

EE 421 / ECG 621

Digital IC Design

Lecture 5

Sept. 8, 2021

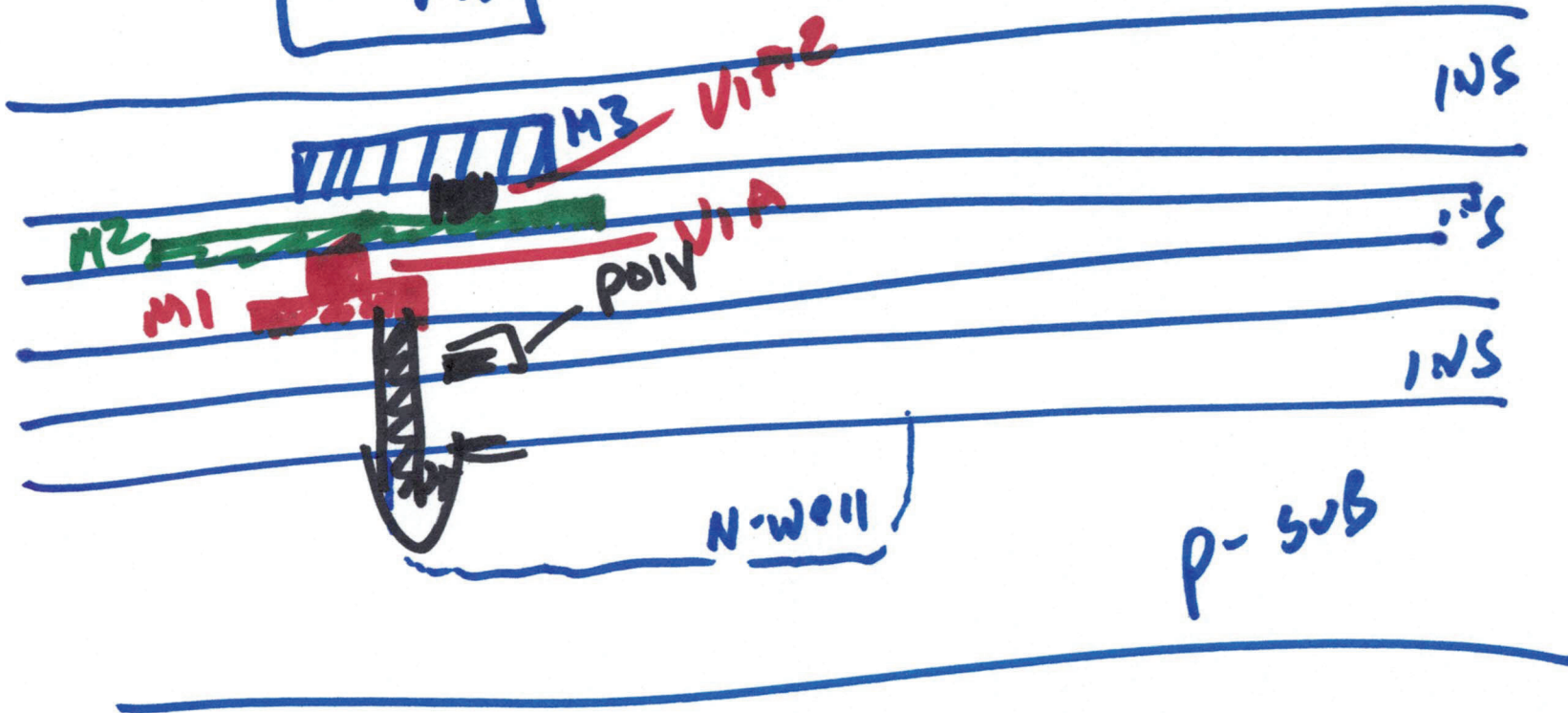
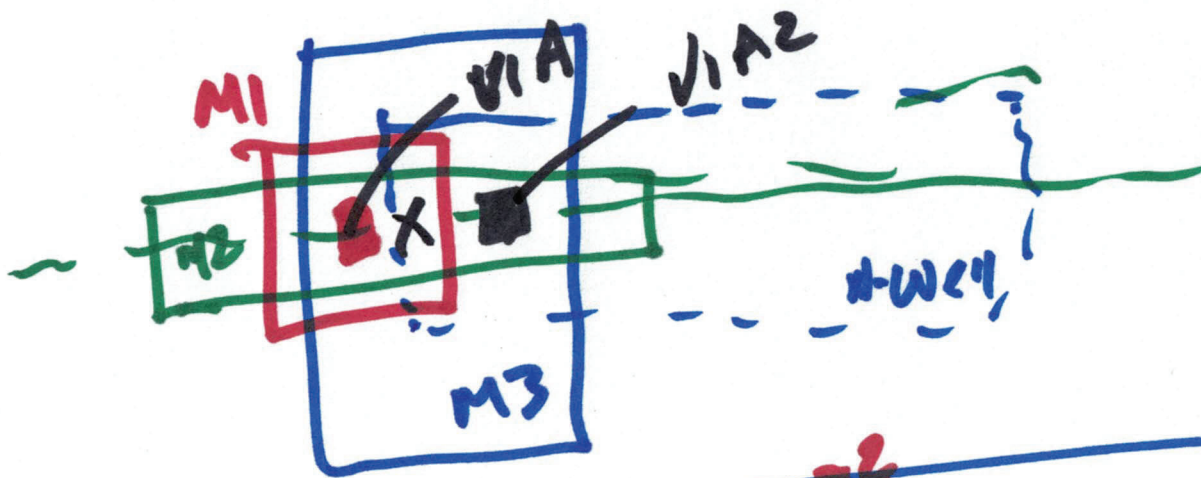
PASSIVATION
SiN
SiO₂

top of chip

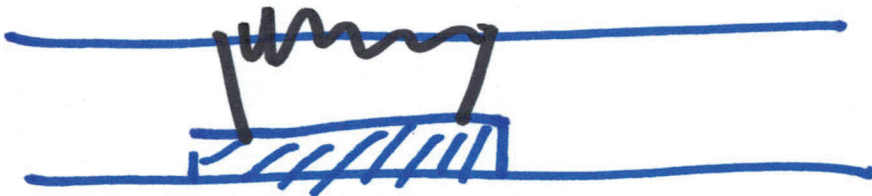
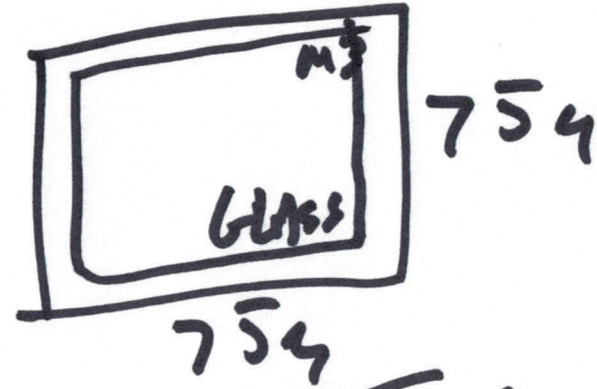
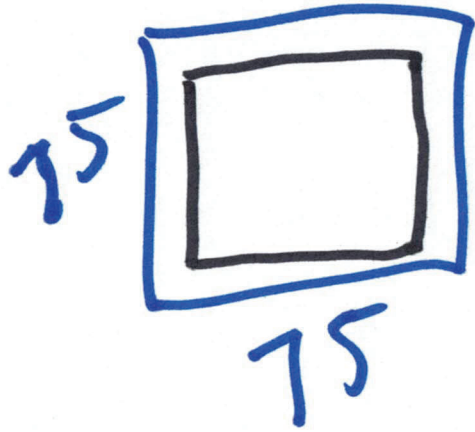
N-well
wires
metal 1) contact
metal 2) via (M12)
metal 3) via (M23)
etc



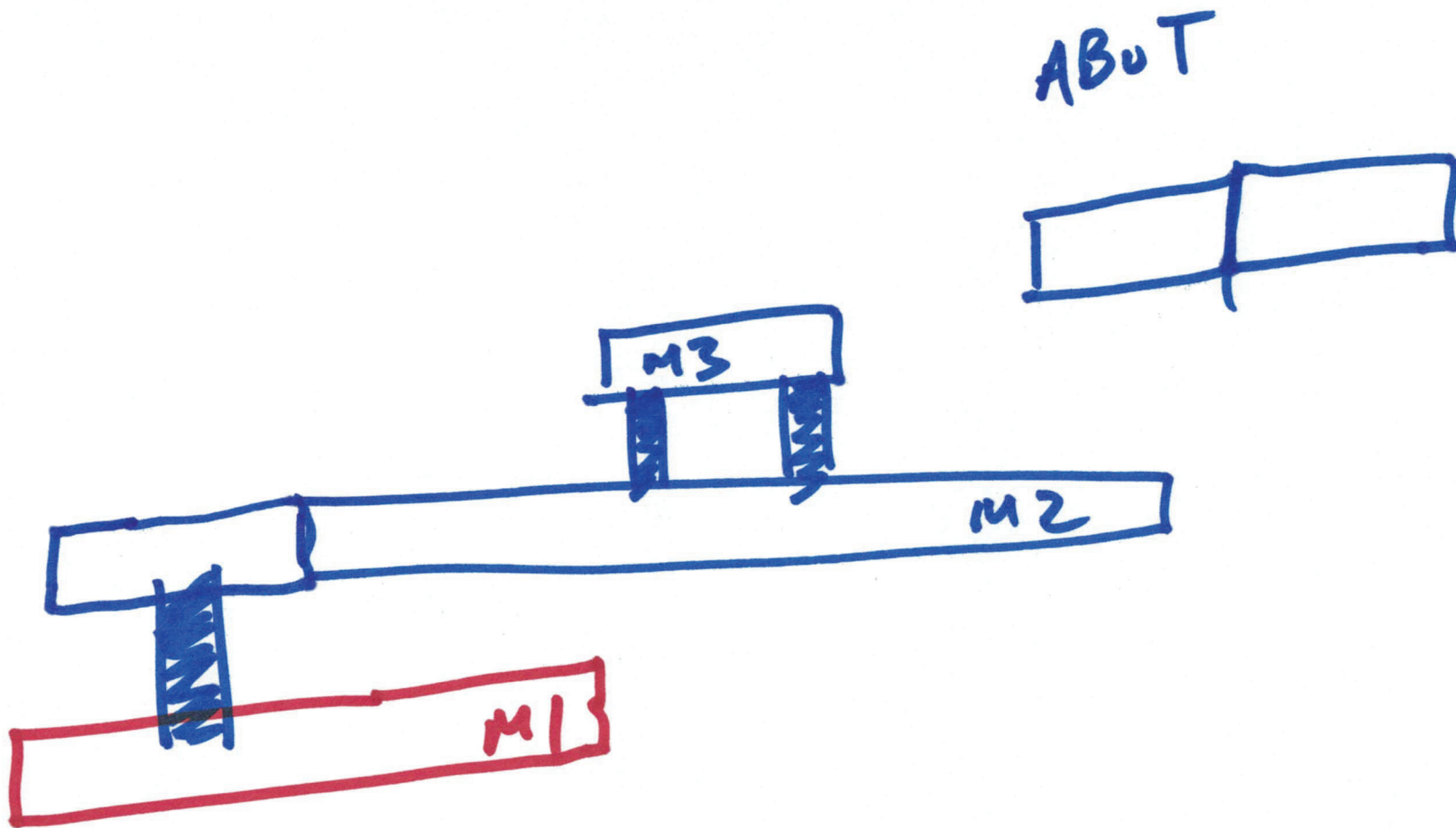
1)



2)

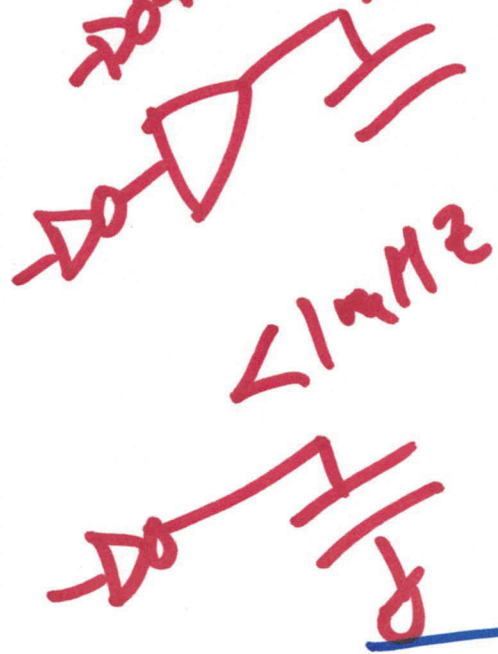


3)

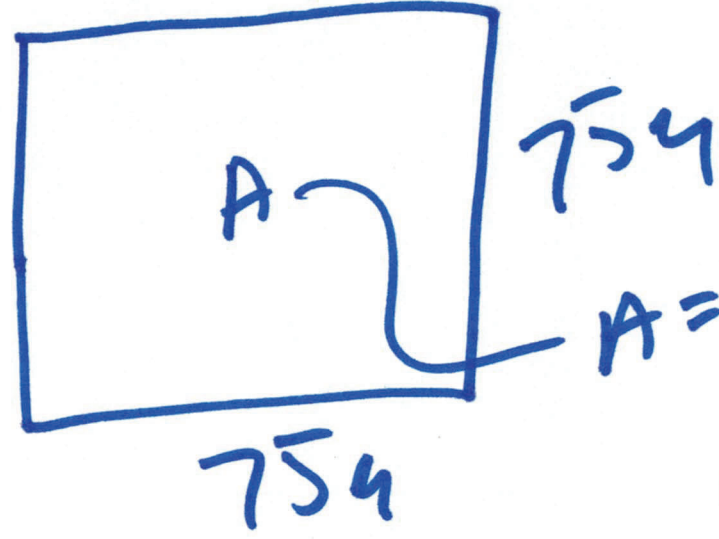


4)

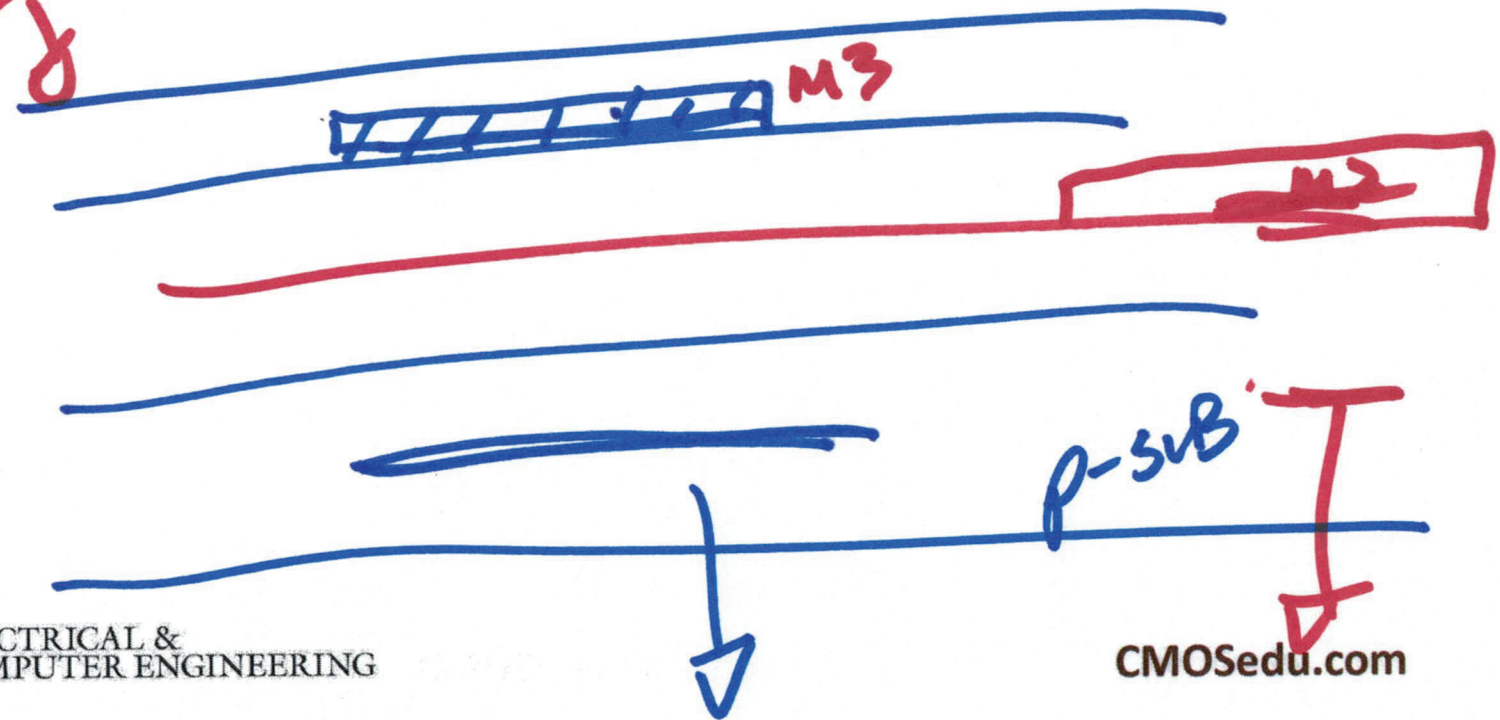
$> 100\text{ MHz}$



$P = 300\text{ m}$



$A = 75 \times 75 \mu\text{m}^2$
 $C = \frac{100\text{ aF}}{\mu\text{m}^2} \times 75 \mu\text{m} \times 75 \mu\text{m}$



5