



## **Baseline Comment Bucket**

Contributors: MLandry, et. al.

# Agenda

- ◆ Patent Policy

  - <http://standards.ieee.org/board/pat/pat-slideset.pdf>

- ◆ Comments



# Comment Bucket Buckets

- ◆ Easy stuff
  - Comments 15, 12, 141
- ◆ Detection stuff
  - Comments 124, 13

# Easy Comment 15

<i>CI</i> 33	<i>SC</i> 4.2	<i>P</i> 67	<i>L</i> 1	# 15
LANDRY, MATTHEW		SILICON LABS		
<i>Comment Type</i> T	<i>Comment Status</i> A		<i>baseline</i>	
The IEC 60060 does not have a year associated with it.				
<i>SuggestedRemedy</i>				
Please clarify the exact year of issue.				
<i>Response</i>	<i>Response Status</i> C			
ACCEPT IN PRINCIPLE.				
Editor to find year or seek help finding correct year.				

## ◆ Reference in question:

Each wire pair shall withstand, without damage, a 1000V common-mode impulse applied at  $E_{cm}$  of either polarity (as indicated in Figure 33–13). The shape of the impulse shall be  $(0.3/50) \mu s$  (300 ns virtual front time, 50  $\mu s$  virtual time or half value), as defined in IEC 60060, where  $E_{cm}$  is an externally applied AC voltage as shown in Figure 33–13.

## ◆ Any input?

# Easy Comment 12, 141

<p>CI 33 SC 3.4.1 P 56 L 32          LANDRY, MATTHEW SILICON LABS</p> <p>Comment Type T Comment Status D          The Usage column in Table 33-10 adds no value.</p> <p>SuggestedRemedy          Remove it.</p>	<p>CI 33 SC 3.4.1 P 56 L 34 # 141          Schindler, Fred Cisco Systems</p> <p>Comment Type TR Comment Status D baseline</p> <p>Table 33-10 is not clear. Why is a range of maximum stated? Maximum is a single value per class. Some people assume the lower bound is a minimum power requirement and this is incorrect. The minimum power required to maintain PSE powering is covered in 33.3.6.</p> <p>SuggestedRemedy          Only state the maximum class power allowed. Replace the third column with:          Maximum power used by the PD (W)          12.95          3.84          6.49          12.95          TBD</p>
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Table 33-10—PD power classification

Class	Usage	Range of maximum power used by the PD
0	Default, Type 1	0.44 W to 12.95 W
1	Type 1	0.44 W to 3.84 W
2	Type 1	3.84 W to 6.49 W
3	Type 1	6.49 W to 12.95 W
4	Type 2	12.95 W to 29.5 W

- ◆ “Usage” column of similar Table 33-3 was removed with D0.9/#163
- ◆ “Range of maximum power” phraseology, while technically accurate, is definitely confusing to the average reader
- ◆ Besides, is there any reason a 2W PD could not advertise itself as Class 2?
- ◆ Accept both remedies



# Detection Comment 124

CI 33	SC 2.5.1	P 33	L 51	# 124
Schindler, Fred		Cisco Systems		
Comment Type	TR	Comment Status	D	baseline
<p>The existing section on PD detection requires specific design requirements that are not necessary to ensure interoperability. Other detection methods have been disclosed: <a href="http://www.ieee802.org/3/poep_study/public/sep05/naegeli_1_0905.pdf">http://www.ieee802.org/3/poep_study/public/sep05/naegeli_1_0905.pdf</a> The IEEE specification should ensure requirements for interoperability are in place.</p> <p>This comment also affects text in section 33.3.3, p54, L18.</p>				
<i>Suggested Remedy</i>				
<p>Reference the PD model shown in figure 33-10, and require that the PSE detect values of Rpd_d for all permissible values of Cpd_d as specified in table 33-2.</p> <p>Remove the text requiring two values but continue to provide guidance for designs that use the two probe method.</p>				
<i>Proposed Response</i>		<i>Response Status</i> O		

◆ Discussion needed

# Detection Comment 13

CI 33	SC 2.5	P 33	L 5	# 13
LANDRY, MATTHEW		SILICON LABS		
Comment Type	TR	Comment Status	D	baseline
A PSE performing detection should be able to provide two characteristics.				
(1) Probing into a short circuit won't destroy the PSE or the source of the short.				
(2) Two PSEs probing the same link segment should not result in a 25kohm differential impedance.				
The probing voltage ( $V_{\text{valid}}$ and $V_{\text{oc}}$ ) and short circuit current limit defined in Table 33-2 accomplish (1). A simple shall statement can accomplish (2).				
Instead we have some schematics (Figs 33-8 and 33-9) and a normative statement requiring conformance to them. This sure sounds like mandating an implementation -- and unnecessarily at that.				
<i>SuggestedRemedy</i>				
Strike Figs 33-8 and 33-9 or add a NOTE mentioning that they are informative only.				
Strike Thevenin shall statement on line 45.				
Add the following shall: A PSE shall present a non-valid signature as defined in Table 33-9 in all detection states.				
Note that current PSEs conforming to the Thevenin circuits currently mandated will still satisfy this new shall.				
Proposed Response		Response Status	O	

◆ Discussion needed

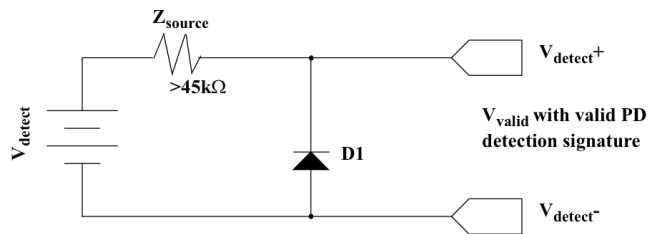


Figure 33-8—PSE detection source

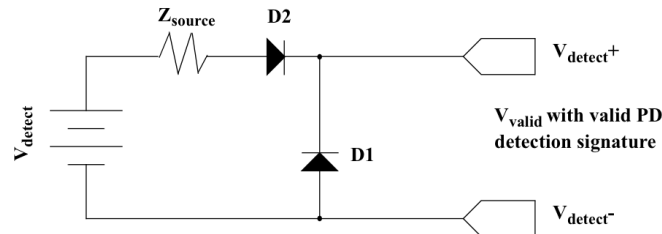


Figure 33-9—Alternative PSE detection source

The PSE shall exhibit Thevenin equivalence to one of the detection circuits shown in Figure 33-8 or Figure 33-9 in all detection states.