection for a single-signature PD and parallel or staggered detection for a dual-signature PD." This connection Check is followed by staggered detection for a single-signature PD and parallel or staggered detection for a dual-signature PD." This connection Check is followed by staggered detection for a single-signature PD and parallel or staggered detection for a dual-signature PD." This connection Check is followed by staggered detection for a single-signature PD. This connection Check is followed by staggered detection for a single-signature PD and parallel or staggered detection for a dual-signature PD." This connection Check is followed by staggered detection for a dual-signature PD. This connection Check is followed by staggered detection for a dual-signature PD. This connection Check is followed by staggered detection for a single-signature PD. CI 145B SC 145B.1.2 P 266 L 20 # i_190 Yseboodt, Lennart Philips Lighting Staggered power on" which is correct per the drawing description however per the definition of CC_DET_SEQ=1 when the connection check and detection sequences while if it is staggered power on or not in dual-signature PD, is not the main issue to emphasis. SuggestedRemedy Add space. SuggestedRemedy Suggered detection and staggered power on" Add space. Response Status C DC_DET_			al-signature to	parallel and staggered		Response Status Z			
Change "Connection Check is followed by staggered detection for a single-signature PD." To: Connection Check is followed by staggered detection for a single-signature PD and parallel or staggered detection for a dual-signature PD." C/ 145B SC 145B.1.2 P 267 L 11 # [452] This resolution is identical to comment #253. C/ 145B SC 145B.1.2 P 266 L 20 # [i-190] Yseboodt, Lennart Philips Lighting Editorial "Figure 145B-6 in Status A Editorial "Figure 145B-6 in Status a PSE implementing CC_DET_SEQ=1 when the connection check and detection sequences while if it is staggered power on or not in dual-signature in page 109 line 43, CC_DET_SEQ=1, do_cxn_chk result is single-sequences while if it is staggered power on or not in dual-signature PD, is not the main issue to emphasis. SuggestedRemedy Add space. Response Response Status C Response Status C Response Response Status C Response Status C Response Status C ACCEPT. Response Status C Response Status C Response Status C	Response	Response Status C			REJECT.				
and parallel detection for a dual-signature PD." Darshan, Yair To: Connection Check is followed by staggered detection for a single-signature PD and parallel or staggered detection for a dual-signature PD." Darshan, Yair This resolution is identical to comment #253. C/ 145B SC 145B.1.2 P 266 L 20 # i 190 Pres: Darshan11 Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A Editorial "Figure 145B-64 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up timing may not be aligned as shown in the Figure." Space missing between the two sentences. Suggested/Remedy Add space. Suggested/Remedy Add space. Response Status C Response Status C Proposed Response Status Z Response Response Status C Response Status C Response Status Z Response Status Z Response Response Status C Response Status C Response Status Z	ACCEPT IN PRINCIPL	E.			This comment was WITHDRAWN by the commenter.				
This resolution is identical to comment #253. Cl 145B SC 145B.1.2 P 266 L 20 # [-190] Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A "Figure 145B-4 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up timing may not be aligned as shown in the Figure." Space missing between the two sentences. SuggestedRemedy Add space. Response Response Status C ACCEPT. Comment Status C	and parallel detection f To: Connection Check	or a dual-signature PD." is followed by staggered dete	ection for a sing	0 0	Darshan, Yair		L 11		
CI 145B SC 145B.1.2 P 266 L 20 # [-190] Yseboodt, Lennart Philips Lighting Comment Type E Comment Status A Editorial "Figure 145B-4 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up timing may not be aligned as shown in the Figure." Space missing between the two sentences. SuggestedRemedy Add space. Response Response Status C Response Response Status C Response Response Status C ACCEPT. Response Response Status C Response Response Status C		-	0.		The title of Figure 14 do_cxn_chk result is	I5B-6 is "Figure 145B-6PSE dual,		C_DET_SEQ=1,	
"Figure 145B-4 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up timing may not be aligned as shown in the Figure." SuggestedRemedy SuggestedRemedy Add space. "Figure 145B-6PSE implementing CC_DET_SEQ=1, do_cxn_chk result is dual, staggered power on" Response Response Status C Proposed Response Response Status C ACCEPT. REJECT. REJECT. REJECT. Response Status C	Yseboodt, Lennart	Philips Lightin	-		of CC_DET_SEQ=1 for dual-signature in page 109 line 43, CC_DET_SEQ is about Connection check and detection sequences while if it is staggered power on or not in dual-				
Inglete 140D 4 initialities at YOL implementing OO_DET_OEQL 1 when the connection of check result is single. The power up timing may not be aligned as shown in the Figure." Space missing between the two sentences. SuggestedRemedy Add space. Add space. Figure 145B-6PSE implementing CC_DET_SEQ=1, do_cxn_chk result is dual, staggered power on" Response Response Status C Proposed Response Response Status C Proposed Response Response Status Z ACCEPT. REJECT.	"Figure 145B-4 illustrates a PSE implementing CC_DET_SEQ=1 when the connection check result is single. The power up timing may not be aligned as shown in the Figure."				SuggestedRemedy				
SuggestedRemedy To : "Figure 145B-6PSE implementing CC_DET_SEQ=1, do_cxn_chk result is dual, staggered detection and staggered power on" Add space. Response Status C Response Response Status C ACCEPT. Proposed Response Status Z REJECT. REJECT.					"Figure 145B-6PSE implementing CC_DET_SEQ=1, do_cxn_chk result is dual,				
ACCEPT. REJECT.	,				To : "Figure 145B-6	PSE implementing CC_DET	_SEQ=1, do_cxn	_chk result is dual,	
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This comment was WITHDRAWN by the commenter.	ACCEPT.				REJECT.				
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Pa **267** Li **11**

Comment Type T Comment Status D Annex The title of Figure 145B-9 is "Figure 145B-9PSE implementing CC_DET_SEQ=2, do_cxn_chk result is dual, staggered power on" which is correct per the drawing description however per the definition of CC_DET_SEQ=2 for dual-signature in page 109 line46, CC_DET_SEQ is about Connection check and detections sequences while if it is staggered power on or not in dual-signature PD, is not the main issue to emphasis. Comment Type T Comment Type Comment Type Comment Type T Comment Type T Comment Type Comment Type T Comment Type E Comment Type T Comment Type E Comment Type	C/ 145B SC 145B.1.3 P 268 L 13 # [i-453] Darshan, Yair	C/ 145B SC 145B.1.4 P 268 L 268 # <u>i-455</u> Darshan, Yair
This generation and energine prior and Proposed Response Response Status Z REJECT. This comment was WITHDRAWN by the commenter. C/ 145B SC 145B.1.4 P 268 L 46 # i-454 Corrent Type T Comment Status D Pres: Darshan8 The title of Figure 145B-11 is "Figure 145B-11-:PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual", missing the remain fact that it is staggered detection per the definition of CC_DET_SEQ=3 for dual-signature in page 109 line 48. SuggestedRemedy Change the title of Figure 145B-9 from : "Figure 145B-11-:-PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual", To : "Figure 145B-11-:-PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual", To : "Figure 145B-11-:-PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual", To :: This comment was WITHDRAWN by the commenter.	The title of Figure 145B-9 is "Figure 145B-9PSE implementing CC_DET_SEQ=2, do_cxn_chk result is dual, staggered power on" which is correct per the drawing description however per the definition of CC_DET_SEQ=2 for dual-signature in page 109 line46, CC_DET_SEQ is about Connection check and detection sequences while if it is staggered power on or not in dual- signature PD, is not the main issue to emphasis. SuggestedRemedy Change the title of Figure 145B-9 from : "Figure 145B-9PSE implementing CC_DET_SEQ=2, do_cxn_chk result is dual, staggered power on" To : "Figure 145B-9PSE implementing CC_DET_SEQ=2, do_cxn_chk result is dual,	CC_DET_SEQ=3 means: Connection check is followed by staggered detection. Figure 145B-11 for dual-signature PD shows that CC_DEC_SEQ=3 is only possible when the Detection of the 2nd pairset starts after Tpon +Tx of 1st pairset which is possible but not the only possibility per CC_DET_SEQ=3 definition. We need clearly to show that first we see CC, and then staggered detection, and then the classification and power_on can be staggered or not. We need to add Figure 145B-11A to show this possibility that shows all possibilities. SuggestedRemedy Adopt darshan_08_0917.pdf Proposed Response Response Status Z
Cl 145B SC 145B.1.4 P 268 L 46 # i-454 Darshan, Yair Comment Type T Comment Status D Pres: Darshan8 The title of Figure 145B-11 is "Figure 145B-11PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual", missing the remain fact that it is staggered detection per the definition of CC_DET_SEQ=3 for dual-signature in page 109 line 48. SuggestedRemedy Change the title of Figure 145B-9 from : "Figure 145B-11PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual" To : "Figure 145B-11PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual,"	REJECT.	C/ 145B SC 145B.3 P 270 L 42 # 1-191
Pronosed Response Response Status 7	Darshan, Yair Comment Type T Comment Status D Pres: Darshan8 The title of Figure 145B-11 is "Figure 145B-11PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual", missing the remain fact that it is staggered detection per the definition of CC_DET_SEQ=3 for dual-signature in page 109 line 48. SuggestedRemedy Change the title of Figure 145B-9 from : "Figure 145B-11PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual" To : "Figure 145B-11PSE implementing CC_DET_SEQ=3, do_cxn_chk result is dual, staggered detection and staggered power on"	Comment Type E Comment Status A Editor "PD may switch current level to class_sig_0 if it requests Autoclass PD to maintain class signature '0' if it requests Autoclass for the duration of the class event Quotes around 0 are not needed. SuggestedRemedy Change to: "PD may switch current level to class_sig_0 if it requests Autoclass PD to maintain class signature 0 if it requests Autoclass PD to maintain class signature 0 if it requests Autoclass PD to maintain class signature 0 if it requests Autoclass PD to maintain class signature 0 if it requests Autoclass for the duration of the class event Response Response Status
Proposed Response Response Status Z REJECT.		

Pa **270** Li **42**