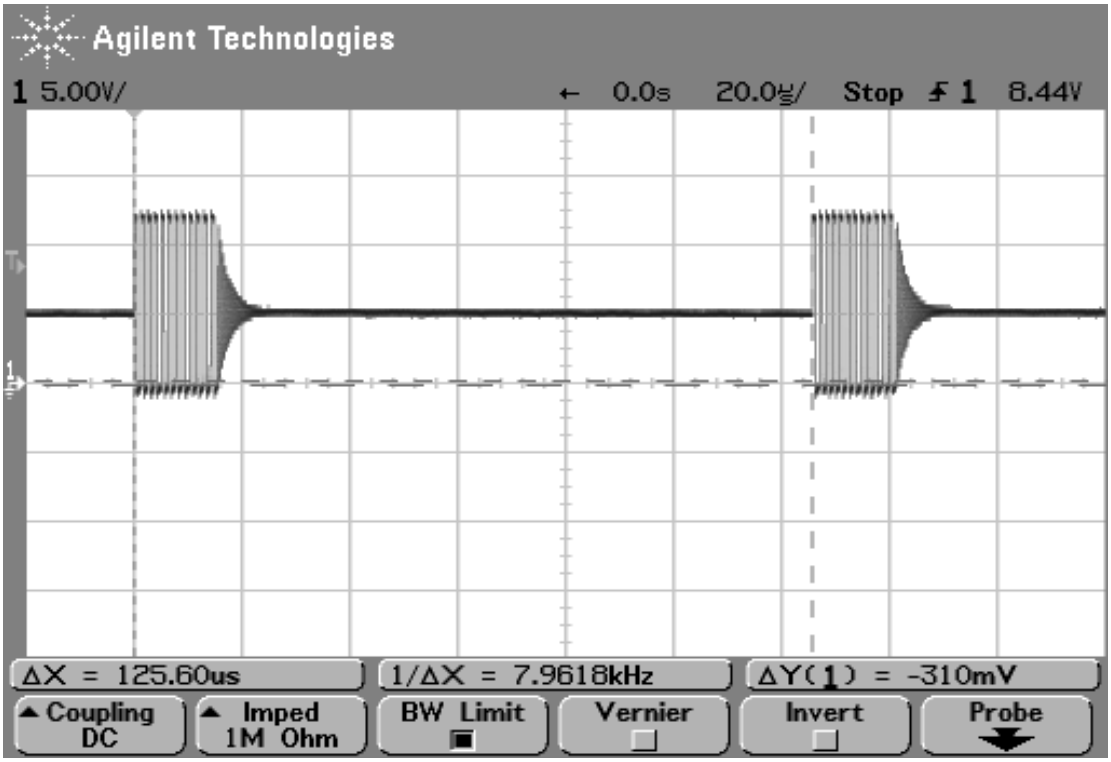
LM 25011, quasi the same circuit as the LM25011MY-EVAL, but works soso, shows different traces, something mystic behavior:

- Apply Vin, delivers 5.12V at output. Ok, little high, but ..
- Variing the input voltage from 10V to 32V (my target range is 21V to 30V) end up in variing the output voltage proportional. 10V ➔ 4.85V out, 32V ➔ 5,35V out. Hmmmm.
- Try to capture traces, same conditions as described in application note AN-1965 (SNVA396B.pdf).
- CCM, ok, same traces, nice.
- DCM, ????. The chip entered some kind of hicup mode, but so far as I know, the LM25011 doesnt support such a mode? Other way round, the signal is really stable and doesn't look like accidently generated. And lastly, entering a hicup mode at very light load is almost a good strategy!

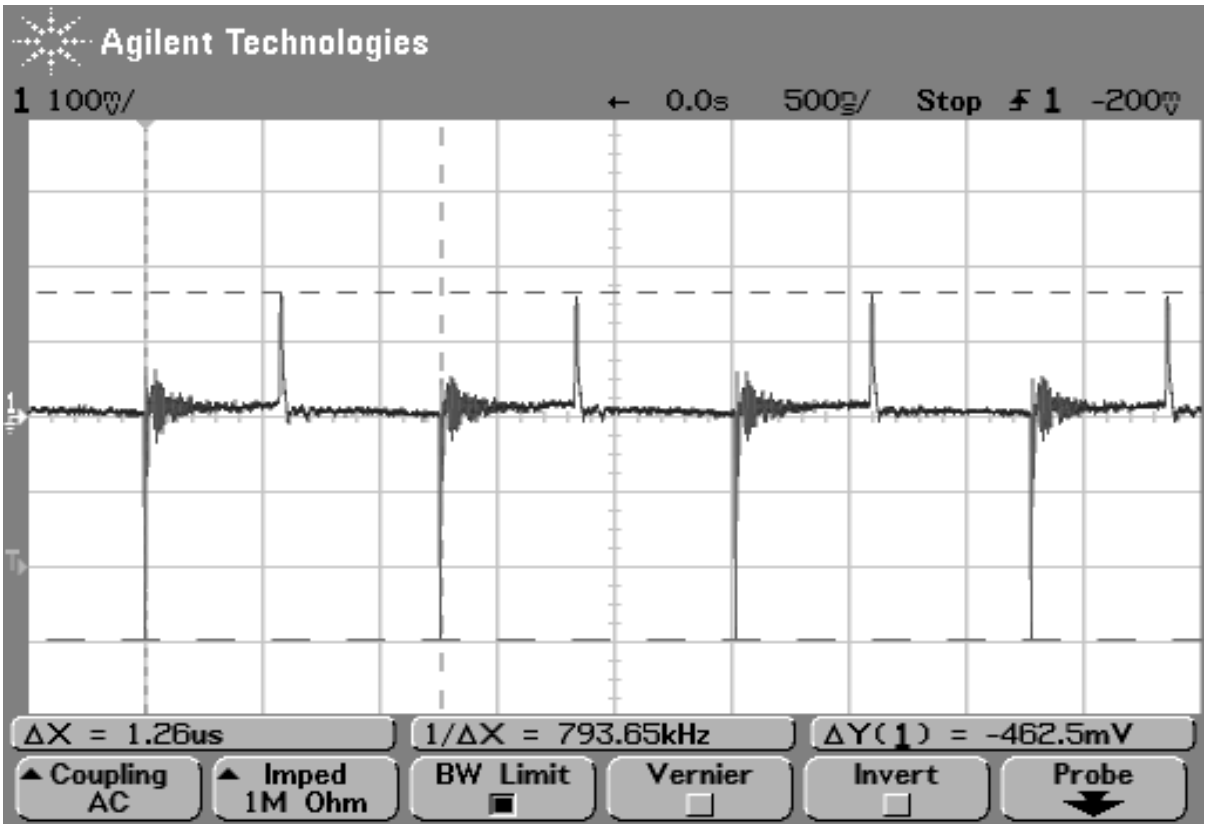


Ok, ~8khz hicup frequency, running exactly 12 cycles CCM and stopping, so the last cycle looks like a DCM pattern. Quite correct, isn't it? Very straight numbers, cant this be any kind of random generated signal?

Now my questions:

- Why is there a significant difference between my solution and the eval board. I have to tell you, that I used just the app note as reference, but I ordered a EVAL-board yesterday to be shure 100%.
- Why is there such close relation between Vi and Vout, which makes the circuit useless.

And why did my output looking like that?



Last but not least, I built two prototypes, and both show the same behavior, so errors caused by production can be omitted (to a reasonable percentage).