Power Matters

Update Figure 33-14

IEEE802.3bt

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Objectives

- Objective
  - Update Figure 33-14 to capture PSE types 1-4 preferably in single drawing

Terminology

- Icon-2P_unb, Ipeak-2P, ILIM-2P are the 2P value of the pair with maximum current due to E2EP2PRunb.
- Icon-2P is additional temporary parameter on the LOWER bound template for the purpose of this presentation.

- Icon, Ipeak, ILIM is the total 4-Pair current (unbalance effect is canceled)

Working Assumptions

- We need to specify the requirements for per pairset and the total current of bot pairsets for design flexibility
  - When total current is observed, it allows cancelation of E2EP2PRunb effect.
- Allowing design flexibility by monitoring -2P current or total 4P current.
- To show that upperbound template after 5sec/ 60sec must be limited to 99.9W

Figure 33-14 for Type 1 and 2: IEEE802.3-2012

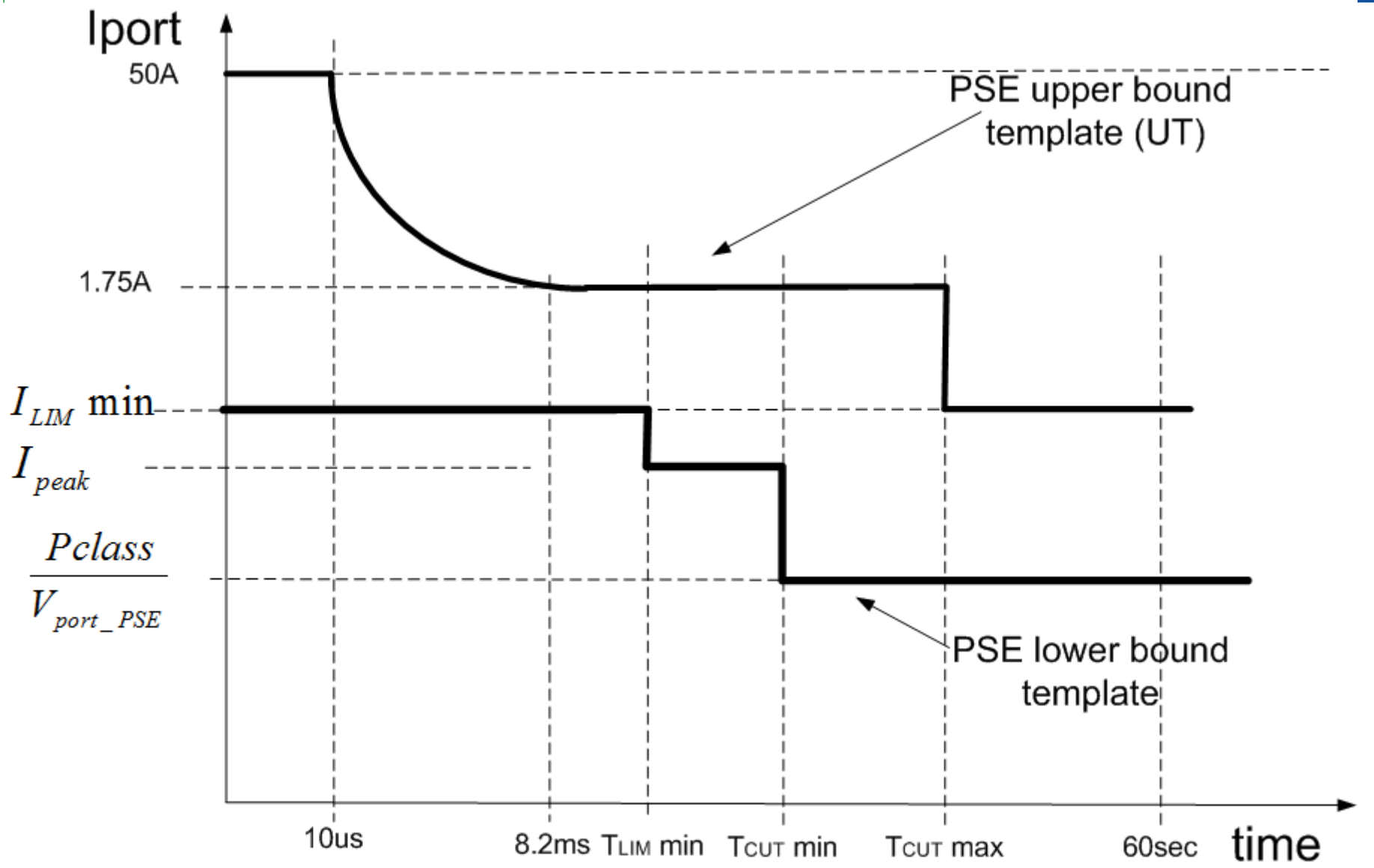
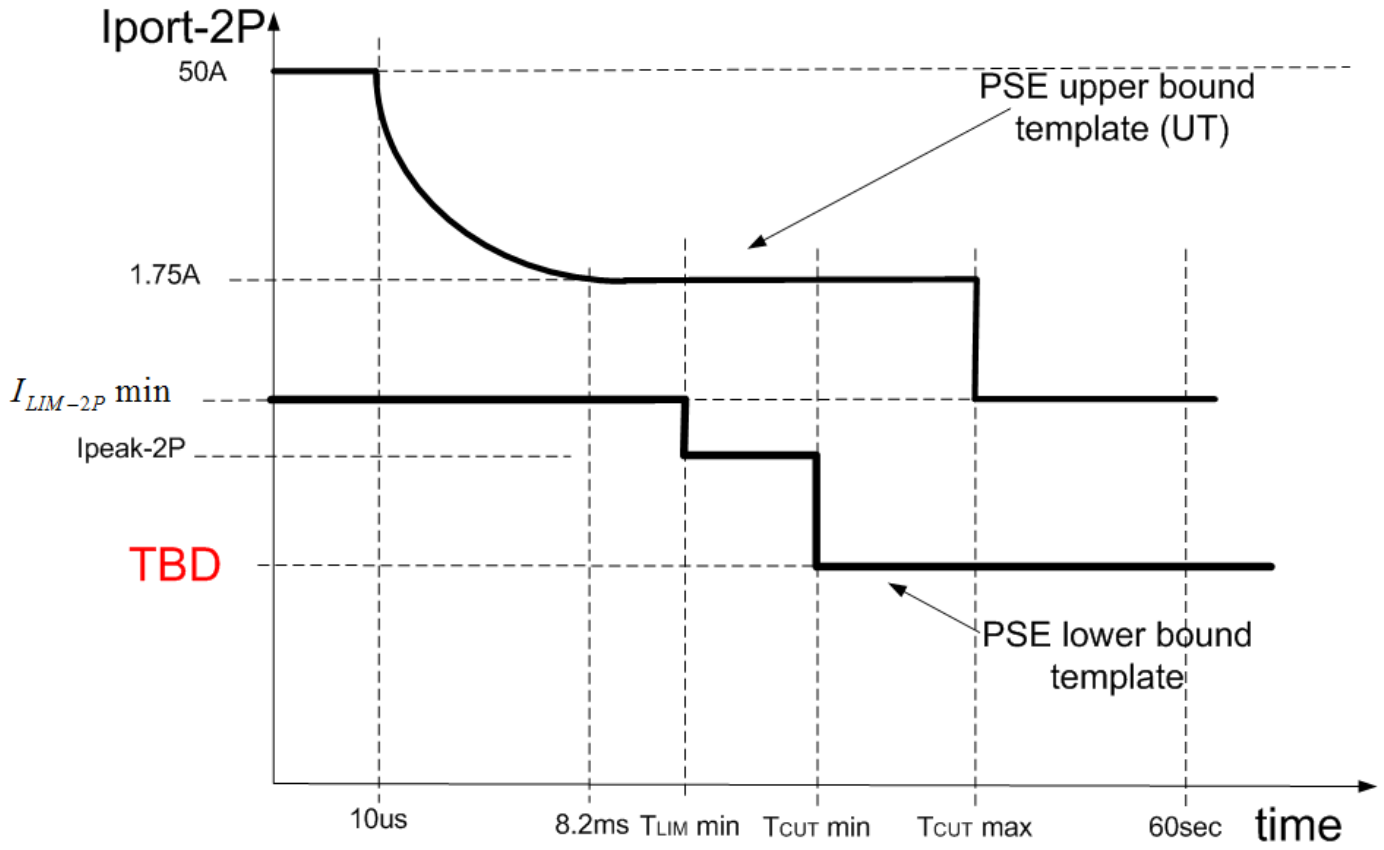


Figure 33-14: Current IEEE802.3 D1.2



- The TBD we need to address

The TBD we need to address is the long term lower bound current that PSE has to supply

Note to remember:
The TBD is the lowerbound that PSE has to supply

Option	The TBD = Icon-2P	Notes
1	Kicut*Pclass/Vport	Shows maximum Icon-2P_unb in terms of Pclass/Vport as in Type 1 and 2
2	Icon-2P_unb	Max pair current
3	(Icon – Icon-2Pmin) to Icon-2P_unb	A range of currents from Imin to Imax
4	min (Icon – Icon-2P, Icon-2P_unb)	Equation form that describes the actual value to be supported. With the constrains of Icon-2P_unb. (see Lenart's presentation)

If the TBD is Icon-2P_unb what it means?

- It means that for that pairset this is the minimum current that I have to support since I don't know what PD will be connected and what are the unbalance conditions.

- Does it means that I need to supply 2xIcon-2P_unb?

No! it means that your protections are set at Icon-2P_unb or above and you will supply up to total Icon current

We can add a normative text that says:

Icon-2P can vary between Icon – I1 to Icon-2P_unb were I1 it the other pair current.

Icon-2P is equal to Icon-2P_unb at the worst case.

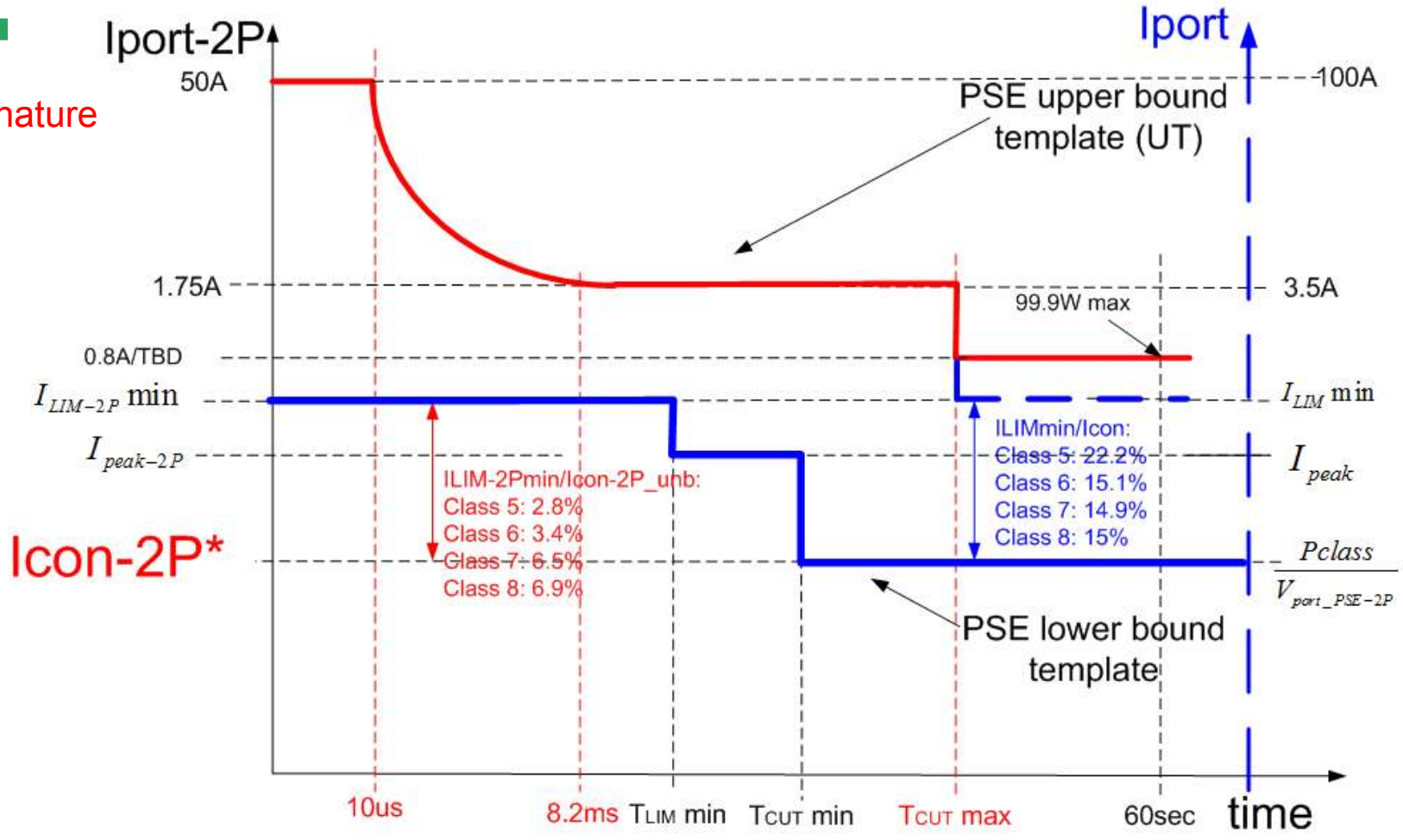
The total current that PSE has to support is Icon and not 2xIcon-2P_unb.

The actual current on the pair set may be lower according to the following equation:

Icont-2P=min (Icon – I1 , Icon-2P_unb).

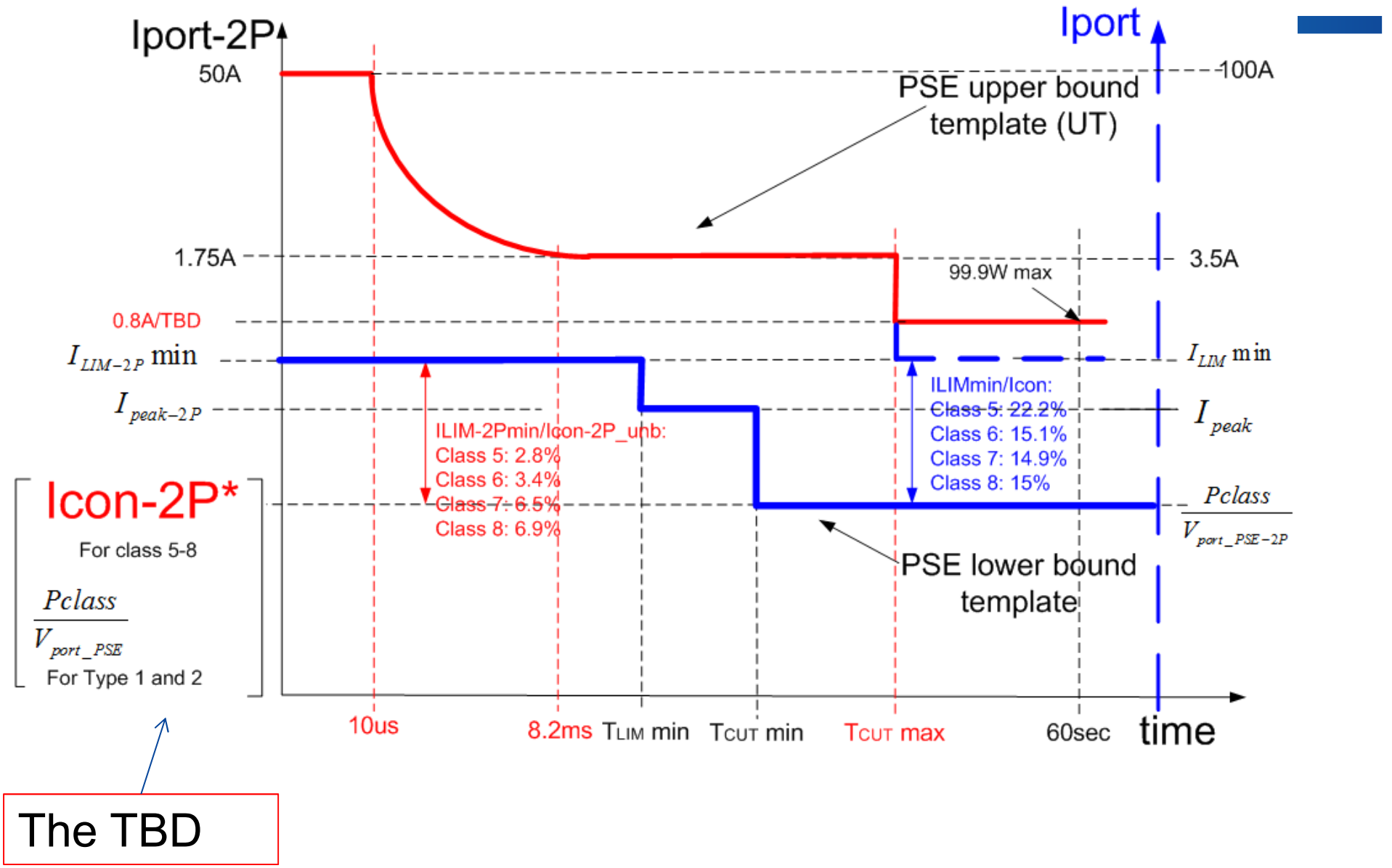
Figure 33-14 for Type 3 (Type 4 is almost similar)

SS Signature case



(*) Icon-2P can vary between Icon – I1 to Icon-2P_unb were I1 it the other pair current. Icon-2P is equal to Icon-2P_unb at the worst case. The total current that PSE has to support is Icon and not 2xIcon-2P_unb. The actual current on the pair set may be lower according to the following equation: Icon-2P=min (Icon – I1 , Icon-2P_unb).

Optional combined Figure 33-14 for Type 1,2,3



The TBD

Issues left to resolve

- To verify that Type 4 can use the same drawing as Type 3 or different drawings are required.

Discussion

Thank You