

IEEE P802.3at Task Force Power Via MDI Enhancements

Suggested Remedy for Voffset and Ioffset comments September 2008

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Background

- IEEE802.3 - 2005 specifies Voffset and Ioffset parameters during detection.
 - Figure 33C.20 in the informative section meant to define what is Voffset and Ioffset.
 - While Voffset definition is clear from this drawing, Ioffset is not clearly defined.
 - Meanwhile the whole annex was deleted in Draft D3.1 and the question is even more valid: What are the definitions for Voffset and Ioffset and how to test them?
- Looking at other parts of the standard reveal the following facts:
 - Figure 33C-17 Test Configuration PSE-K in the informative section of Draft D3.0 or 802.3af – 2005: **Voffset is the diode voltage drop. Ioffset is the leakage current at the PD PI inputs (informative section).**
 - Figure 33C-18 Test Configuration PSE-K in the informative section of Draft D3.0 or 802.3af – 2005: **Voffset_max is 2V max when tested at the PSE PI when PD load is connected during detection. (informative section).**
 - Figure 33C-20 Signature voltage offset in the informative section of Draft D3.0 or 802.3af – 2005: **Voffset is the voltage when the PI current starts to increase above its previous steady state condition.**
 - Figure 33-16 – Zac1 definitions as indicated by Table 33-12 in the normative section of 33.2.11.1: **Voffset is the diode voltage drop.**



Voffset and Ioffset definitions per IEEE 802.3-2005 references

- To use the following model to define Voffset and Ioffset. This model was taken from the informative section of IEEE802.3AF - 2005

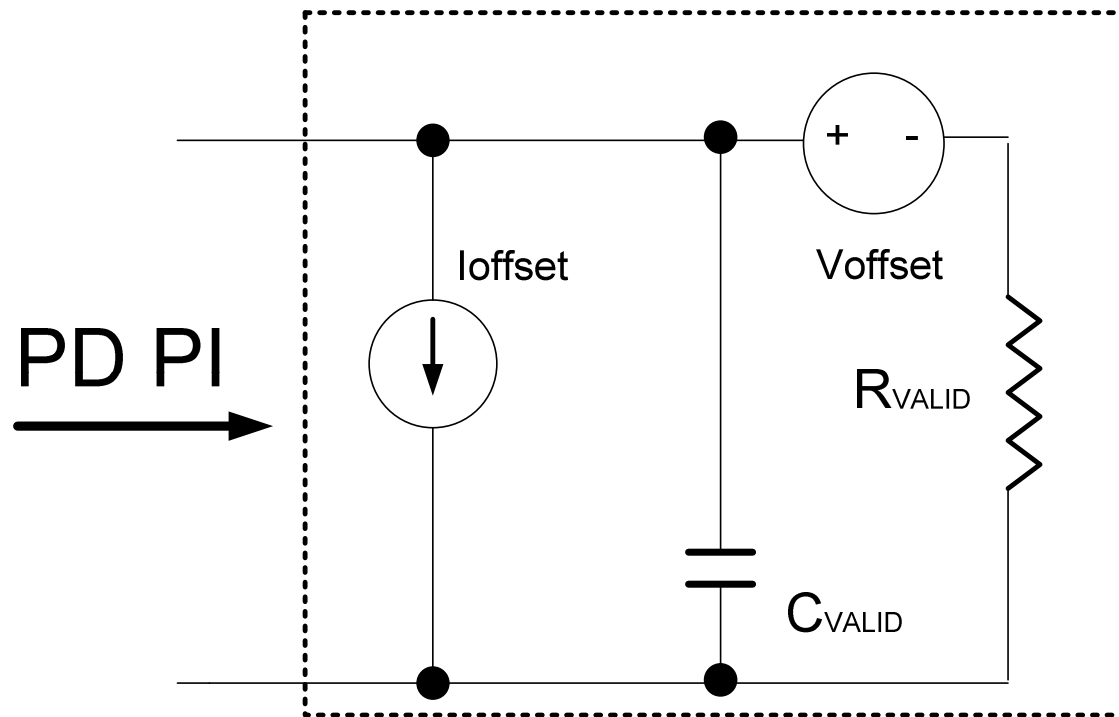
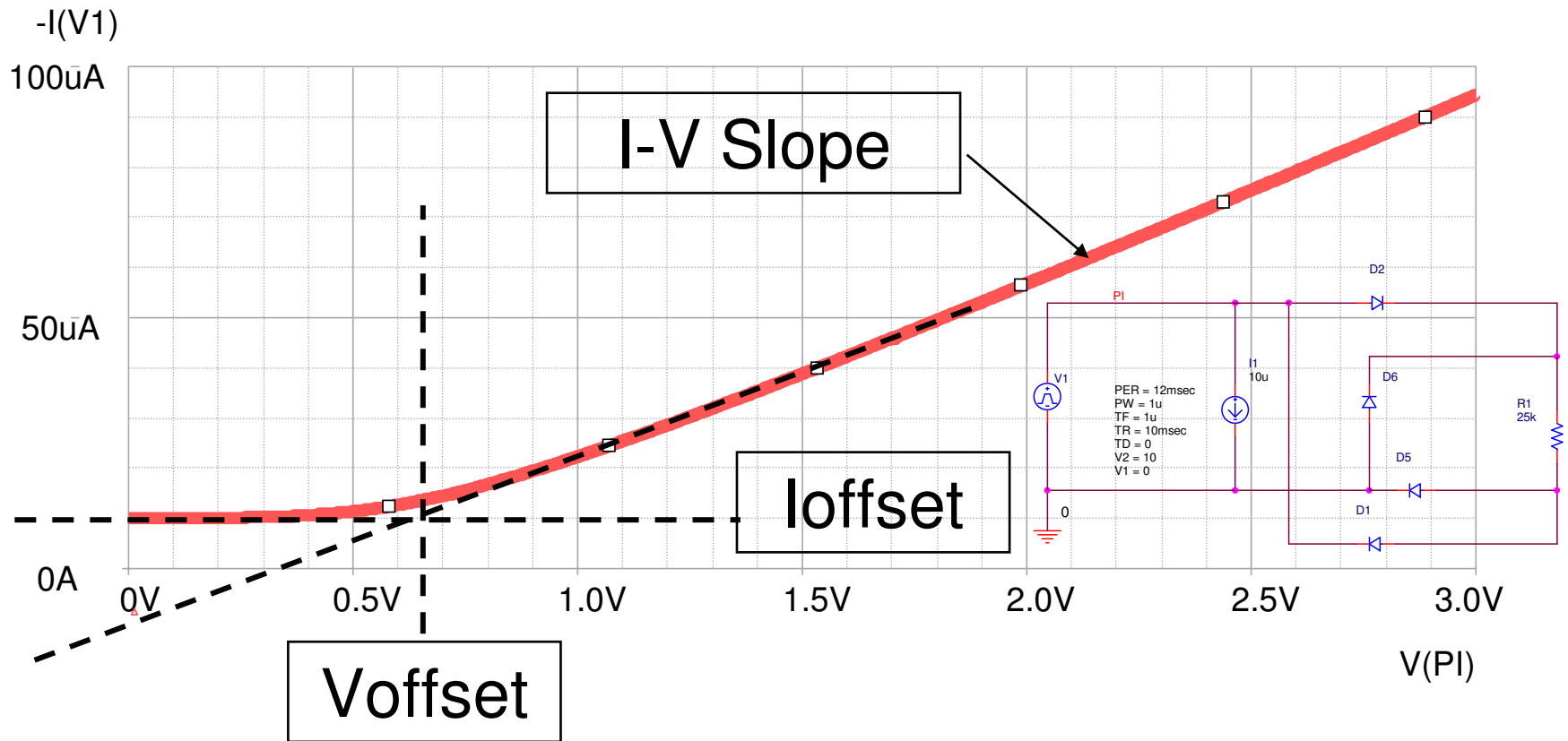
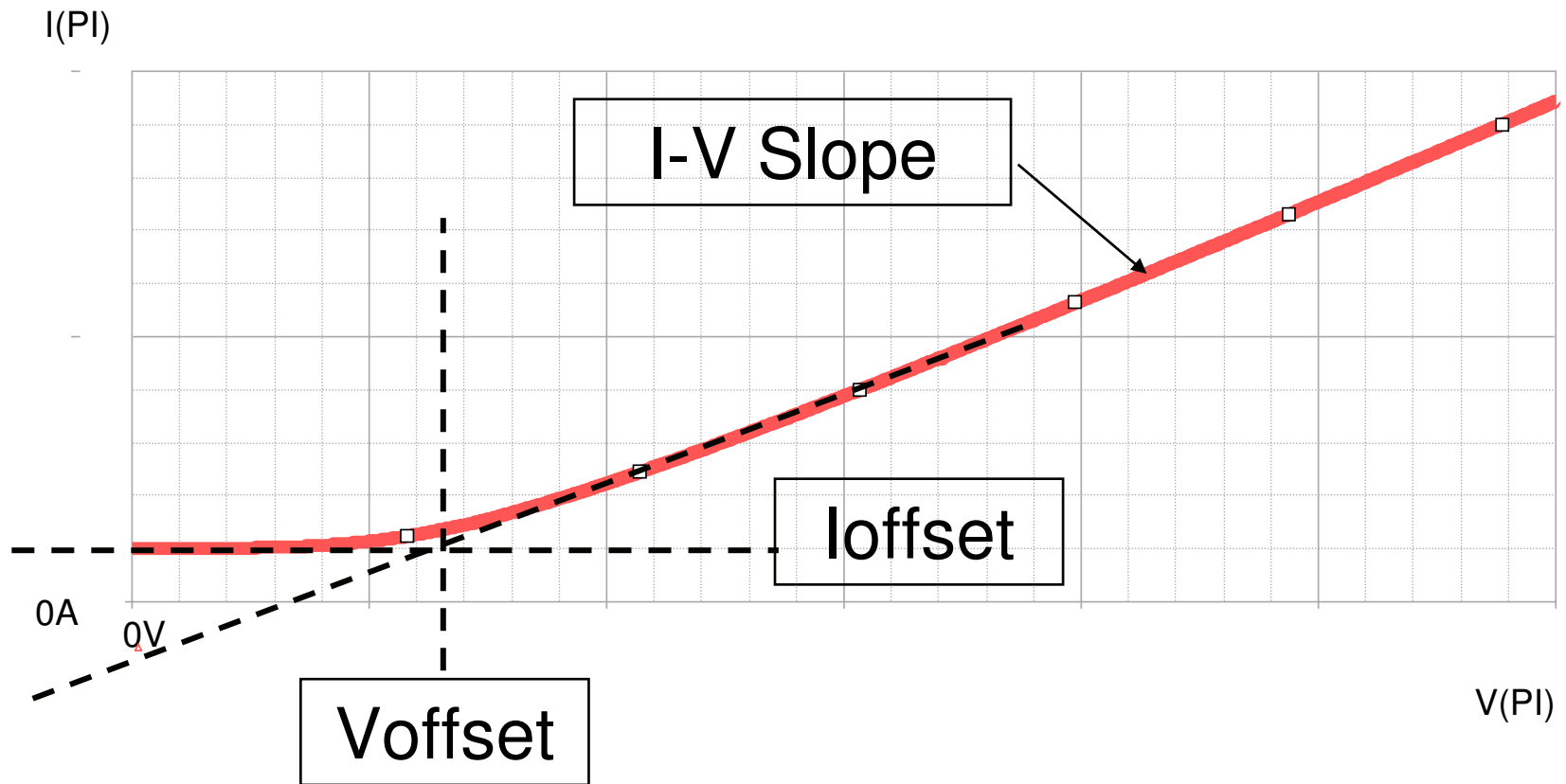


Figure TBD: Voffset and Ioffset definitions

Valid PD characteristics - simulation results



Updated Figure 33C.20 for the normative section.



Suggested Remedy for Voffset, Ioffset comments

- 1. Add Figure TBD after Table 33-15 in 33.3.4
- 2. Add revised figure 33C.20 after figure TBD in 33.3.4
- 3. Add additional information column for Table 33-15 for items 2 and 3 and add to it the following text: “See Figure TBD and Figure 33C.20 for Voffset and Ioffset definitions”
- 4. In Table 33-5 in the additional information for items 3 and 4:
 - Delete the current text regarding ANNEX 33A
 - Replace With: “See Figure TBD and Figure 33C.20 for Vos and Ios (Voffset and Ioffset at the PD) definitions”

