Table 104-6 Specifications

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Changes Adopted from D1.0

- Replace PD V_{on} and V_{off} specifications that are currently stated as equations and apply to all voltage classes with:
  - A maximum V_{on} specification for each voltage class.
  - A minimum V_{off} specification for each voltage class.
  - All specifications shall be TBD until the level of hysteresis needed is determined.

Item	Paramter	Symbol	Unit	Min	Max	PD Type	Additional Information
4a	Maximum power supply turn on voltage (12V Classes)	Von(max)	V		TBD		
4b	Maximum power supply turn on voltage (24V Classes)				TBD		
4c	Maximum power supply turn on voltage (48V Classes)				TBD		
5a	Minimum power supply turn off voltage (12V Classes)	Voff(max)	V	TBD			
5b	Minimum power supply turn off voltage (24V Classes)			TBD			
5c	Minimum power supply turn off voltage (48V Classes)			TBD			

What's Left To Do?

- Startup analysis must be performed in order to determine the level of hysteresis needed.
- Power classes (Table 104-1) needs to be finalized in order to complete Table 104-6.
  - Now that we decided (in Pittsburgh) to have a single "unregulated" class that would cover the applications that need to be powered directly off the battery, should we:
    - Raise the minimum voltage of the remaining power classes in order to increase the power delivered or increase the maximum Rloop allowed?
    - Raise the minimum voltage of the remaining power classes in order to decrease the amount of current needed?
    - Lower the maximum voltage of the remaining power classes to make writing some of the remaining specifications easier?
    - Raise the minimum voltage of the remaining power classes in order to allow for more margin between turn on and turn off voltages?

What's Left To Do? Part II

- Define ripple current requirements.
- Define input voltage and current ramp rates.
- Define inrush enable delay time.
  - Will directly depend on Tinrush of the PSE.
- Revisit maximum capacitance during detection and classification states.
  - Currently specified at 1nF.
  - Using numbers from Table 104-7, assuming a sink current of 10uA, a 1nF cap, the amount of time for a 1V voltage drop on the local cap of a PD used for SCCP is:
    - Dt = C * dV / I = 1nF * 1V / 10uA = 100us.
  - Is this a problem when the time slot has a maximum value of 120us?