Minor Problem with PD Reset Threshold and Reset Voltage

The PD reset value changed and was broken between drafts 3.1 and 3.2.

Draft, 3.3, PD Section, page 75 (**In Error**):

Table 33–17—2-Event Physical Layer classification electrical requirements

Item	Parameter	Symbol	Units	Min	Max	Additional Information
1	Class event voltage	V_{Class}	V	14.5	20.5	
2	Mark event voltage	V_{Mark}	V	6.90	10.1	
3	Mark event current	I_{Mark}	mA	0.250	4.00	See 33.3.5.2.1
4	Mark event threshold	V_{Mark_th}	V	10.1	14.5	See 33.3.5.2.1
5	Classification reset threshold	V_{Reset_th}	V	2.70	6.90	See 33.3.5.2.1
6	Classification reset voltage	V_{Reset}	V	0	2.70	See 33.3.5.2.1

Draft, 3.1, PD Section, page 77 (**Correct**):

Table 33–17—2-Event Physical Layer classification electrical requirements

Item	Parameter	Symbol	Units	Min	Max	Additional Information
1	Class event voltage	V_{Class}	V	14.5	20.5	
2	Mark event voltage	V_{Mark}	V	6.9	10	
3	Mark event current	I_{Mark}	mA	0.25	4	See 33.3.5.2.1
4	Mark event threshold	V_{Mark_th}	V	10	14.5	See 33.3.5.2.1
5	Classification reset threshold	V_{Reset_th}	V	2.8	6.9	See 33.3.5.2.1
6	Classification reset voltage	V_{Reset}	V	0	2.8	See 33.3.5.2.1

The PD is required to transition from Mark to Reset somewhere within the Classification Reset Threshold range. The PSE is required to present a reset signal somewhere between 0 to 2.8V (Table 33-10). If the PD does not reset until 2.71V and the PSE discharged the port to 2.79V for reset, both devices would be compliant, but the PD would not reset. The PD reset threshold and voltage needs to be 2.8V. Note that this does not match the PD signature range (2.7V-10.1V), which is correct at 2.7V.

Table 33–10—PSE Physical Layer classification electrical requirements

Item	Parameter	Symbol	Units	Min	Max	1- or 2-Event	Additional Information
1	Class event voltage	V_{Class}	V	15.5	20.5	1, 2	
2	Class event current limitation	I_{Class_LIM}	A	0.051	0.100	1, 2	
3	Mark event voltage	V_{Mark}	V	7.00	10.0	2	
4	Mark event current limitation	I_{Mark_LIM}	A	0.005	0.100	2	
5	1st class event timing	T_{CLE1}	ms	6.00	30.0	2	
6	1st mark event timing	T_{ME1}	ms	6.00	12.0	2	
7	2nd class event timing	T_{CLE2}	ms	6.00	30.0	2	
8	2nd mark event timing	T_{ME2}	ms	6.00		2	Time from end of detection until power-on is limited by 33.2.9.13.
9	Classification reset voltage	V_{Reset}	V	0	2.80	2	
10	Classification reset timing	T_{Reset}	ms	15.0		2	
11	1-Event Physical Layer classification timing	T_{pdc}	ms	6.00	75.0	1	