

Proposed Remedy for comment #512. Comment (clause 33.2.8.4 page 108 line21)

Ppeak_PD-2P is not defined in Table 33-25.

It is not defined in Table 33-28 as well.

(Table 33-28 defines Pport-PD-2P, Pclass-PD-2P and Ppeak PD.

Ppeak_PD is defined as function of:

1.05*Pclass_PD for class 5-8,

1.11*Pclass PD for class 4.

For classes 3 it is 14.4W

For for class 1 and 2, 5W and 8.36W respectively.

Proposed Remedy

1. Add the following spec item after item 10 in Table 33-28:

Item	Parameter	Symbol	Unit	Min	Max	PD Type	Additional Information
10.1	Peak operating power over a pairset						
	Class 1	Ppeak_PD-2P	W		5	3	See 33.3.8.4
	Class 2				8.36	3	
	Class 3				14.4	3	
	Class 4				1.11xPclass-PD-2P 28.3	3	
	Class 5				1.05xPclass-PD-2P 37.4	4	

2. Make the following changes:

a) Page 108 line 21: Replace “See Table 33-25” with “See Table 33-28”

b) Change the text in page 149 lines 18-19 as follows (2 instances):

Single-signature PDs assigned to Class 1, 2, or 3 shall conform to PClass_PD and PPeak_PD within TInrush-2P min as defined [in](#) Table 33–17. Type 3 and Type 4 dual-signature PDs assigned to Class 1, 2, or 3 shall conform to PClass_PD-2P and PPeak_PD-2P within TInrush-2P min as defined [in](#) Table 33–17 on that pairset.

c) Change the text in page 149 lines 45-48 as follows:

At any static voltage at the PI, and any PD operating condition, with the exception described in 33.3.8.4.1, the peak power [for single-signature PD](#) shall not exceed PClass_PD max for more than T_{CUT-2P} min, as defined in Table 33–17 and 5% duty cycle. Peak operating power shall not exceed PPeak_PD.

[At any static voltage at the PI, and at any PD operating condition, with the exception described in 33.3.8.4.1, the peak power for dual-signature PD shall not exceed PClass_PD-2P max for more than \$T_{CUT-2P}\$ min, as defined in Table 33–17 and 5% duty cycle. Peak operating power shall not exceed PPeak_PD-2P.](#)

d) Change the text in page 150 lines 45-49 as follows:

Peak power is defined in Table 33–28 and depends on the Class assigned by the PSE. The equations in Table 33–28 are used to approximate the ratiometric peak powers of Class 0 through Class 8. These equations may be used to calculate PPeak_PD or PPeak_PD-2P for Data Link Layer classification by substituting PClass_PD or Pclass_PD-2P with PDMaxPowerValue and for Autoclass by substituting PClass_PD with PAutoclass_PD.

e) Change the text in page 150 lines 52-54 and page 151 lines 1-18 as follows:

33.3.8.4.1 Peak operating power ~~for certain Class 6 and Class 8 PDs~~ exceptions

For Class 6 and Class 8 single-signature PDs, when additional information is available to the PD regarding actual channel DC resistance between the PSE PI and the PD PI, in any operating condition with any static voltage at the PI, the peak power shall not exceed PClass at the PSE PI for more than TCUT-2P min, as defined in Table ~~33-17~~ 33-12 and with 5% duty cycle.

For Class 5 dual-signature PDs, when additional information is available to the PD regarding actual channel DC resistance between the PSE PI and the PD PI, in any operating condition with any static voltage at the PI, the peak power shall not exceed PClass-2P at the PSE PI for more than TCUT-2P min, as defined in Table 33-13 and with 5% duty cycle.

Ripple current content (I_{Port_ac}) superimposed on the DC current level (I_{Port_dc}) is allowed if PPeak_PD requirements are met and the total input power is less than or equal to PClass at the PSE PI.

For single-signature PD, the maximum I_{Port_RMS} value over the operating I_{Port_PD-2P} range shall be defined by Equation (33–27):

$$I_{port_RMS_max} = \left\{ \frac{Pclass}{V_{PSE}} \right\}_A \quad (33-27)$$

Where

$PClass$ is the allocated Class power as defined in 33.2.7 and Equation (33–2)

V_{PSE} is the voltage at the PSE PI as defined in 1.4.426

For dual-signature PD, the maximum I_{Port_RMS-2P} value over the operating I_{Port_PD-2P} range shall be defined by Equation (33–27a):

$$I_{port_RMS-2P_max} = \left\{ \frac{Pclass - 2P}{V_{PSE}} \right\}_A \quad (33-27a)$$

Where

$PClass-2P$ is the allocated Class power as defined in 33.2.7 and Equation (33–3)

V_{PSE} is the voltage at the PSE PI as defined in 1.4.426

NOTE—The duty cycle of the peak current is calculated using any sliding window with a width of 1 s.