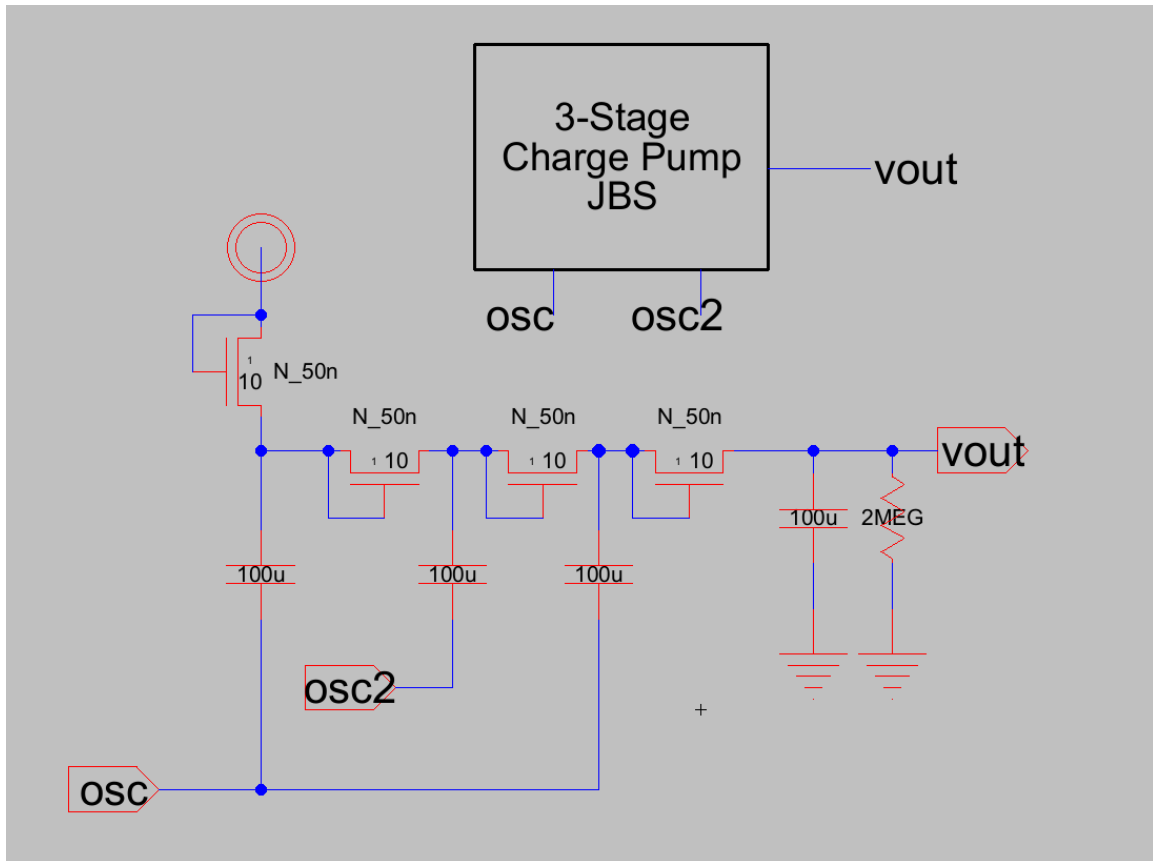


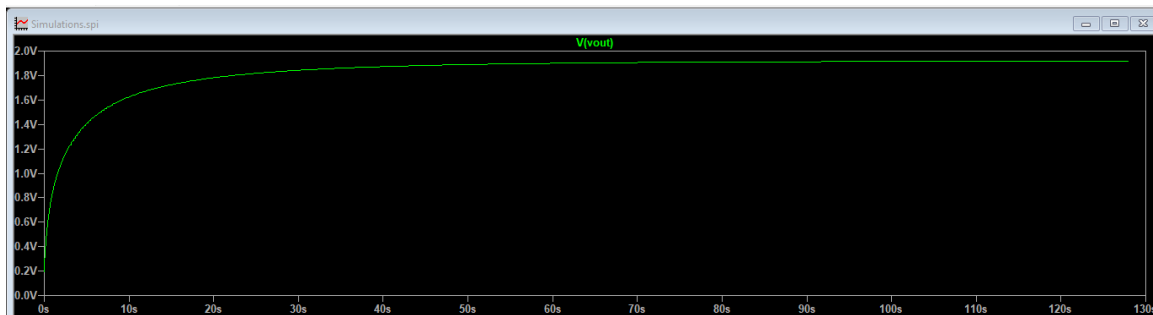
# Lab 6

Name: Jameson Stanley Date: November 5, 2025, 2025

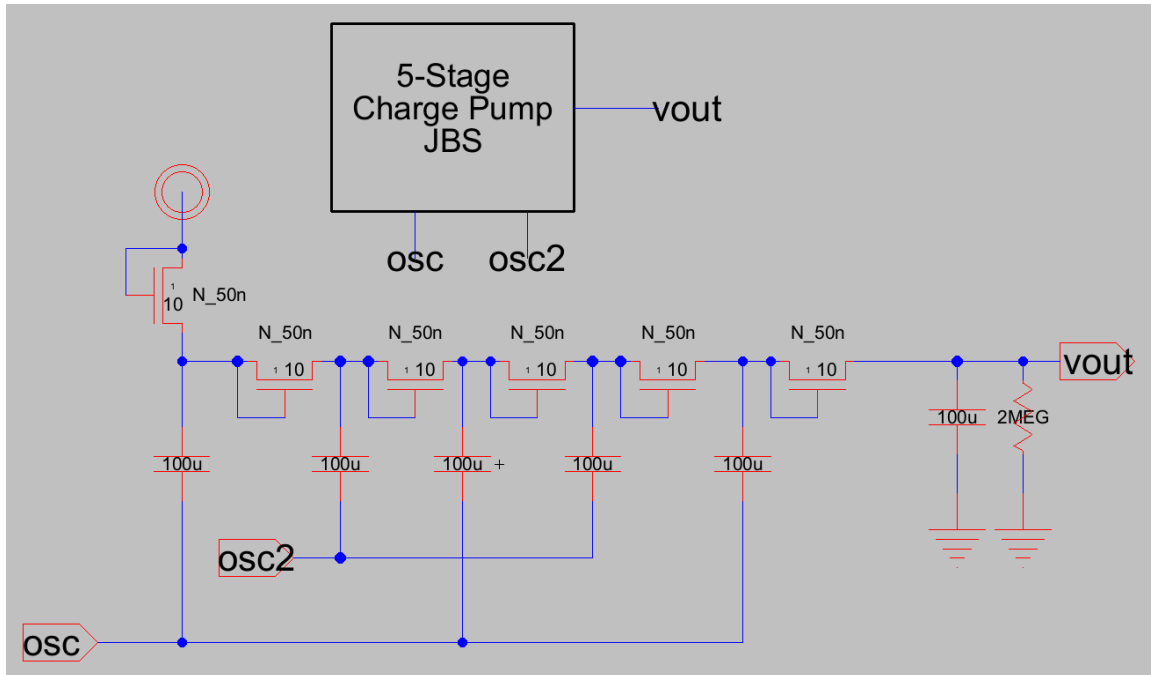
## 3-Stage Charge Pump Schematic



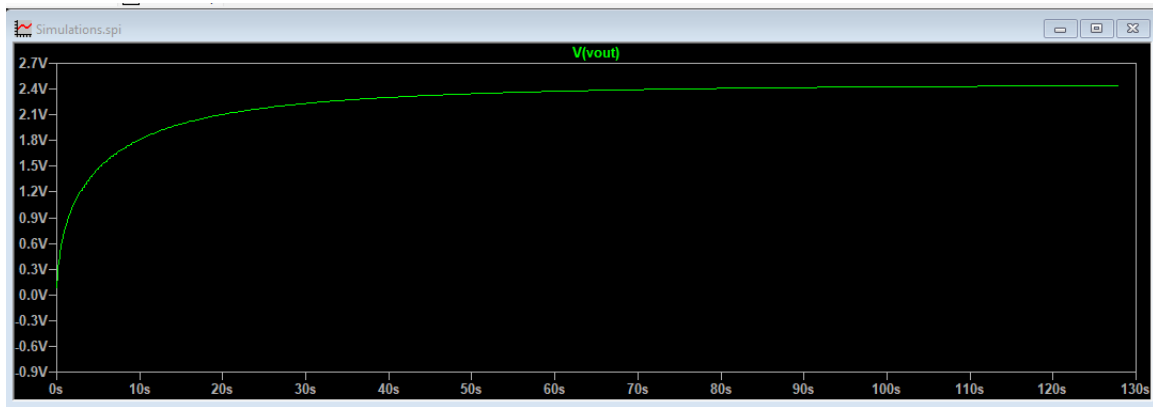
## 3-Stage Charge Pump Simulation



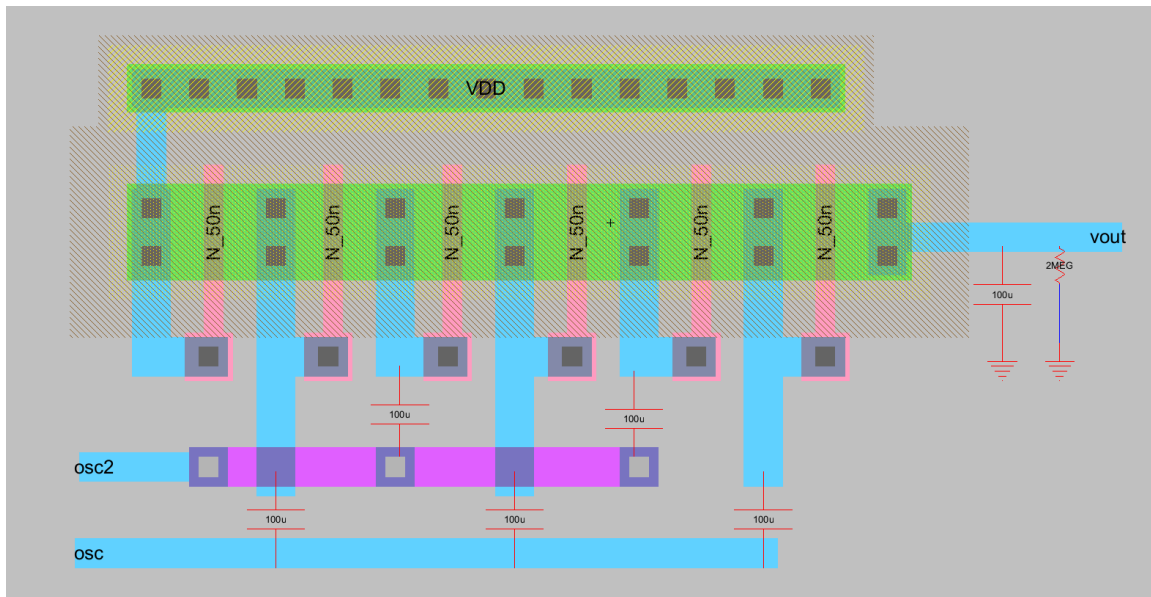
## 5-Stage Charge Pump Schematic



## 5-Stage Charge Pump Simulation

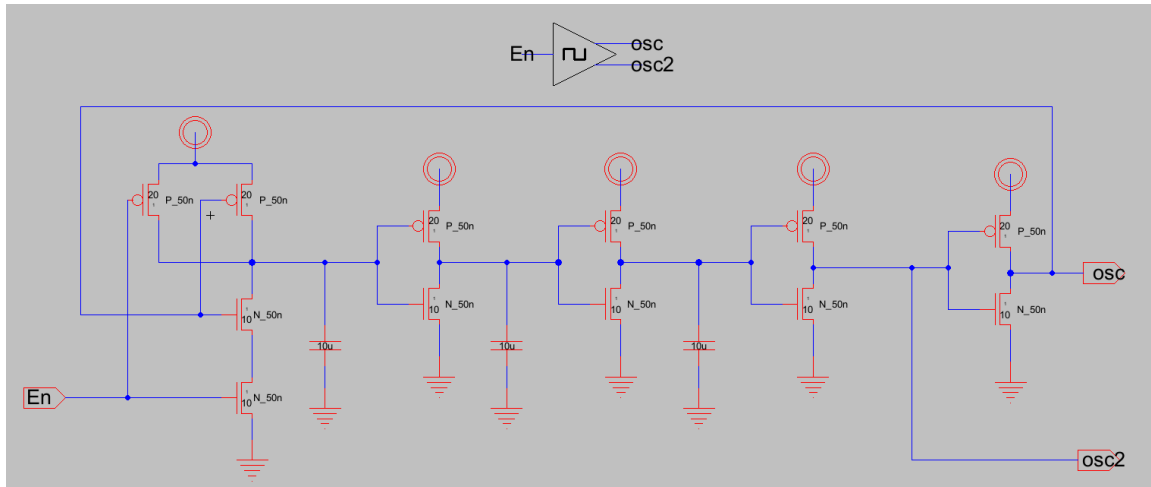


## 5-Stage Charge Pump Layout

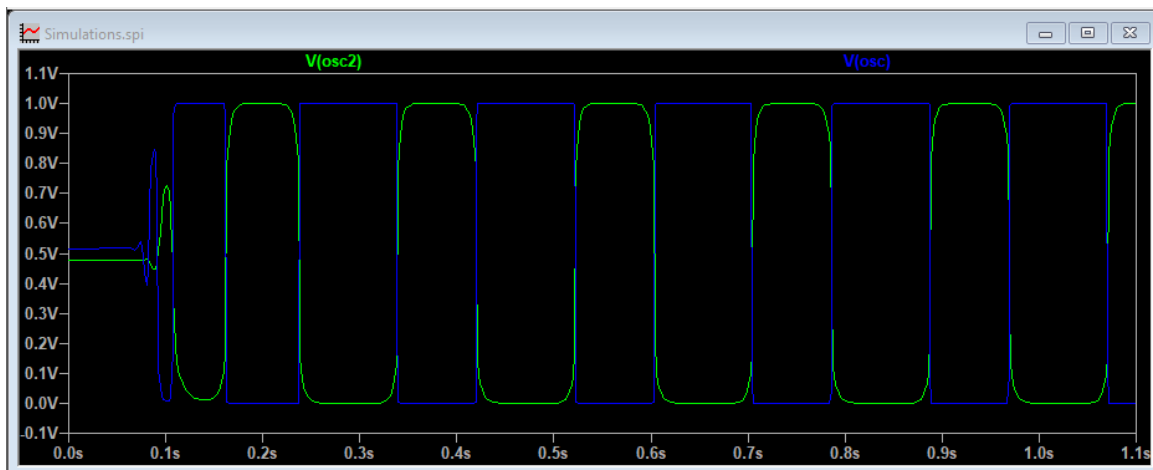


The layout design composes of 6 NMOS transistors in line. This design was chosen for its inline and organization which will allow for easier assembly of the final DC-DC Charge Pump design.

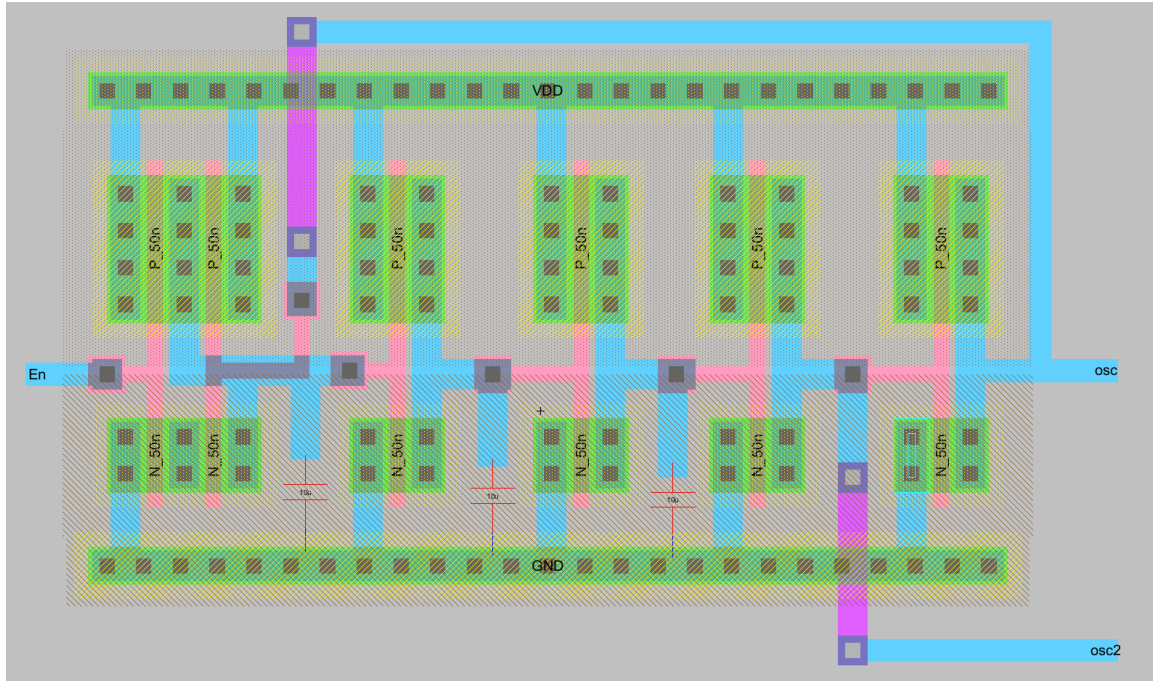
## Ring Oscillator Schematic



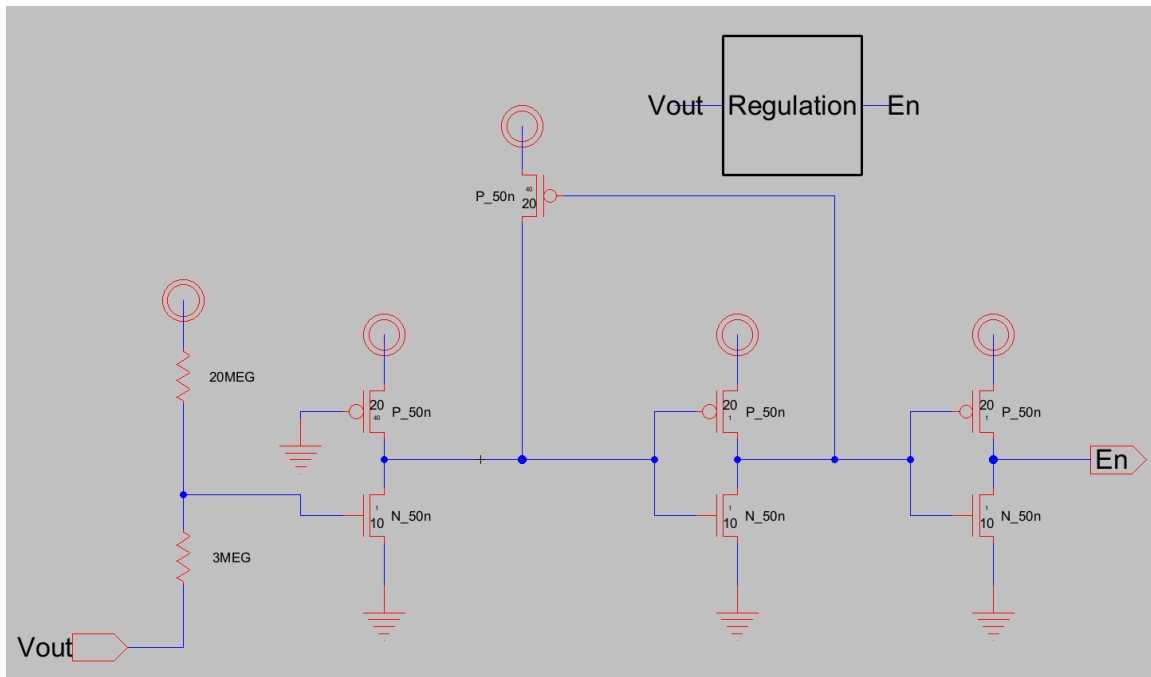
## Ring Oscillator Simulation



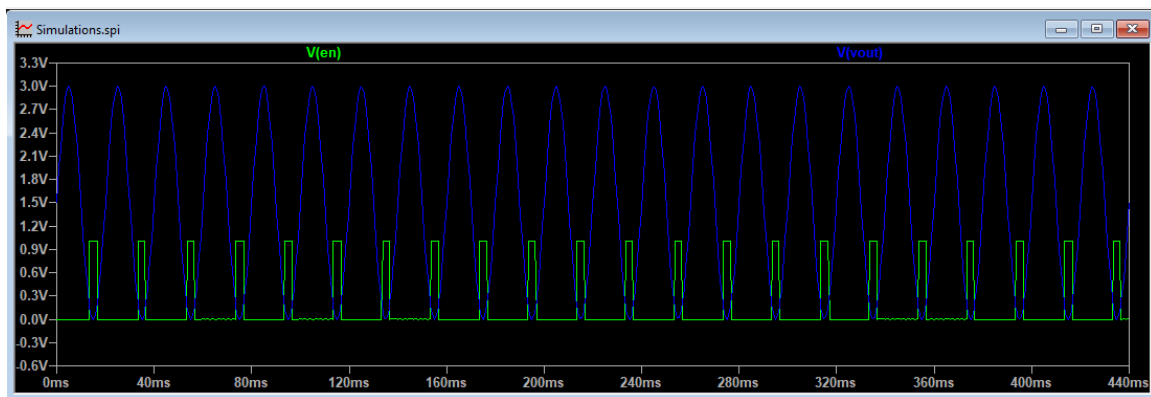
## Ring Oscillator Layout



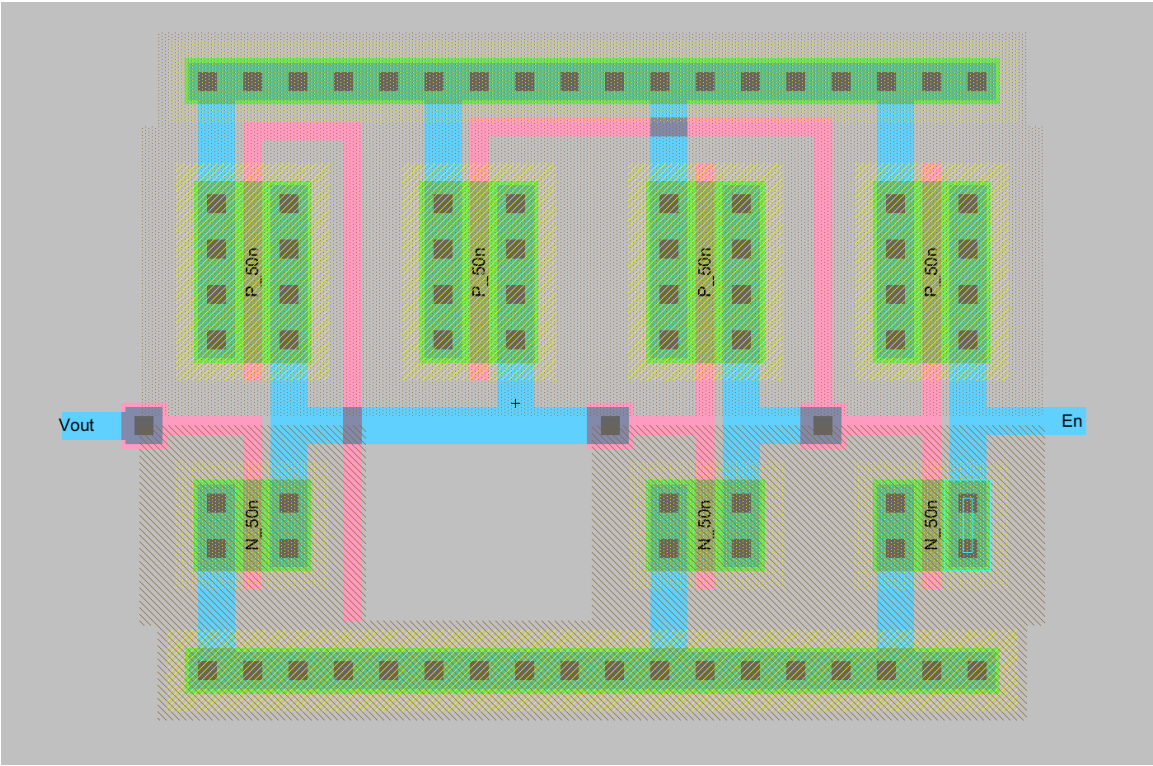
## Regulator Circuit Schematic



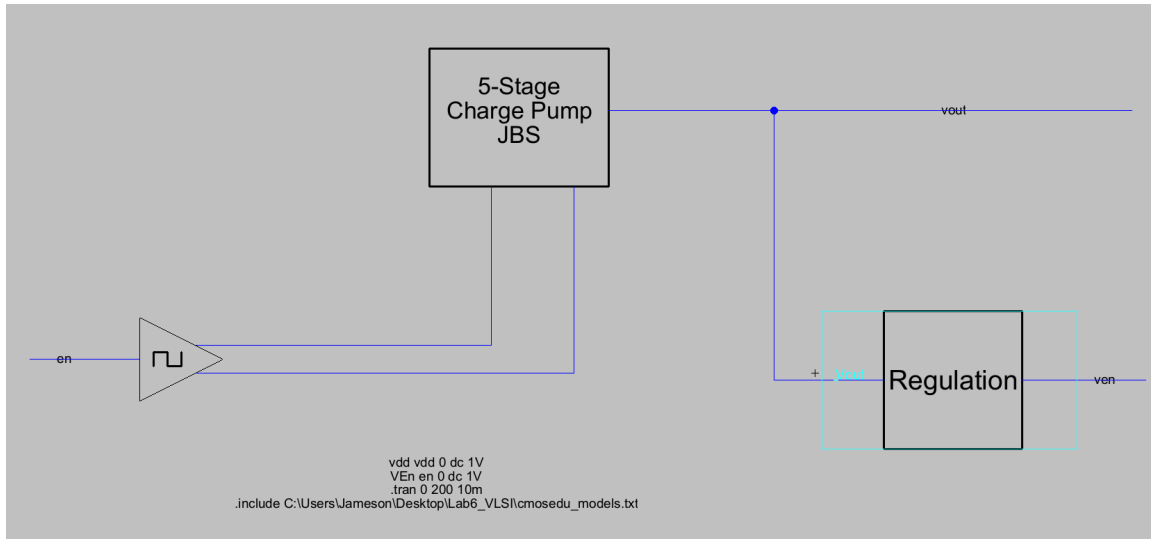
## Regulator Circuit Simulation



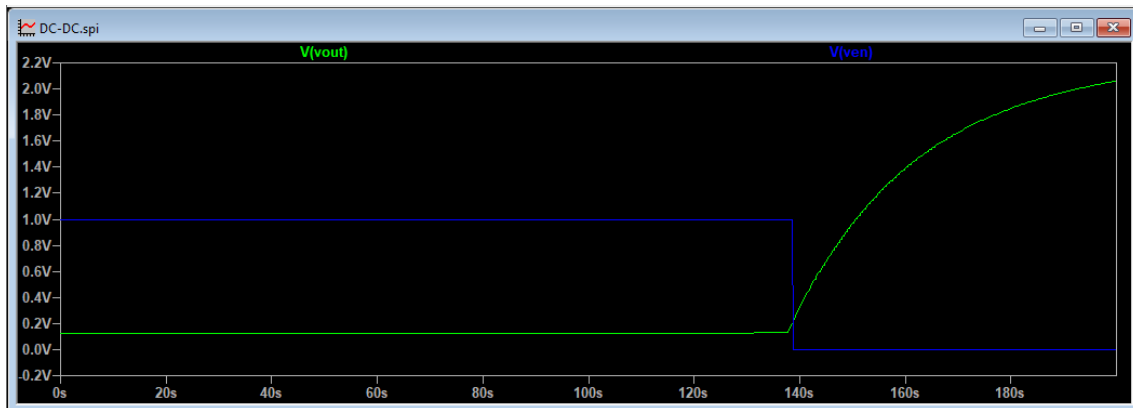
Regulator Circuit Layout



## DC-DC Charge Pump Schematic

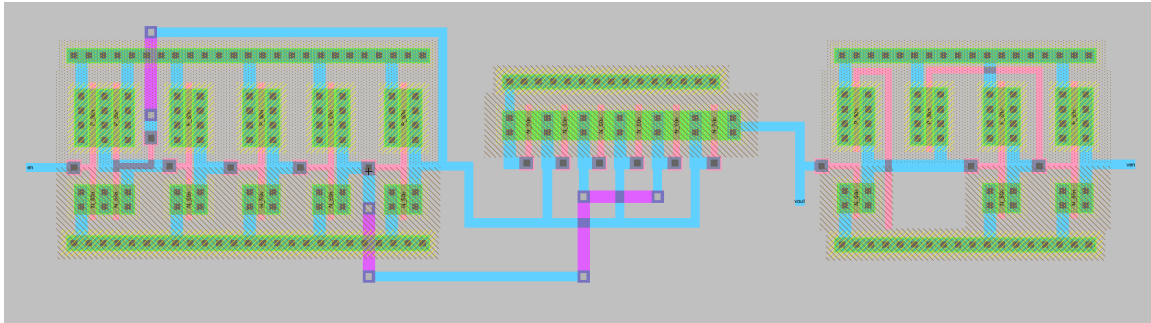


## DC-DC Charge Pump Simulation





## DC-DC Charge Pump Layout



## NRC and DRC Check

All pass NRC and DRC checks