

# MPS Baseline

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# PD DC Maintain Power Signature - Table 33–19a

Item	Parameter	Symbol	Units	Min	Max	PD Type	Conditions
1	Input current	I <sub>Port_MPS</sub>		0.01		1-4	<ul style="list-style-type: none"> <li>• Single Signature PD</li> <li>• Pclass_PD ≤ PD class -4 power limit.</li> <li>• Total PD current sum of both pair-sets</li> </ul>
				0.016		3-4	<ul style="list-style-type: none"> <li>• Single Signature PD</li> <li>• Pclass_PD &gt; PD class -4 power limit.</li> <li>• Total current sum of both pair-sets</li> </ul>
				0.008		1-4	<ul style="list-style-type: none"> <li>• Dual Signature PD</li> <li>• Applies to each powered pair-set</li> </ul>

Add to 33.3.8 (after 2<sup>nd</sup> paragraph):

PDs using Auto class shall use the Iport\_MPS associated with the PD class advertised during physical layer classification.

# PSE DC Maintain Power Signature - Table 33–11

Item	Parameter	Symbol	Units	Min	Max	PSE Type	Additional Information
17	DC MPS current when measured over a pair-set <sup>1</sup> connected to Single Signature PDs	I <sub>Hold</sub>	A	0.005	0.01	1, 2	
				0.002	0.005	3,4	Pclass ≤ Pclass(4). The pair-set with highest current.
				0.002	0.007	3,4	Pclass ≥Pclass(5) The pair-set with highest current.
17a	DC MPS current when measured over a pair-set <sup>1</sup> connected to Dual Signature PDs			0.002	0.007	3,4	MPS need to be detected over each pair-set.
17b	DC MPS current when total sum of both pairs with the same polarity is measured connected to Single Signature PDs <sup>2</sup>			0.004	0.009	3,4	Pclass 0-4.
				0.004	0.014		Pclass 5-8.

## Notes:

- Item 17 and 17a apply to PSEs that implement MPS detection measuring each pair-set.
- Item 17b applies to PSEs that implement MPS detection measuring the sum of the pair-set currents of the same polarity.

### 33.2.9.1.2 : PSE DC MPS Component Requirements

A PSE shall consider the DC MPS component to be present if  $I_{\text{port-2P}}$  or the sum of  $I_{\text{port-2P}}$  of both pair-sets of the same polarity is greater than or equal to  $I_{\text{Hold max}}$  for a minimum of  $T_{\text{MPS}}$ .

A PSE shall consider the DC MPS component to be absent if  $I_{\text{port-2P}}$  or the sum of  $I_{\text{port-2P}}$  of both pair-sets of the same polarity is less than or equal to  $I_{\text{Hold min}}$ .

A PSE may consider the DC MPS component to be either present or absent if  $I_{\text{port-2P}}$  or the sum of  $I_{\text{port-2P}}$  of both pair-sets of the same polarity is in the range of  $I_{\text{Hold}}$ .

The values of  $I_{\text{port-2P}}$  or the sum of  $I_{\text{port-2P}}$  of both pair-sets of the same polarity and the corresponding values of  $I_{\text{Hold}}$  shall meet the conditions specified in Table 33-11.

A Type 3 or 4 PSE, when connected to a single signature PD, shall monitor either the sum of  $I_{\text{port-2P}}$  of both pair-sets of the same polarity or the pair-set with the highest  $I_{\text{port-2P}}$  current value and use the appropriate  $I_{\text{Hold}}$  level shown in Table 33-11. Power shall be removed from the PI when DC MPS has been absent for a duration greater than  $T_{\text{MPDO}}$ .

A Type 3 or 4 PSE, when connected to a dual signature PD shall monitor each pair-set and use the appropriate  $I_{\text{Hold}}$  level shown in Table 33-11. The PSE shall remove power from any pair-set on which the DC MPS has been absent for a duration greater than  $T_{\text{MPDO}}$ . The PSE may remove power from both pair sets if the DC MPS has been absent for duration greater than  $T_{\text{MPDO}}$  on either pair set.

The specification for  $T_{\text{MPS}}$  in Table 33–11 applies only to the DC MPS component. The PSE shall not remove power from the port when  $I_{\text{port-2P}}$  or the sum of  $I_{\text{port-2P}}$  of both pair-sets of the same polarity is greater than or equal to  $I_{\text{Hold max}}$  continuously for at least  $T_{\text{MPS}}$  every  $T_{\text{MPS}} + T_{\text{MPDO}}$ , as defined in Table 33–11 and 33-11a. This allows a PD to minimize its power consumption.