

Triger Pulse Comparator

Long Pulse



Medium Pulse



Yellow : Amplifier output X4
Green: Comparator output
Blue: Trigger for Pulse Generator
Red : Fast Pulse Generator Output



Short Pulse

Yellow : Amplifier output X4

Green: Comparator output

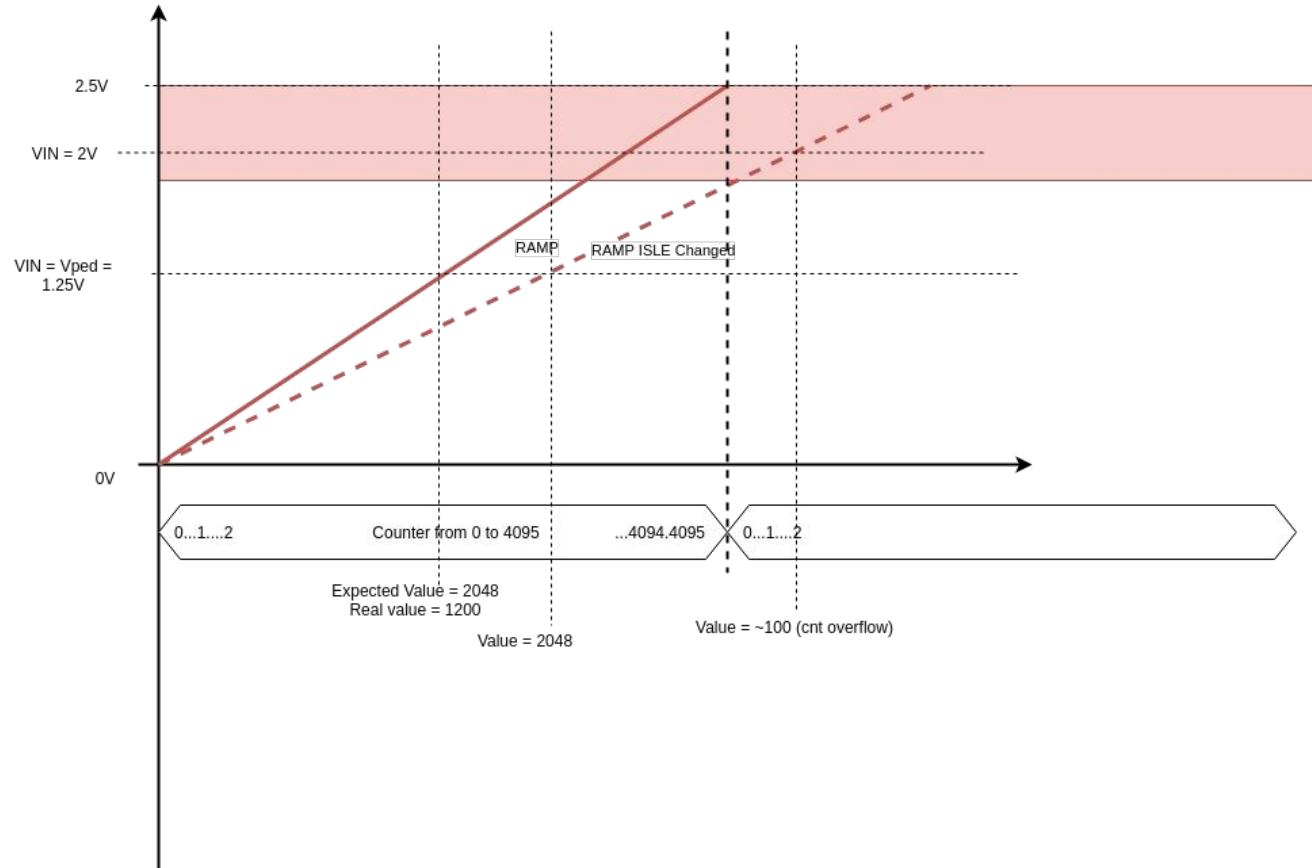
Blue: Trigger for Pulse Generator

Red : Fast Pulse Generator Output

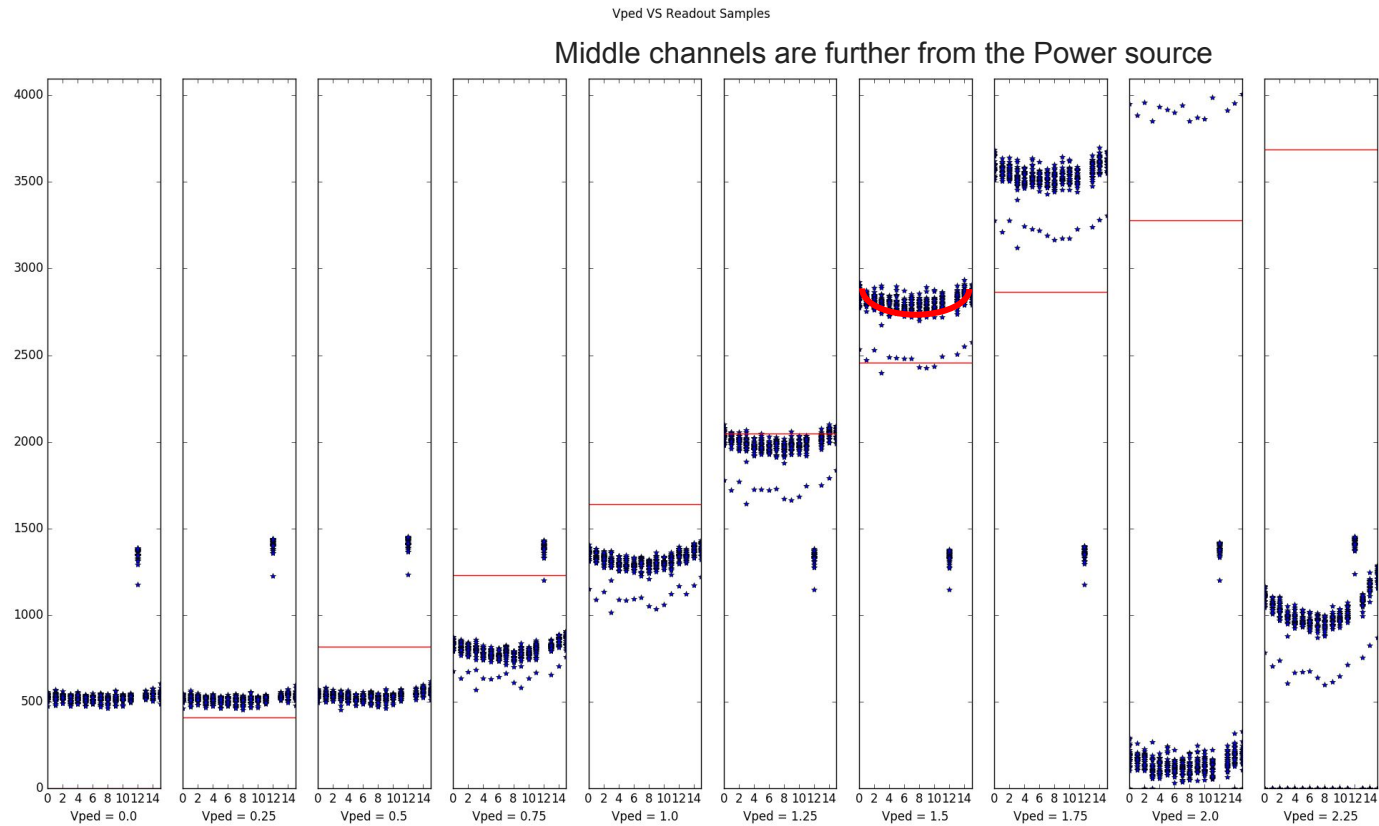


New Circuit ?

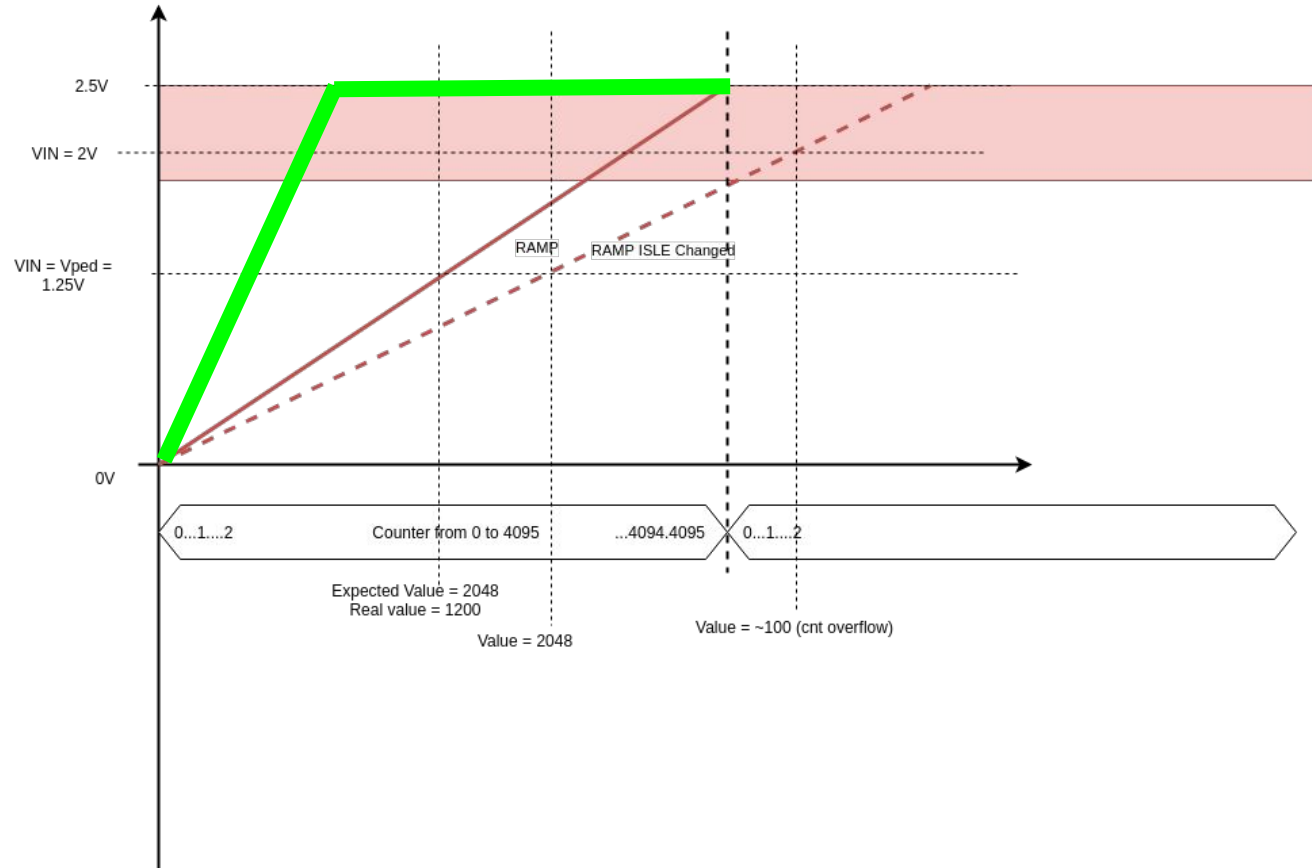
Readout TARGETC



Readout TARGETC



Readout TARGETC

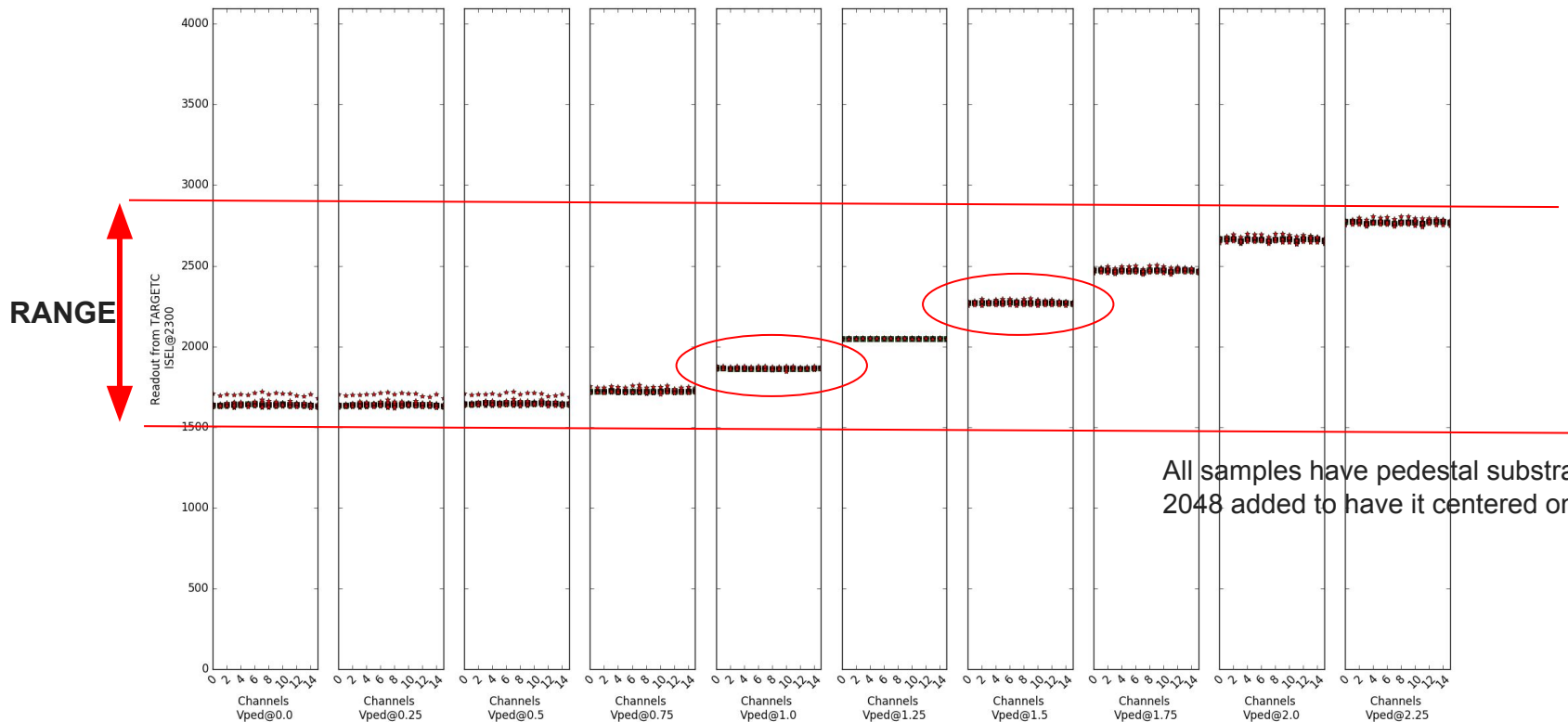


Readout TARGETC

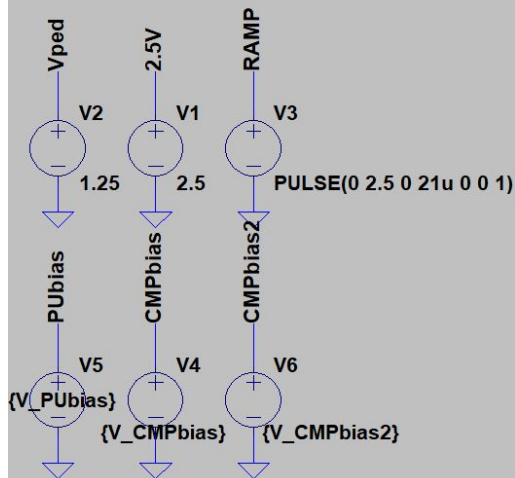
Step 1)
ISEL to 2300 and Vped @ 1.25V
Find pedestal

Step 2)
ISEL to 2300
Rerun simulation for different Vped.

Vped VS Readout Samples



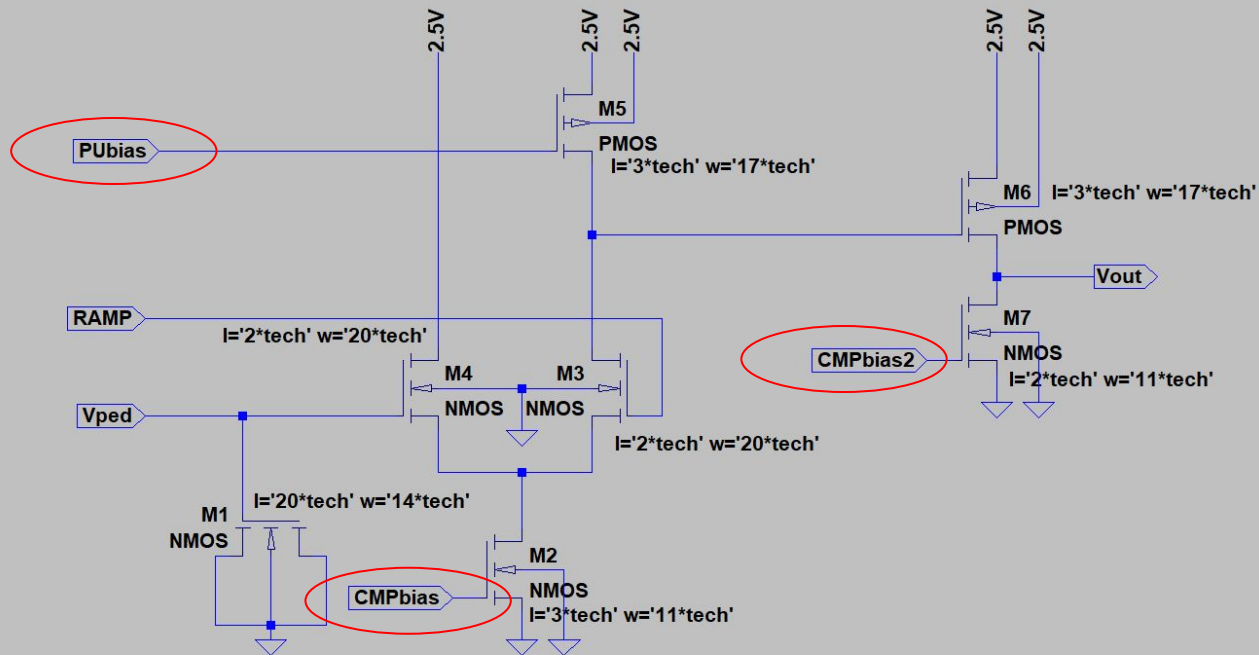
Input Voltage/Parameter Bias



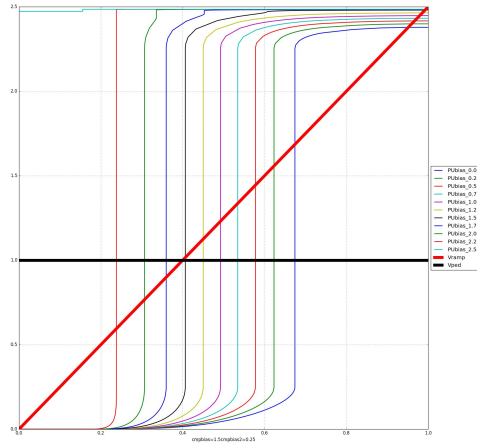
Parameters of Simulation :

```
.param tech=0.12u
.step param V_CMPbias2 0 2.5 0.25
.step param V_CMPbias 0 2.5 0.25
.step param V_PUBias 0 2.5 0.25
.tran 22u
```

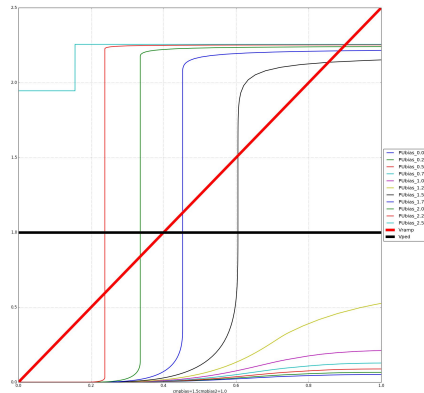
Circuit under Simulation



CMPbias = 1.5V and CMPbias2 = 0.25 V



CMPbias = 1.5V and CMPbias2 = 1.0 V



Technology of transistors for better simulations ?

Vped VS Readout Samples

