CI 33	SC	33.2.0a	P 25	L 1	# 251		C/ 33	SC	33.2.4.4	P 34	L 40	# 246
Schindle	r, Fred		Seen Simply				Schindler,	Fred		Seen Simply		
Comme	nt Type	TR	Comment Status D			4PID	Comment	Туре	TR	Comment Status D		PSE State Diagram
New "2-P	sentenc air opera	e, tion allowe	d if PSE is supplying Class 4	t power or less	."		New v power standa	variable r one pa ard did i	both_alts_ airset wher not have a	valid appears to be incomple a valid detection signature is variable to indicate a valid P	ete. Some P s present. N D detection s	SE implementations will ote that the legacy signature.
Is in	complete	and shoul	d be improved. Legacy PDs	may only be p	owered on all pai	r sets	Suggeste	dReme	dy			
Suaaest	edReme	dv	chance as being supusie of t	loooping powe	or an pair octo.		This v	ariable	should be	replaced by do_detection ad	justments pr	ovided in the comment
Rep "Pov sect	lace the s vering of ion 33.2.3	sentence w both pair s 5.6 have be	<i>r</i> ith, sets is allowed for Type 1 or 2 een met. Type 1 or 2 PDs m	2 PDs when the	e requirements of I using one pair s	et."	Proposed PROF	Respor POSED	nse ACCEPT	Response Status W IN PRINCIPLE.		
Propose	d Respoi	nse	Response Status W				OBE	by comi	ment # 229	9		
This	goes ald	ong with so	me of the 4PID discussion w	e need to have	9.		CL 22	sc	33 2 4 4	D 25	/ 10	# 254
CI 33	SC	33.2.0a	P 25	L 1	# 261		Darshan,	Yair	55.2.4.4	Microsemi	L 19	# 334
Dwelley,	David		Linear Techno	logy			Comment	Tvpe	TR	Comment Status D		4PID
Commen Note falls pair plac	at Type 4 doesn into row power to e for it.	ER I't add any 4 which all 2-pair pow	Comment Status D information. Class 4 power of ows 2-pair power. If we're try ver is compliant behavior, that	or less is alway ring to ensure t t's OK - but thi	s 30W or less, wh hat falling back fr s note is not the r	<i>4PID</i> nich om 4- ight	The m ID me The te "It is i	naintain echanisr ext says nitially s	_4pair_po ns. :: set to the v	wer signature current text blo ralue of pd_4pair_candidate"	cks us to imp	blement more reliable 4P-
Suggest		dy A					The "i	s" shou	ld be repla	aced with "may"		
Propose PRC	d Respoi POSED	nse REJECT.	Response Status W				Suggester Repla "It is i	dRemed .ce: nitially s	<i>dy</i> set to the v	value of pd_4pair_candidate"		
This wou	note doe Id like it r	es address emoved, p	that 2-pair power is complian lease suggest an alternate p	nt if the power lace to make tl	is less than 30W. nat clarification.	lf you	To: "It ma	y initiall	y set to the	e value of pd_4pair_candidate	9"	
							Proposed PROF	Respoi POSED	nse ACCEPT	Response Status W IN PRINCIPLE.		
							Repla "It is i	ce: nitially s	set to the v	value of pd_4pair_candidate"		
							To: "It ma	y initiall	y be set to	the value of pd_4pair_candio	date"	

C/ 33 SC 33.2.4.4 Page 1 of 12 6/17/2015 5:21:57 PM

Cl 33	SC 33.2.4.4	P 35	L 20	# 129		C/ 33	SC :	33.2.4.4	Р	35	L 6	# 321	
Johnson,	, Peter	Sifos Techn	ologies			Darshan, Y	'air		Micr	osemi			
Commen	nt Type T	Comment Status D			4PID	Comment 7	Гуре	TR	Comment Status	5 D			4PID
The seven class As th "ven signa won't	state machine vari tts including LLDP s power draw (pow his is an interopera dor discretion"? F ature (or dual load) t happen?	able "maintain_4pair_powe message (e.g. "PD does no er policing to class?), and " bility specification, how is a for example, if a PSE can r PD, how does the PD des	r" can be reset as of want 4-pair pow vendor discretion PD designer to k emove power fron igner know to des	a result of 3 possib rer"), enforcement o '. now what constitute n some flavor of dua ign a PD where this	ole f es al	In the f PD_4p This va a candi the phr The va with 4F	ollowing air_can ariable i idate to rase "a riable F power	g variable: didate s provided receive p connectior PD_4pair_c	for Type 3 and Ty ower on both pair n" is not clear. candidateIt is to de	pe 4 PSE sets. termine if	s to determine a class 0-4 PD	whether a connectio	on is ork
Furth	nermore, there is n	o possible recipe by which	to verify the integ	rity of the PSE's		The tex	kt "a co	nnection" o	can be "a PD" or "	a device" (or "a PD class ()-4".	
decis faulty	sion nor is there or y processing of an	Network the power MPS or overload type of sh	emoval from wha utdown.	t might otherwise be	ea	Suggested	Remed	y nnootion" :	with "o DD close 0	4 "			
Suggeste	edRemedy					Replac	e a co	nnection	with "a PD class u	-4			
Eithe more	er remove "vendor e detailed criteria is advisable	at a ng is	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.										
Proposed	d Response	Response Status W				Need to see associated state diagram and where/how this variable is used.							
PRO	POSED ACCEPT					See comment # 225							
1110						000 00	minem	# 225.					
Add	"Vendor discretion	needs explanation." to end	o of editor's note.			No cha	inges to	o the text a	are required at this	time.			
						CI 33 Schindler, I	SC: Fred	33.2.4.4	P See	35 n Simply	L 7	# 224	
						Comment 7 This te	<i>Type</i> xt used	TR may conf	Comment Status	D What this v	ariable accomp	olishes.	4PID
						Suggested Strike t	<i>Remed</i> text, "is	y used to do	o physical layer 4F	ID".			
						Proposed F	Respon	se	Response Status	w			

C/ 33 SC 33.2.4.4

C/ 33 SC 33.2.4.4 Darshan, Yair	P 36 Microsemi	L 11	# 363	<i>CI 33 Darshan, Y</i>	SC 33.2.4 air	.4	P 37 Microsemi	L 9	# 324
Comment Type TR The text " for PSEs th " is not accurate. It should be (adding the " for PSEs that monit It is with sync to lines 1 SuggestedRemedy Repalce The text " for information" with: " for PSEs that monit Proposed Response PROPOSED REJECT.	Comment Status D hat monitor the per pair set v e word "only"): or only the per pair set voltag 3-14 that means the same a r PSEs that monitor the per p or only the per pair set voltag <i>Response Status</i> W	oltage output an ge output and u und use the word pair set voltage ge output and u	PSE State Diagram ad use that information se that information" d "only" as well. output and use that se that information"	Comment T At the s pair-se As a re Suggested Chang A varia 33.2.7. To: A varia conditio	Type TR system level ts. sult, the varia Remedy e from: ble indicating 6) for" ble indicating on (see 33.2.	Comme we need to know able ovld_dete if the PSE ou if the PSE ou 7.6) for" Respons	nt Status D ow if we have over cted text need to tput current has to tput current over te Status W	er load conditior be updated. been in an overl a pair-set has b	PSE State Diagram n over a pair set, for both load condition (see
This is existing text and This could be filed as a	I should not be changed unle maintenance request.	ess we change	t for 4P or HP operation.	CI 33 Schindler, I	SC 33.2.4 Fred	.4	P 39 Seen Simply	L 3	# 227
Cl 33 SC 33.2.4.4 Dwelley, David Comment Type T Add "on at least one pa SuggestedRemedy Add "on at least one pa Proposed Response PROPOSED ACCEPT Also replace all VPort_	P 37 Linear Techn Comment Status D irset" to the end of the "TRU irset" to the end of the "TRU <i>Response Status</i> W IN PRINCIPLE. PSE references to Vport_PS	<i>L</i> 4 ology JE" value definit JE" value definit SE-2P.	# 2 <u>68</u> <i>PSE State Diagram</i> ion	Comment T Table 3 reader. Suggested On pag "See 3 permut "See 3 be TRU Note al not ado Proposed F PROPO	Type ER B3-3 column p Remedy Je 38, line 8 r 3.6 for a desc ations of this 3.6 for a desc JE for Type 2 I occurrences bressed by the Response DSED ACCE	Comme ose_dll_capab eplace text, rription of Data variable with f rription of Data PSEs with cla s of Table 33-3 is comment. <i>Respons</i> PT.	nt Status D le may be replace a Link Layer funct PSE Type and cla a Link Layer funct ass_num_events 8 were considered be Status W	ed by text for ea ionality and Tat ass_num_event ionality. Variab of 1." d when creating	PSE State Diagram usier processing by the ble 33-3 for the allowed s." With le pse_dll_capable shall this solution. PIC text is

C/ 33 SC 33.2.4.4

CI 33	SC 33.2.4.6	P 40	L 52	# 186		C/ 33	SC :	33.2.4.6	P	41	L 48	# 229
Zimmerma	in, George	CME Consultin	g			Schindler, Fre	ed		See	n Simply		
Comment	Type TR	Comment Status D		PSE State Diag	gram	Comment Typ	be	TR	Comment Statu	s D		PSE State Diagram
do_cor occur p Task F place l	nnection_check prior to classifica Force has been o left is to put it ins	needs a home in the state diag ation. It also shouldn't happen a clear that it doesn't want conne side the "DO_DETECT" state in	gram. According significantly before the ction check pine a parallel with de	g to 33.2.5.0a it has ore detection. The ned down, so the or o detection (but not	i to nly	Function one pairs respect to	do_c et wh o PSI	detection a hen a valic E behavio	appears to be incond d detection signatu or.	nplete. So re is prese	ome PSE imple nt. The text sh	mentations will power ould be written with
include	ed in do_detection	on).				SuggestedRe	emed	ly h the Dor				
Suggested	IRemedy					"valid A:	"valic The	PSE has	E has detected a F detected a valid Pl	D requesti	ng power." Wit	n ALT A.
add "d	o_connection_c	heck" to state START_DETEC	T in Figure 33-9	9a.		valid_B: 1	The F	PSE has d	detected a valid PD	detection	signature on po	ower on ALT B.
Proposed I PROP	Response OSED ACCEPT	Response Status W				Valid_AB ALT B."	: Th€	e PSE has	s detected a valid F	D detectio	n signature on	power on ALT A and
We ne would	ed to add it to th require you to fi	ne state diagram for Types 3 an nish detection and the connect	nd 4, but adding ion check within	it to Start_Detection tdet.	n	Strike out "both_alts both pair	t text s_val	, lid:A Type "	e 3 or Type 4 PSE I	nas detecte	ed a PD reques	ting power on
We ne	ed to create a T	ype 3 and 4 state diagram that	considers thes	e issues.		both pair	3013.	•				
Accept	ting this comme	nt results in no changes to the	text.			Text, "This vari "This vari	iable	indicates	the presence or al	osence of a	PD." Should b	be replaced by
See co	omment # 225.					THIS VAL	aule	muicales	the presence of a			cuon signature.
						 Flag this	comi	ment with	FRS-2			
						Proposed Re	spon	ise	Response Status	w		
						PROPOS	SED /	ACCEPT I	IN PRINCIPLE.			
						Replace ' "valid: Th PSEs. valid_A: T Type 3 ar valid_B: T Type 3 ar valid_AB: ALT B. U	"valic he PS The F nd Ty The F nd Ty : The sed o	d: The PSE BE has det PSE has d ype 4 PSE PSE has d ype 4 PSE PSE has only by Ty	E has detected a F tected a PD reques detected a valid PD Es. detected a valid PD Es. detected a valid P s. detected a valid P ype 3 and Type 4 P	D requesti sting power detection detection D detection SEs."	ng power." With . Used only by signature on Al signature on Al n signature on J	h: / Type 1 and Type 2 LT A. Used only by LT B. Used only by power on ALT A and
						Strike out "both_alts both pair Text,	t text s_val sets.	i, lid:A Type ."	9 3 or Type 4 PSE I	nas detecte	ed a PD reques	ting power on
						"This vari "This vari	iable iable	indicates indicates	the presence or all the presence of the presen	osence of a osence of a	a PD." Should b a valid PD deteo	e replaced by ction signature."
TYPE: TR/ COMMENT	/technical require T STATUS: D/di	ed ER/editorial required GR/g spatched A/accepted R/reject	eneral required ted RESPON	T/technical E/edito	orial G/gen en W/writte	neral en C/closed Z	ː/with	ndrawn		CI 33 SC 33.	2.4.6	Page 4 of 12 6/17/2015 5:21:57 PM

SORT ORDER: Clause, Subclause, page, line



C/ 33 SC 33.2.4.6

C/ 33	SC 33.2.4.6	P 42	L 41	# 187	C/ 33	SC	33.2.4.7	P 45	<i>L</i> 1	# 312
Zimmerma	an, George	CME Consulti	ng		Picard, Je	an		Texas Ins	struments	
Comment	Type TR	Comment Status D		PSE State Diagram	Comment	Туре	TR	Comment Status D		PSE State Diagra
Text h there	nas become conve are the PSE Type	oluted. There is the PSE Type requirements that the PSE is	be, then there is applying, the	is the PD Type, then en there are missing	the st requir	ate diag ed befo	gram does ore I will rev	not cover Type 3 and Ty view it.	ype 4 PSEs and th	at a replacement is
words	s, and the fact that	t PSEs don't "choose", having	g the option 'm cripte	iay' is enough.	Suggeste	dReme	dy			
Note i	Terriedy uses _su		unpts.		New	Гуре 3-	4 state dia	gram to be provided.		
In the	process the text	has gotten wrong as well, e.g	., a PSE shou	Idn't be supplying Ptype	Proposed	Respo	nse	Response Status W		
greate	er than the PD typ	be allows			PROF	POSED	ACCEPT	IN PRINCIPLE.		
Suggester	dRemedy				T L - F			will be left an en fan an e	and the design of	
Rewri "Whe	te. Replace parag	graph with proposed text belo	W: Type sub Pl) than its own native	The F	SE Sta	ite diagram	will be left open for con	nment in the next of	comment cycle.
type (Type_sub_PSE),	the PSE shall meet the PI el	ectrical require	ements of the PD Type	See c	commer	nt # 225.			
(Туре	_sub_PD), excep	t for ICon-2P, ILIM-2P, TLIM-	2P, and PTyp	e, for which the PSE	A	ating this		t requite in no changes t	to the text	
snall r Type	sub PSE.	nents of any PSE type Type_	_SUD_PD <= P	SE Type <=	Acce	bung in	is commen	t results in no changes i	lo lhe lexi.	
Proposed	Response	Response Status W			C/ 33	SC	33.2.4.7	P 45	<i>L</i> 1	# 233
PROF	POSED ACCEPT.				Schindler	Fred		Seen Sin	nply	
					Comment	Туре	TR	Comment Status D		PSE State Diagra
CI 33	SC 33.2.4.6	P 42	L 42	# 147	The S	State Di	agram prov	vided in Figure 33-9a wa	as created to be ea	sier to follow than the
Nalker, D	ylan	Cisco			existii PSEs	ng appr	oach. The	existing approach takes takes 5 pages and d	s two pages to cov loes not vet cover	er Type 1 and Type 2
Comment	Type ER	Comment Status D		PSE State Diagram	poten	tially ot	her necess	ary requirements.		
"The I TLIM- and g	PSE may choose 2P, and PType (s reater than equal	to apply the electrical require see Table 33-11) of any Type to the PD Type."	ements for ICo lower than or	n-2P, ILIM-2P, equal to the PSE Type	Other to cor	approa	aches shou on a solutio	Id be considered and th on for Type 3 and Type 4	e suggested appro 4 PSEs.	bach should be discussed
Minnin		this name and is alt as a differen	n an tha Eslitar	la Nata annual	Suggeste	dReme	dy			
IVIISSI	ng or, assuming	this paragraph isn't modified	per the Editor	s note anyway.	For a	ll past F	PoE efforts	Task Force meeting tin	ne was devoted to	discussing and refining
Suggester	dRemedy				state	diagran	ns. I recon	nmend that this approad	ch is also taken du	ring .3bt meetings and
" I he I TI IM-	PSE may choose	to apply the electrical require see Table 33-11) of any Type	ements for ICo	n-2P, ILIM-2P, equal to the PSE Type	that w	/e provi	de time for	others to present altern	ative approaches	to solving this problem.
and g	reater than or equ	ual to the PD Type."			Proposed	Respo	nse	Response Status W		
Proposed	Response	Response Status W			PROF	POSED	ACCEPT	IN PRINCIPLE.		
PROF	POSED ACCEPT	IN PRINCIPLE.			No ch	anges	to the text	result from accepting thi	is comment.	
Possi	ble OBE by comn	nent # 187				3				

CI 33 SC 33.2.4.7 PSE State Diagram

PSE State Diagram

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SC 33.2.5.6

~ ~	00.00.0		D 45	1.0	"	
	SC 33.2	.4.7	P 45	L 8	# 34	CI 33 S
YSEDOOD	t, Lennart		Philips			Darsnan, Yair
Commen	t Type E	Comm	ient Status D		PSE State Diagram	Comment Type
Most	of the state r	names have ar	abbreviated name		s complexity.	Adressing
Suggest	Lopecia Domodu	ily the abbrevia			nighty confusing.	candidate
Suggeste	a nome for e	atota and da n	at abbraviata			Does it me
PICK	1 name for a	state and do n	tot appreviate.			apply 2P c
Proposed	l Response	Respor	nse Status W			Suggested Per
PRO	POSED ACC	EPI.				Add note :
CI 33	SC 33.2	.4.7	P 45	L 8	# 35	Note: App
Ysebood	t, Lennart		Philips			pair set is
Commen	t Type E	Comm	ient Status D		PSE State Diagram	
The	overview diag	ram should no	ot mix container box	es for sub state	e machines with actual	Proposed Res
state	s.					PROPOSE
Suggeste	edRemedy					Add Editor
Only	show contair	er boxes (dasl	hed) in the overview	v and the detail	s go in the sub state	"Editor's N
macr	nines.	_	_			single and
Proposed	l Response	Respor	ise Status W			
PRO	POSED ACC	EPT.				
() 22						C/ 33 S
0 33	SC 33.2	.4.7	P 47	L 1	# 232	C/ 33 S Thompson, Ge
Schindler	SC 33.2 , Fred	.4.7	P 47 Seen Simply	<i>L</i> 1	# 232	C/ 33 S Thompson, Ge Comment Type
Schindler Commen	SC 33.2 ; Fred <i>t Type</i> TR	. 4.7 Comm	P 47 Seen Simply	L 1	# 232	CI 33 S Thompson, Ge Comment Type I have no i
Schindler Commen The s	SC 33.2 , Fred <i>t Type</i> TR state diagram	.4.7 Comm	P 47 Seen Simply tent Status D qure 33-9a does no	L 1	# 232 PSE State Diagram 3 and Type 4 PSE	CI 33 S Thompson, Ge Comment Typ I have no i SuggestedRer
Schindler Commen The s requi	SC 33.2 ; Fred <i>t Type</i> TR state diagram rements. It is	.4.7 Comm provided in Fi not suppose	P 47 Seen Simply nent Status D gure 33-9a does no to include Type 1 a	L 1 at include Type nd Type 2 requ	# 232 PSE State Diagram 3 and Type 4 PSE irrements. It appears to	CI 33 S Thompson, Ge Comment Type I have no i SuggestedRer Remove th
Schindler Commen The s requi only s	SC 33.2 ; Fred t Type TR state diagram rements. It is show Type 1	4.7 Comm provided in Fi s not suppose and Type 2 red	P 47 Seen Simply nent Status D gure 33-9a does no to include Type 1 a quirements.	L 1 ot include Type nd Type 2 requ	# 232 PSE State Diagram 3 and Type 4 PSE irements. It appears to	Cl 33 S Thompson, Ge Comment Type I have no i SuggestedRer Remove th Proposed Res
Cr 33 Schindler Commen The s requi only s Suggeste	SC 33.2 r, Fred t Type TR state diagram rements. It is show Type 1 edRemedy	4.7 Comm provided in Fi s not suppose and Type 2 red	P 47 Seen Simply nent Status D gure 33-9a does no to include Type 1 a quirements.	L 1 ot include Type nd Type 2 requ	# 232 PSE State Diagram 3 and Type 4 PSE hirements. It appears to	Cl 33 S Thompson, Ge Comment Typ I have no SuggestedRer Remove th Proposed Res PROPOSI
Cr 33 Schindler Commen The s requi only Suggeste Rem	SC 33.2 ; Fred t Type TR state diagram rements. It is show Type 1 edRemedy ove the state	4.7 Comm provided in Fi s not suppose and Type 2 red diagram on pa	P 47 Seen Simply nent Status D gure 33-9a does no to include Type 1 a quirements.	L 1 ot include Type nd Type 2 requ	# 232 PSE State Diagram 3 and Type 4 PSE irements. It appears to	Cl 33 S Thompson, Ge Comment Type I have no i SuggestedRer Remove th Proposed Res PROPOSE
Schindler Commen The s requi only Suggeste Rem "Editt partic	SC 33.2 r, Fred t Type TR state diagram rements. It is show Type 1 edRemedy ove the state or's Note: The cipants are er	4.7 provided in Fi not suppose and Type 2 rea diagram on pa e state diagram icouraged to p	P 47 Seen Simply nent Status D igure 33-9a does no to include Type 1 a quirements. ages 47-49 and rep n for Type 3 and Ty rovide presentation	L 1 bt include Type nd Type 2 requilace with, pe 4 PSEs nee is to address th	# 232 PSE State Diagram 3 and Type 4 PSE irements. It appears to eds further study and is need."	Cl 33 S Thompson, Ge Comment Type I have no i SuggestedRen Remove th Proposed Res PROPOSE Better lang be change
Schindler Commen The s requi only s Suggeste Rem "Editu partic Proposed	SC 33.2 r, Fred t Type TR state diagram rements. It is show Type 1 edRemedy ove the state or's Note: The cipants are en d Response	4.7 provided in Fi not suppose and Type 2 red diagram on pa state diagram icouraged to p Bespor	P 47 Seen Simply nent Status D igure 33-9a does no to include Type 1 a quirements. ages 47-49 and rep n for Type 3 and Ty rovide presentation ase Status W	L 1 ot include Type nd Type 2 requilace with, pe 4 PSEs nee is to address th	# 232 PSE State Diagram 3 and Type 4 PSE irrements. It appears to eds further study and is need."	Cl 33 S Thompson, Ge Comment Type I have no i SuggestedRen Remove th Proposed Res PROPOSE Better lang be change
Schindler Commen The s requi only : Suggeste Rem "Edit partic Proposed PRO	SC 33.2 F, Fred t Type TR state diagram rements. It is show Type 1 edRemedy ove the state or's Note: The cipants are end t Response POSED ACC	4.7 provided in Fi not suppose and Type 2 red diagram on pa state diagram icouraged to p Respor EPT IN PRINC	P 47 Seen Simply nent Status D igure 33-9a does not to include Type 1 a quirements. Ages 47-49 and repl n for Type 3 and Ty rovide presentation nse Status W CIPLE.	L 1 ot include Type nd Type 2 required lace with, rpe 4 PSEs need is to address th	# 232 PSE State Diagram 3 and Type 4 PSE irrements. It appears to eds further study and is need."	Cl 33 S Thompson, Ge Comment Type I have no i SuggestedRen Remove th Proposed Res PROPOSE Better lang be change

Add Editor's Note in suggested remedy below Type 3/4 PSE State Diagram.

Darshan, Yair		Micro	semi		
Comment Type	TR	Comment Status	D		4PID
Adressing the "Type 3 and T candidate to r Does it means apply 2P cheo reads that I ca	text: Type 4 PSEs eceive power that applyin the LLDP and ant do it	shall determine w r on both pair sets g 4P power (all p then connect the	hether a prior to airs at th 2nd pair	n attached PD w applying 4 pair p e same time) is t ? this is the reliat	ith classes 0 to 4 is a ower" he only choice, can I ble way to do it but it
SuggestedRemed	ly				
Add note afte Note: Applyin pair set is pov Tble TBD tem	r line 47: g 4P power d vered first an i TBD."	loesn't imply if bo d later the 2nd pa	h pair-se ir is pow	et are powered at ered within the tir	the same time or one ne limit specified in
Proposed Respon	se F	Response Status	w		
PROPOSED	ACCEPT IN	PRINCIPLE.			
Add Editor's N "Editor's Note single and du	lote after line to be remov al-signature f	e 47: ed before publica PDs."	ion: Ne	ed to define start	up timing for both
CI 33 SC	33.2.5.6	P 5	4	L 45	# 375
Thompson, Geoff		GraCa	aSI S.A.		
Comment Type I have no idea	E what "initial	Comment Status y" means in this s	D sentence		4PID
SuggestedRemed Remove the v	ly vord "initially"	'.			
Proposed Respon PROPOSED	se F REJECT.	Response Status	w		
Better langau be changed b	ge is always y other thing:	welcome, but "init s than those listed	ially" is a I as dete	a key part of the s rmining the initia	sentence as 4PID can I value.

P 54

L 44

367

C/ 33 SC 33.2.5.6

C/ 33 SC 33.2.5.6	P 54 Microsemi	L 46	# 335		Cl 33 Schindler	SC 33.2.5 .	6 P 57	L 45	# 236
Comment Type T Comment	nt Status D				Comment		Comment Status	пру	PSE Classification
Reference to 33.2.5.0 is placed in 33.2.5.0. is the palce where conne	the wrong place. ction check is me	tioned bit not fo	r other system	4610	The te	ext needs to be	updated to support Type	3 and Type 4 class	ification.
Information SuggestedRemedy Replace: "the result of connection check a in 33.2.5.0."	nd the results of o	other system inf	ormation, as des	cribed	Add to "Both and T	the end of the pair sets of the ype 4 PSEs."	paragraph on line 45, the PI attached to a Dual Sig	e sentence, gnature PDs shall be	e classified by Type 3
With: "the result of connection check a information."	s described in 33	.2.5.0 and the re	esults of other sys	stem	Proposed PROF Add to	Response POSED ACCEF	Response Status V PT. paragraph on line 45, the	v sentence,	
Proposed Response Response PROPOSED ACCEPT.	e Status W				"Both PSEs	pair sets attacl ."	ned to a Dual Signature P	D shall be classified	d by Type 3 and Type 4
	D E 4	1 46	# 267		C/ 33	SC 33.2.5.	6 P 57	L 49	# 237
Dwelley David	F 34		# 207		Schindler,	Fred	Seen Si	mply	
Comment Type T Commen "and the results of other system "other information" defined in 33.2.	nt Status D information, as de .5.0.	escribed in 33.2.	.5.0.". There is no	4PID	Text r signal	needs to show t cure PDs and h	hat a TBD state diagram bw to process them.	, may identify single :	signature or dual
SuggestedRemedy					Note:	This comment	is flagged with comment-	FRS1 for easy sear	ching.
Remove "and the results of other s	system information	ר"			Suggester After	dRemedy the paragraph e	ending on line 49, add the	new paragraph,	
Proposed Response Response PROPOSED ACCEPT IN PRINCIP Partial OBE by comment # 335 (dr	e Status W PLE.				"The o deterr comp prede	connection che nine the value ly with the TBD termined to be	ck, described in 33.2.5.0, of variable pd_4pair_cand state diagram, which det connected to a PD capab	and the results of o lidate, defined in 33 ermines the power i le of accepting pow	ther system information, .2.4.4. PSEs shall requirements for pair sets er on both pair sets, see
					Proposed	Response	Response Status V	v	
Replace "&" with "and" in line 45.					I don'i	understand th	e suggested remedy.	•	
					This a go in t	ddition seems the classificatio	reasonable, but the place n section which is not cor	ment is wrong. The rect.	e suggested remedy is to
					pair s sets"	ets predetermir	led to be connected to a l	PD capable of acce	pting power on both pair

C/ 33 SC 33.2.5.6 Page 8 of 12 6/17/2015 5:21:57 PM

CI 33	SC 33.2.6.1	P 58	L 11	# 235	CI 33	SC	33.2.7	P 63	L 11	# 337	
Schindler,	Fred	Seen Simply			Darshan,	Yair		Microsemi			
Comment	Type TR	Comment Status D		4PIE	Commen	t Type	т	Comment Status D		Pres: Icon	
The te "The P in Tabl Applica perma typical provide to devi dissipa Alterna New P need te	xt, 'SE shall provide le 33-10." Need the ation of the classi- nently damage a ly). During detect e 5mA short-circu- ce during detecti- ated in a device. ative (pair set). SE may detect, co- prevent damage	to the PI VClass with a currer to be updated to support Type ification voltage to a pair set w device. For example, Bob Sr tion, which is not likely to caus it current and up to 30V open on. Classification permits (20 Legacy PSEs detect, classify classify, and power on, on all p e to network equipment.	It limitation of l 3 and Type 4 with an invalid of nith termination se device dam circuit. This pr $.5V \ge 0.1A$) up and power on wair sets of the	Class_LIM, as defined classification. letection signature may n resistors (0.125W age, the PSE may ermits up to 37.5 mW to 2.1W to be using the same PI. Therefore, we	At worst case P2P_lunb conditions: lcut_min-2P=lcont-2P_unb= (lcont-2P_unb_max/lcont-2P_max)*0.5*Pclass/Vport_PSE-2P= (0.668/0.6)*0.5*Pclass/Vport_PSE-2P=0.556*Pclass/Vport_PSE-2P for Type 3 PSE. In similar way for Type 4: lcont-2P_unb=(0.931/0.865)*0.5*Pclass/Vport_PSE-2P=1.076*0.5*Pclass/Vport_PSE-2P. lcont-2P_unb=0.538*Pclass/Vport_PSE-2P SuggestedRemedy 1. Split lcut-2P for two lines for Type 3 and Type 4 (see attached darshan_06_0615.pdf for details). 2. Replace TBD with: lcut-2P_min=0.556*Pclass/Vport_PSE-2P for Type 3 PSE lcut-2P_min=0.556*Pclass/Vport_PSE-2P for Type 3 PSE lcut-2P_min=0.556*Pclass/Vport_PSE-2P for Type 4 PSE						
Suggested Modify "The P defined Proposed I	Remedy the sentence as SE shall provide d in Table 33-10 o Response	follows, to a pair set VClass with a cu only for a pair set with a valid <i>Response Status</i> W	rrent limitation detection signa	of IClass_LIM, as ature."	Proposed PRO C/ 33 Picard, J	d Respo POSED SC ean	D ACCEPT	P 63 Comment Status D	<i>L</i> 11 ts	# 295	
	OSED ACCELLI.				Table	= 33-11:	IIX			1 163. 10011	
C/ 33 Dwelley, D	SC 33.2.7 avid	P 62 Linear Technol	L 42 ogy	# 273	ICUT Shou	-2P mir Ild refer	n needs to to ICON-2	be specified. P-unb			
Comment Table 3 PDs m Suggested Add to Proposed 1 PROP This ap	Type TR 33-11: this seems uust use 45W tran Remedy Additional Inform Response OSED ACCEPT oplies to middle m Additional Inform	Comment Status D s to imply that 45W over a sing insformers on each pairset nation: "Class 4 and lower only <i>Response Status</i> W IN PRINCIPLE. ow of item # 4 in Table 33-11: nation: "Class 4 and lower only	gle pairset is C /"	Pres: Class	Suggeste Repl Proposed PRO OBE	edReme ace TBI d Respo POSED by com	dy D with sam Inse D ACCEPT Iment # 33	e values used for ICON-2P-unb <i>Response Status</i> W IN PRINCIPLE. 7.			

C/ 33 SC 33.2.7

Cl 33 SC 33.2.7 P 63 L 17 # 296	C/ 33 SC 33.2.7 P 63 L 19 # 297	
Picard, Jean Texas Instruments	Picard, Jean Texas Instruments	
Comment Type TR Comment Status D Pres	ILIM Comment Type TR Comment Status D Pres: I	ILIM
Table 33-11: Regarding type 3, the ILIM-2P min definition is NOT right, it does not take into account imbalance.	Table 33-11: the ILIM-2P min needs to be defined for type 4	
SugaestedRemedy	Suggested Remedy	
Redefine Type 3 ILIM-2P min, using the unbalance factor.	Define Type 4 ILIM-2P min starting from (1+K) X IPeak-2P, which means around 1.2A.	
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	
	OBE by comment # 337.	
OBE by comment # 339.	— Cl 33 SC 33.2.7 P 64 L 12 # 347	
CI 33 SC 33.2.7 P 63 L 17 # 339	Darshan, Yair Microsemi	
Darshan, Yair Microsemi	Comment Type E Comment Status D PSE N	MPS
Comment Type T Comment Status D Pres.	ILIM Table 33-11 item 17, additional information column, line 12	
Table 33-11 item 9, ILIM-2P for type 3,4: To replace TBD with numbers per the the	The text: "The pair set with highest current" is not clear since we are looking at two pairs	;
calculations shown in Darshan_00_0013.pdf.	with the highest current.	
Short summary:	with the highest current. SuggestedRemedy	
Short summary: ILIM-2P_MIN>=Ipeak-2P_max per figure 33-14.	with the highest current. SuggestedRemedy Change to "The pair with highest current"	
Short summary: ILIM-2P_MIN>=Ipeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions of Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT.	
SuggestedRemedy	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response RESponse Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs.	
SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9.	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. C/ 33 SC 33.2.7 P64 L 38	
Calculations shown in Darshan_06_0015.pdf. Short summary: ILIM-2P_MIN>=Ipeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions or Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9. Proposed Response Response Status	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. C/ 33 SC 33.2.7 P 64 L 38 # [342] Darshan, Yair Microsemi	
Calculations shown in Darshan_06_0615.pdf. Short summary: ILIM-2P_MIN>=Ipeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions or Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. Cl 33 SC 33.2.7 P 64 L 38 # 342 Darshan, Yair Microsemi Comment Type TR Comment Status D	tion
Calculations shown in Datshall_06_0615.pdf. Short summary: ILIM-2P_MIN>=Ipeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions or Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Waiting for Presentation.	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. C/ 33 SC 33.2.7 P 64 L 38 # 342 Darshan, Yair Microsemi Comment Type TR Comment Status D PSE Detect Table 33-11 item 22, Cout. Cout is correct over a pair-set for type 3 and 4 as well. Current and hot the pair set well.	ction
Calculations shown in Datshall_06_0013.pdf. Short summary: ILIM-2P_MIN>=Ipeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions or Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Waiting for Presentation.	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. Cl 33 SC 33.2.7 P 64 L 38 # 342 Darshan, Yair Microsemi Comment Type TR Comment Status D PSE Detect Table 33-11 item 22, Cout. Cout is correct over a pair-set for type 3 and 4 as well. SuggestedRemedy	tion
Calculations shown in Datshall_06_0013.pdf. Short summary: ILIM-2P_MIN>=lpeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions or Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9. Proposed Response Response Status PROPOSED ACCEPT IN PRINCIPLE. Waiting for Presentation.	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. C/ 33 SC 33.2.7 P 64 L 38 # 342 Darshan, Yair Microsemi Comment Type TR Comment Status D PSE Detect Table 33-11 item 22, Cout. Cout is correct over a pair-set for type 3 and 4 as well. SuggestedRemedy Change parameter name to: "Output capacitance during detection state over a pair set" Change PSE Type to 1,2,3,4.	
Calculations shown in Datshan_06_0015.pdf. Short summary: ILIM-2P_MIN>=lpeak-2P_max per figure 33-14. Ipeak_max for Type 3 and 4 can be found by equation 33-4 at worst case conditions o Ppeak_PD-2P per equation 33-12 and 33-12a and Table 33-18 item SuggestedRemedy See darshan_06_0615.pdf for updated Table 33-11 item 9. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Waiting for Presentation.	With the highest current. SuggestedRemedy Change to "The pair with highest current" K, Proposed Response Response Status W PROPOSED REJECT. All of the specifications are per pair set. Here, we are requiring that the PSE look at the pair set with the highest current, even if the PSE is only looking at one of the pairs. Cl 33 SC 33.2.7 P 64 L 38 # 342 Darshan, Yair Microsemi Comment Type TR Comment Status D PSE Detect Table 33-11 item 22, Cout. Cout is correct over a pair-set for type 3 and 4 as well. SuggestedRemedy Change parameter name to: "Output capacitance during detection state over a pair set" Change PSE Type to 1,2,3,4. Proposed Response Response Status W	I

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CI 33

SC 33.2.7

C/ 33 SC 33.2.7.5 P 67 L 36 # 346 Darshan, Yair Microsemi	C/ 33 SC 33.3.4 P 82 L 1 # 171 Zimmerman, George CME Consulting						
Comment Type TR Comment Status D PSE Power It is usefull to allow higher Inrush current than 450mA after TBD time from POWER UP	Comment Type ER Comment Status D 4PID Editor's note has been resolved - no change to valid or non valid signatures is required by						
start for the following reasons: a)Reducing dynamic stress on the MOSFET during POWER UP and b)Reach faster startup with lower probability for startup oscilations c) Handle different load behaviour during startup that is time dependent.	4PID. SuggestedRemedy Remove editor's note.						
SuggestedRemedy	Proposed Response Response Status W						
Add the following text after line 36.	PROPOSED REJECT.						
The maximum inrush current sourced by the PSE per pair set may exceed the per pair set PSE inrush template in Figure 33–13 only TBD msec after POWER UP has started and shall not exceed II IM-2P maximum as specified by Table 33-11 item 9	Based on the number of comments related to 4PID and this text, I suggest we keep the editor's note there for now.						
Pronosed Response Posponso Status W	C/ 33 SC 33.3.7.3 P 90 L 53 # 334						
Hold open to lulu	Darshan, Yair Microsemi						
Yair to present. Allowing higher current based on time is a brand new topic. Please create a presentation and build consensus for this idea.	We don't want to wait 50- 75msec in Type 3 and 4 systems for linrush to be ended if not required due to measuring PD voltage/current/time profile by the PSE and knowing that it was ended earlier. In some large mutiport systems time for all ports to be ON is affected by Tinrush*N. N						
CI 33 SC 33.3.3.4 P 78 L 46 # 65 Yseboodt, Lennart Philips	number of ports and PSE power supply power capability and its response to dynamic load behavior.						
Comment Type E Comment Status D PD State Diagram	SuggestedRemedy						
"A timer used to prevent the Type 2 PD from drawing more than inrush current during the PSE's inrush period; see T delay in Table 33-18." SuggestedRemedy	To add Editor Note at the end of 33.3.7.3. To address the following issues: 1. Shortening Tinrush if PSE has the knowledge that PD is done with its Inrush. 2. Fastening Tinrush by allowing higher linrush_max during Tinrush time frame to shorten Tinrush with big PD capacitors.						
Change to "T Delay" to "Tdelay-2P"	Proposed Response Response Status W						
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	hold open for Yair presentation in July.						
OBE by comment # 112.	This is a brand new topic that has a large techinical impact on the standard. Please give a presentation on such material if you would like it to be included in the standard.						

Cl 33 SC 33.3.7.3 Page 11 of 12 6/17/2015 5:21:57 PM

<i>CI</i> 33 Darshan.	SC 33.3.7.3 Yair	P 90 Microsemi	L 90	# 365	<i>Cl</i> 33 Darshan.	SC 33 Yair	3.3.7.9	P 94 Microsemi	L 32	# 360	
Comment	Type TR	Comment Status D		PD Inrush	Comment	Туре	TR	Comment Status D		Pres: PD Unbalance	
Some of important PD factual behaviour was removed from lines 28-31 that was in IEEE802.3-2012. The reason why they were removed is relevent to the PSE but not relevant for the PD as it is accurate phisycal behaviour of the PD i.e. Inrush current period ends when Cport is charged to 99% of its final value within a time duration of Tinrush-2P minimum per Table 33-11 etc. SuggestedRemedy Modify the text per the following instructions: new text Strike text XXX: (Strike XXX):						and current unbalance. In Table 33-11 item 4a, Icont-2P_unb we defined the maximum pair set current with the effect of E2EP2P_lunb/Runb. This current is also a limit for the PD due to the fact that it is the same current. As a result, a PD vendor will have to design his PD to not exceed under the test setup conditions specified in the proposed 33.3.7.10. SuggestedRemedy 1. Add new clause with the following content: 2.2.7.4.0 RD RD RD Paints Paints Paints and a maximum paints of the proposed set of the proposed se					
Inrusi pair s when TInrus per pa	n current per pair-s et compliant with \ Cport is charged t sh-2P minimum pe air set current thres	set is drawn beginning with th /port_PD-2P requirements a o 99% of its final value withi er Table 33-11. After TInrush shold corresponding to its cl	he application o las defined in Tal n a time duratio I-2P min, the PE ass level.	f input voltage at the ble 33-18, and ending n of (strike "before") D shall not exceed its	Type when 2 Ado resist Insert	3 and Typ tested wit new clau ance and the conte	the 4 PDs the the test se 33.3.1 current u ent of PD	shall not exceed Icont-2Pun st setup specified in 33.3.7.10 7.10.1: Test setup and test c unbalance. PI baseline text proposal in	b as specified 0.1. onditions for F darshan_01_0	in Table 33-11 item 4a PD PI pair to pair 0615.pdf to 33.3.7.10.1.	
Proposed	Response	Response Status W			Proposed	Response	е	Response Status W			
PROF	POSED REJECT.				PRO	POSED A	CCEPT	IN PRINCIPLE.			
This c capac "After corres	change was made ctiance by Tinrush- TInrush-2P min, th sponding to its clas	because a PD may not nece 2p min, but it is still required he PD shall not exceed its p ss level."	essarily be done I to meet the res er pair set curre	e charging its st of the text such as ent threshold	Waiti	ng for pres	sentation				

In the field, PDs will switch over to their "nominal" current draw once their cap was charged even if it only took 10ms. This note about the cap being charged to 99% was the source of

a great deal of confusion.

C/ 33 SC 33.3.7.9