Comment (clause 145.2.8.12 page 173 line 15)

Equation 145-22 for 4-pairs, defines the maximum current per pairset that PSE should source in order to keep Ptype_max for Type 4.

Simulation Results

Vpse at the PI (SIM)	PPD (SIM)	ICON-2P	Icon	Icon_cal	Icon-2P_unb	SPEC D3.1
V	W	A	A	A	A	A
52 TO 52.11	99.9	1.2105	1.9245	1.921154	1.2105	1.3
		0.714				
		1.17	1.924			
		0.754				

Few issues to check:

1) The 1.3A limit is too high. The value from simulations is:1.21.

2) Icon is expressed as Ptype max/Vpse which is correct however the 1.3A value is a fixed number which its value impossible to happen due to the fact that the system current/resistance unbalance has almost the same value (~0.3) as in 90W.

3) Actually, the 1.3A value allows much higher effective Icon-2P_unb for 99.9W. If we allow much higher Current during unbalance then the physics per the 4-pair model used for the spec allows, we may not meet the requirements at lower "normal" Pclass_PD.

4) Is it OK to have 1.3A on a pair while in Table 145-1 we allow up to 0.96A at 99.9W for 100% balanced system which has 1.21A maximum current unbalance at worst case conditions (not including test verification model accuracy).

Conclusions:

To consider lowering the value from 1.3A to 1.25A (The margin from 1.21A is to account for test verification model accuracy).

Group to discuss if there are other reasons for additional margins that Justify staying at 1.3A.

Proposed Remedy:

Change the value of the constant in Equation 145-22 from 1.3 to 1.25 if there is no additional arguments to keep the 1.3A value.