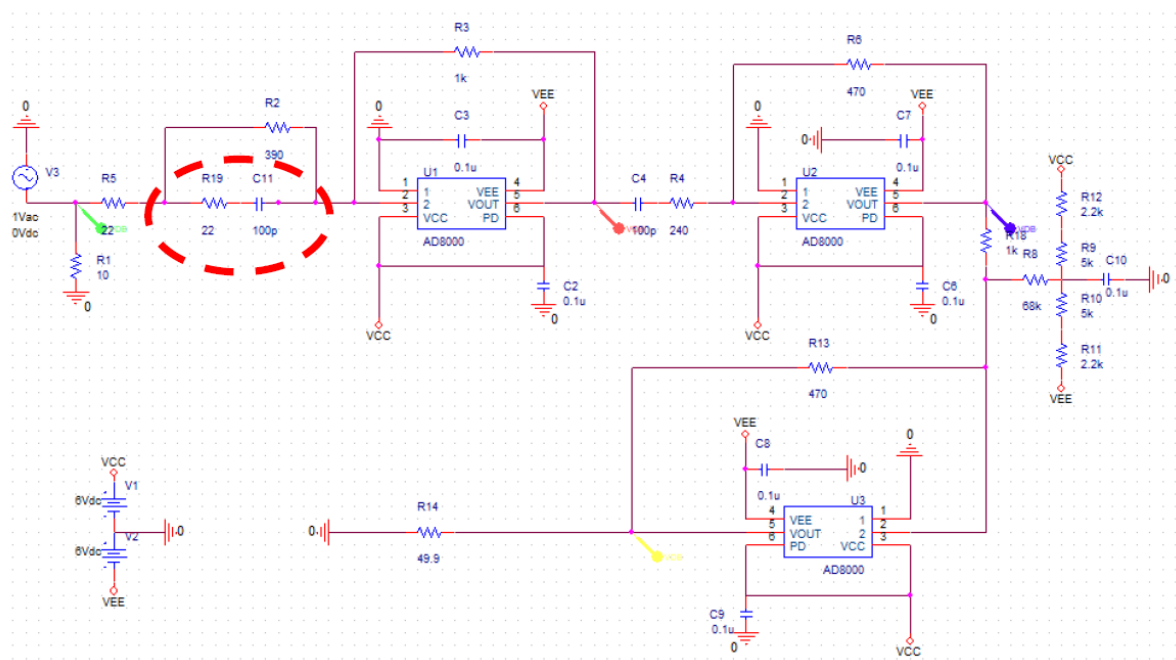


LAMPS Monthly Meeting

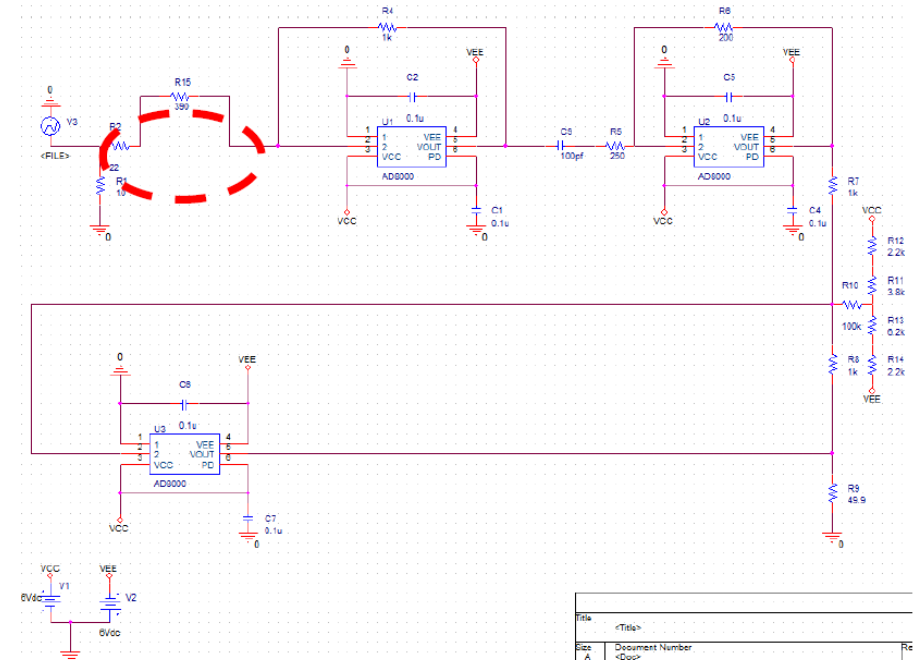
Jeahyunn Do
Hyugnjun Lee
Minjung Kweon
INHA Univ.

MPPC

- ▶ Compared a Pspice simulation with real data for checking they are similar.



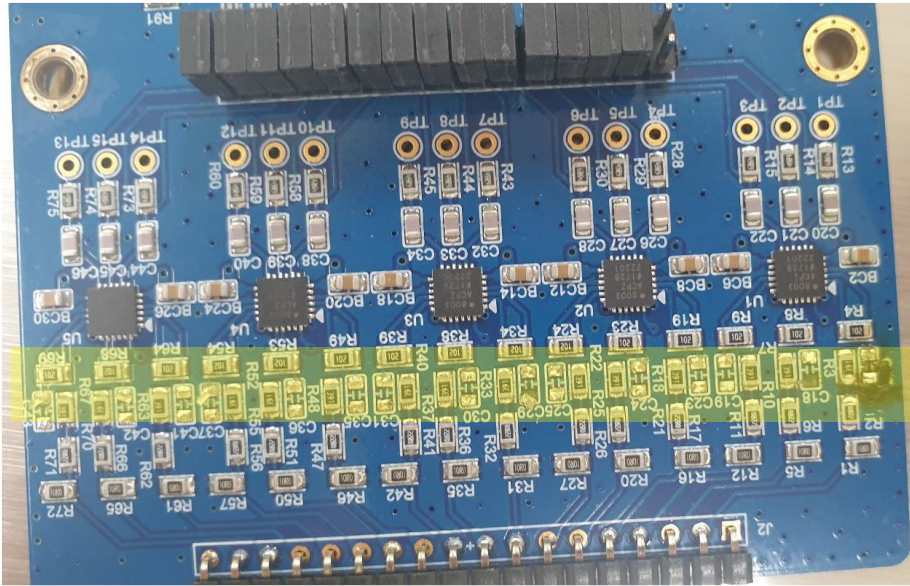
before modifying.



After modifying.

- ▶ Deleted the part of circuit in red circle and checked the difference of output signal for comparing a simulation.

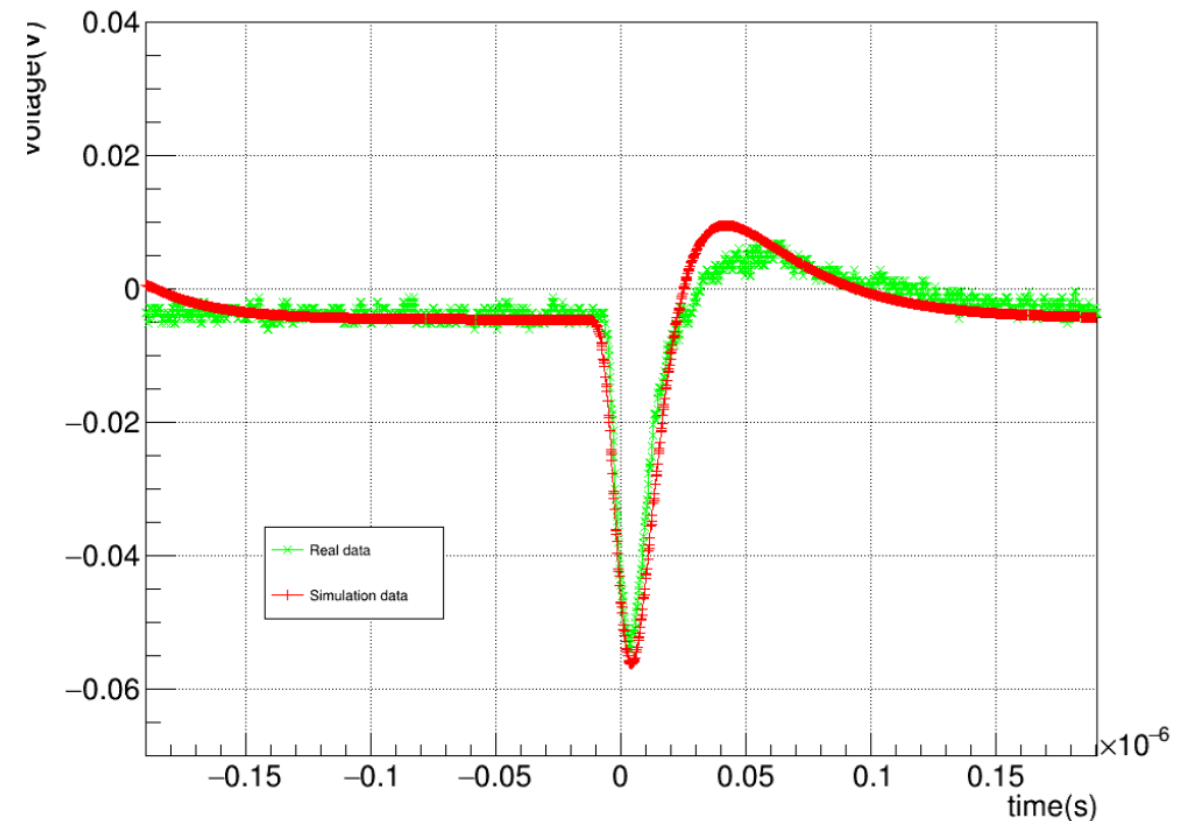
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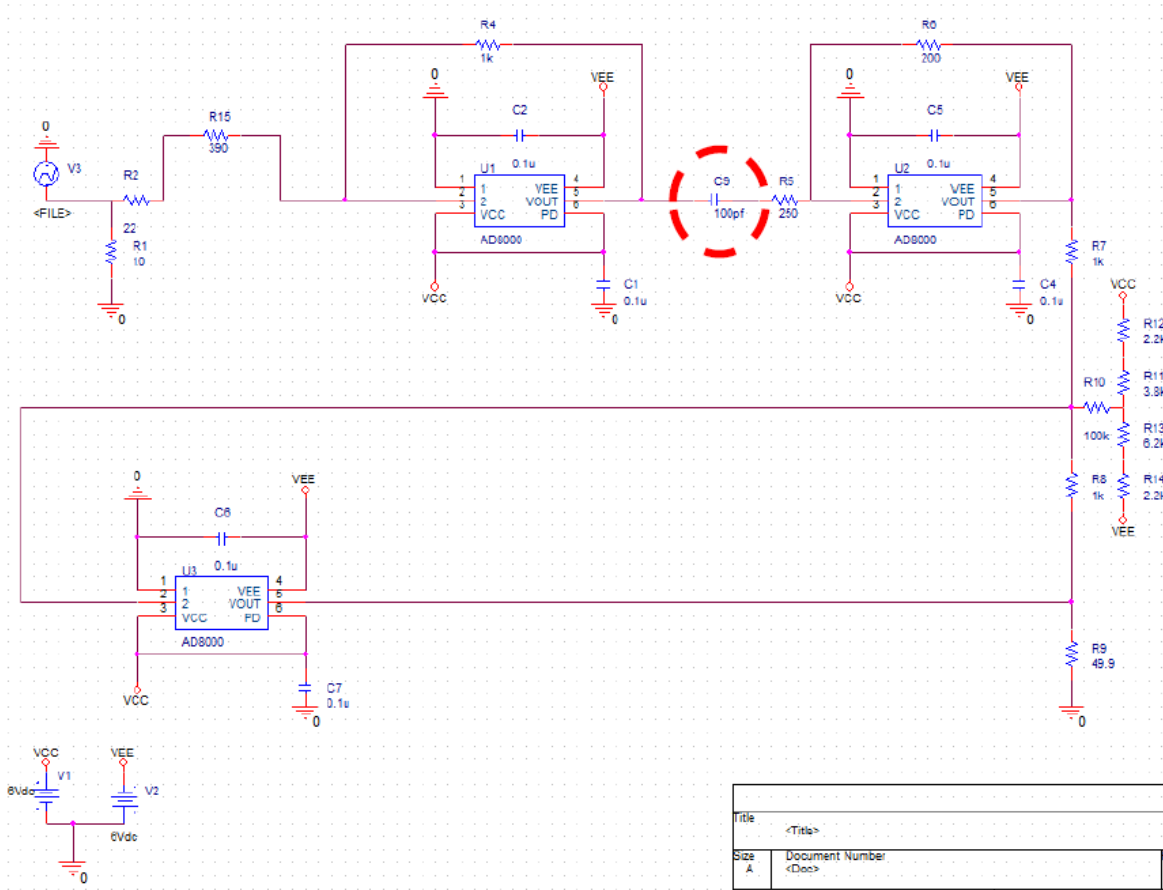
- ▶ I burned a one of capacitors by my mistake.
- ▶ I disassembled 14 capacitors.
: The yellow zone indicates the part of disassembled devices.

- ▶ We can check if real data is similar to simulation.
- ▶ We found the result of simulation is reliable.

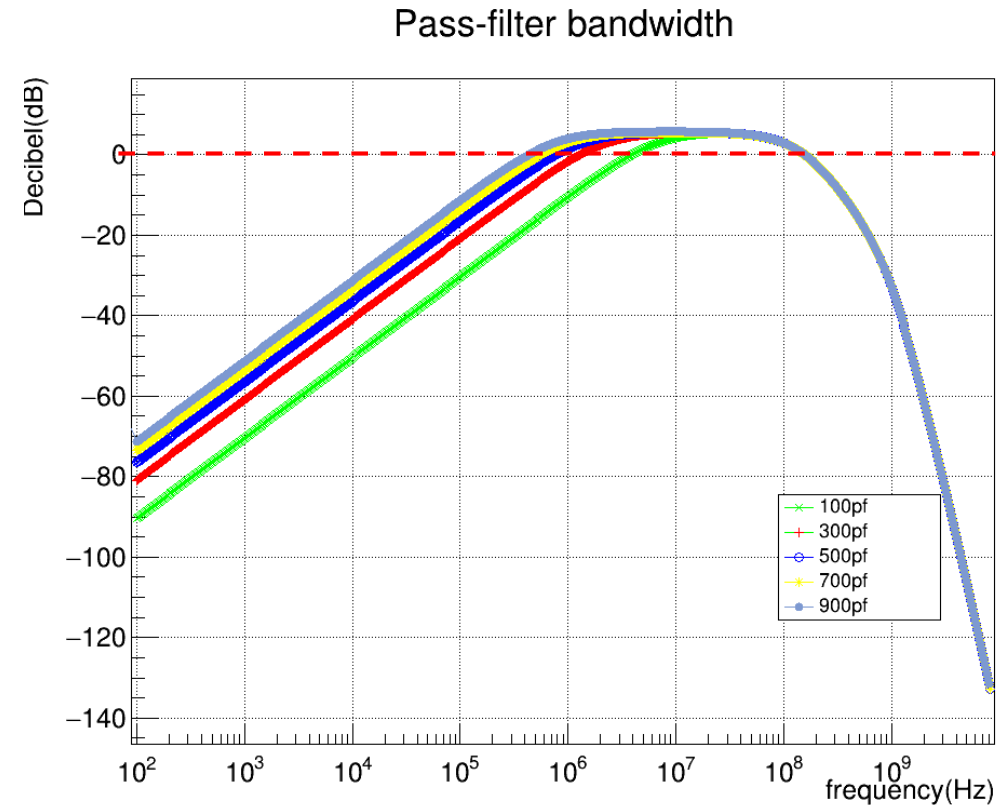
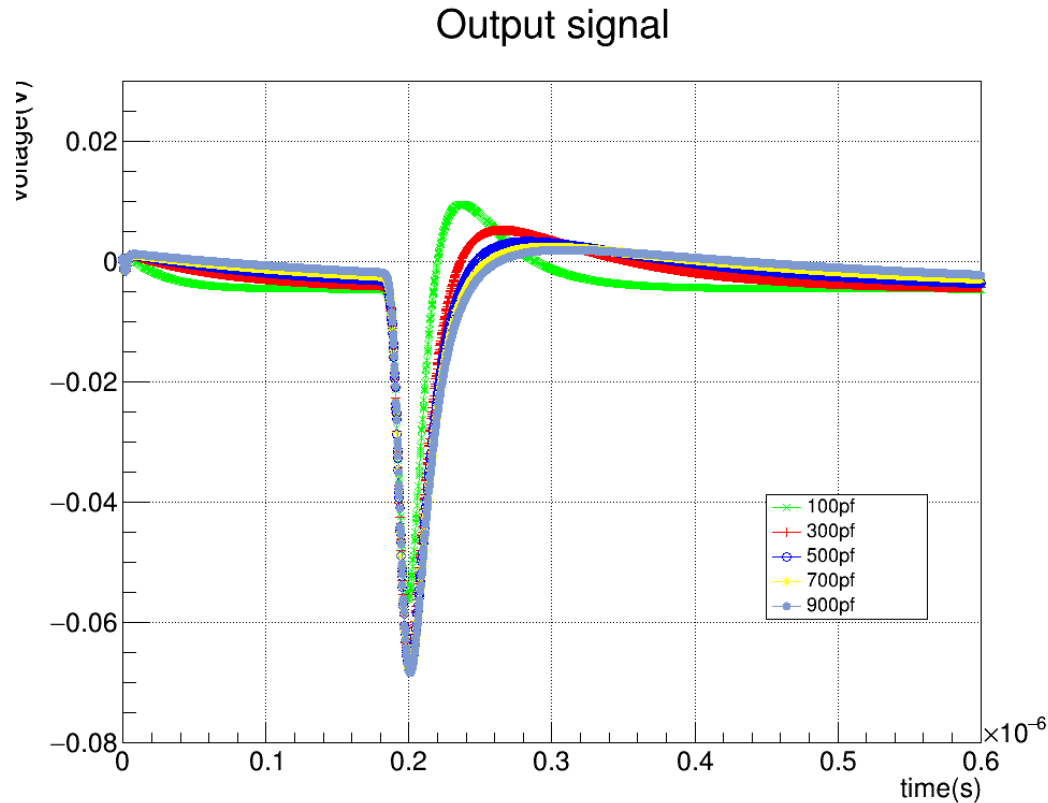
MPPC signal



MPPC

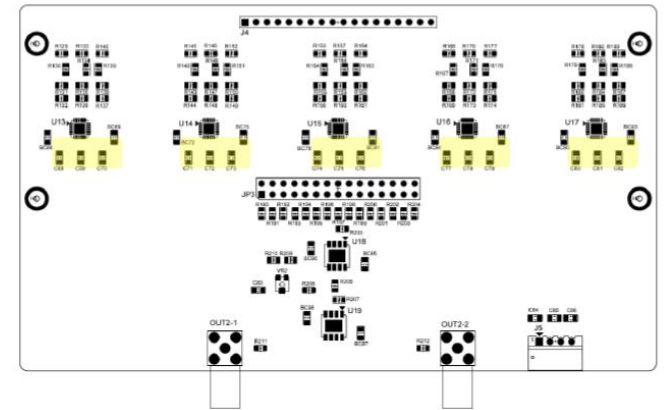
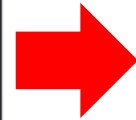
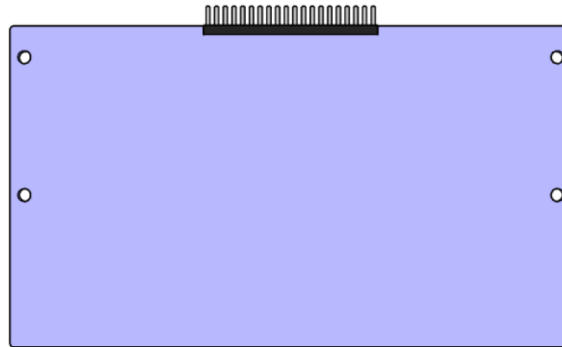
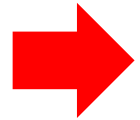
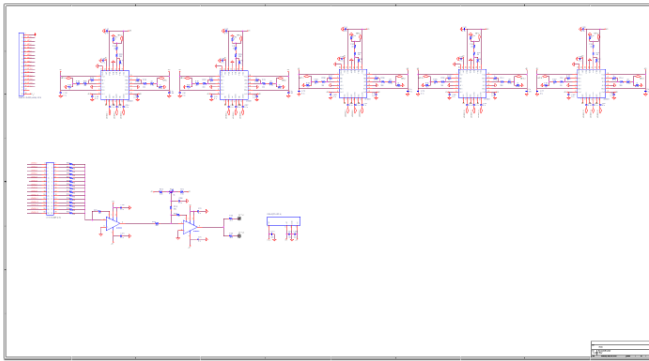
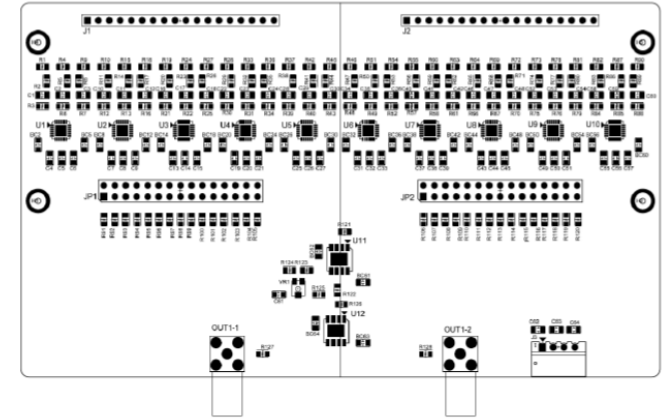
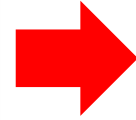
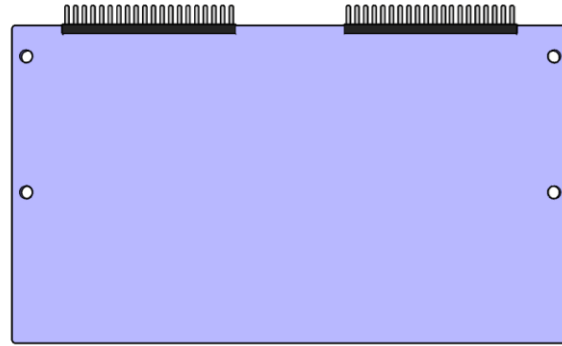
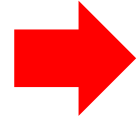
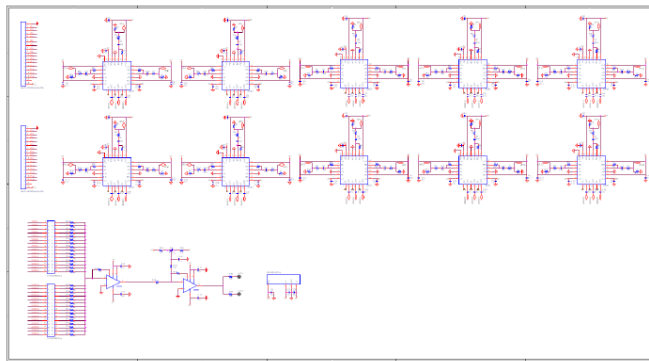


- ▶ For removing an overshoot, we modified a capacitor value in red circle.
- ▶ It causes to change of HPF bandwidth.
- ▶ We checked that an overshoot of output pulse and bandwidth as changing capacitor value from 100pF to 1000pF

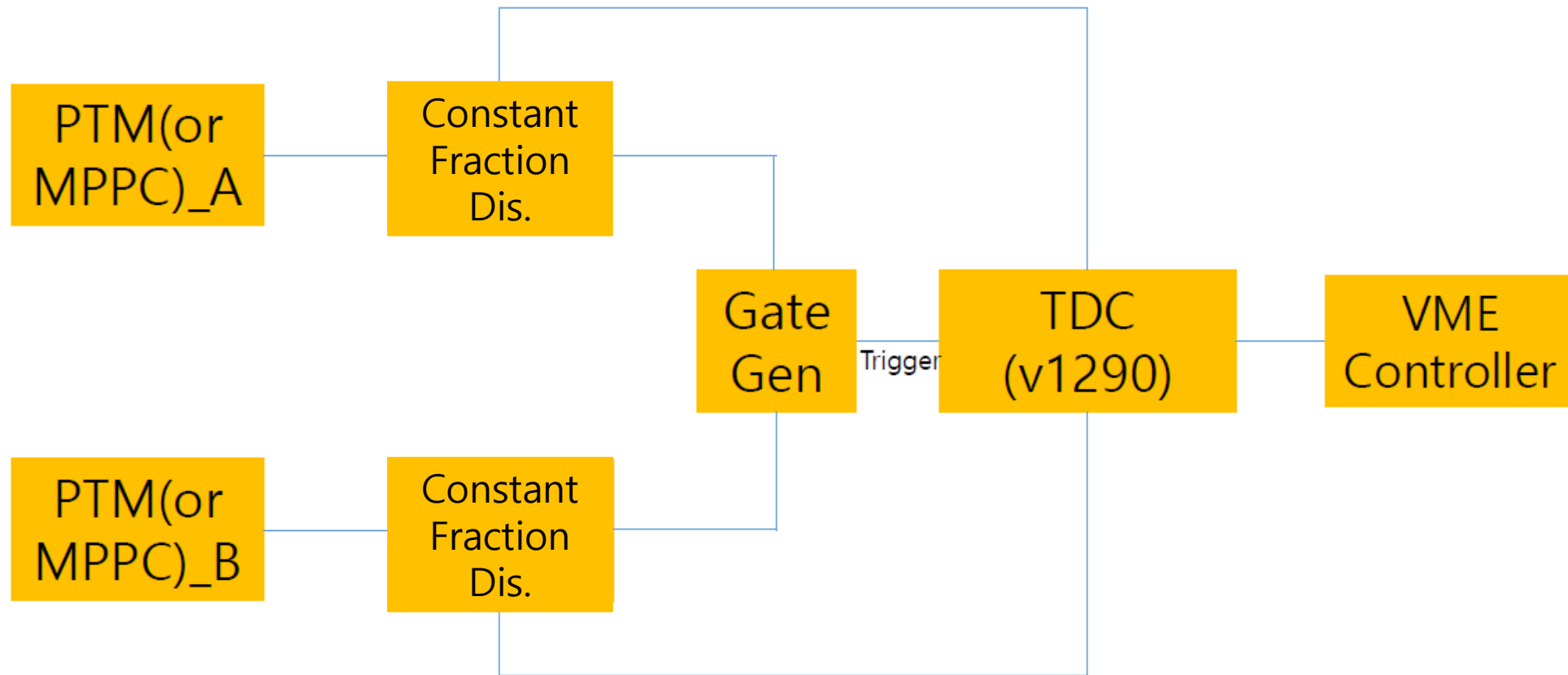


- ▶ The overshoot becomes smoother as capacitance increases.
- ▶ And bandwidth becomes larger too. (the frequency at dB = 0 :1.5Mhz at 100pF , 400kHz at 900pF)
- ▶ The amplification looks small on the right plot, but we can enlarge amplification as change a feedback resistance.

MPPC





- ▶ As I said in last meeting, we will make two versions of PCB.
- ▶ The one is a model that KOREA Univ. gave to us : It can connect two sensor boards.
The another is a model that we modified : It can connect one sensor board.
- ▶ The reason for making a PCB that connects only one sensor board is because it makes PCB modification easier
- ▶ A yellow part of right plot is modification part.



- ▶ We had a termination issue when we connected with each module.
- ▶ A TDC module can read a Trigger signal but can't read data signal.

Summary & Plan

- ▶ We finalized an order and a making PCB. We will receive PCB today.
- ▶ We will modify manually the capacitance as I mentioned for comparing with simulation.
- ▶ We will solve DAQ code issue as soon as possible.
- ▶ Our final goal is to finalize a starting counter model until Mid-July.

PLAN	6/ 3 rd week	6/ 4 th week	6/ 5 th week	7/ 1 st week	7/ 2 nd week	7/ 3 rd week
DAQ code						
Board test						
Final draft submission					