

Full scale output of An DAC

V_{REF}? Resolution × 2^N?
(smallest change
in voltage)

$$V_{FS} = \frac{2^{N-1}}{2^N} \cdot V_{REF} = \boxed{\frac{V_{REF}}{2^N}} \cdot 2^{N-1}$$

DNL / INL

The CS layers

Lambda Rule

$$1 \lambda = \underline{\underline{300 \text{ nm}}}$$

2 λ length or width
for the CMOS
Transistor

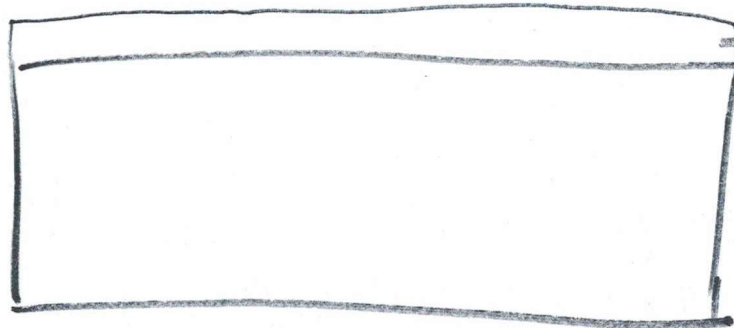
$$2 \lambda = \boxed{600 \text{ nm}}$$

$\frac{1}{4} \lambda$

300nm / 600nm

3 layers of metals

500nm



Fox
Field oxide

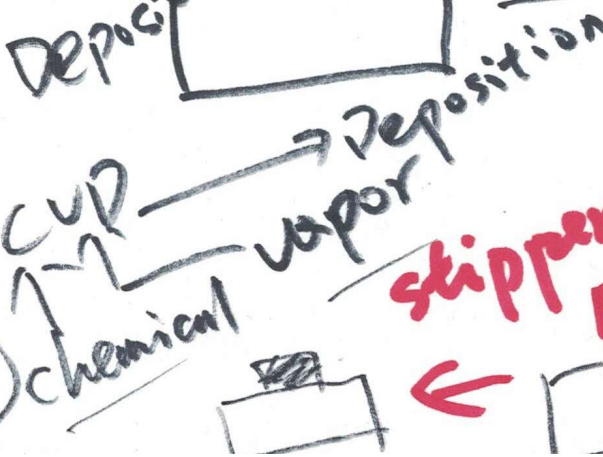
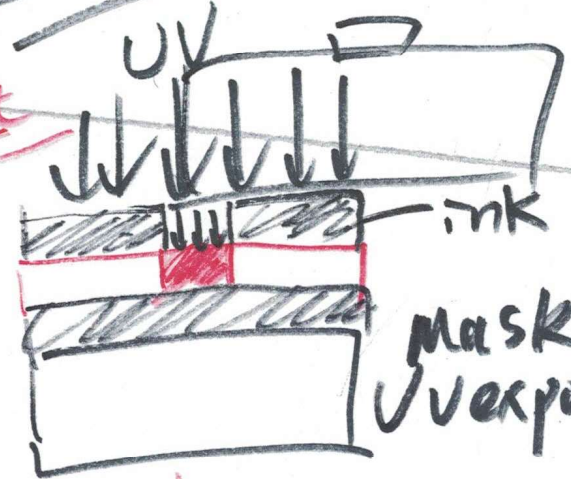
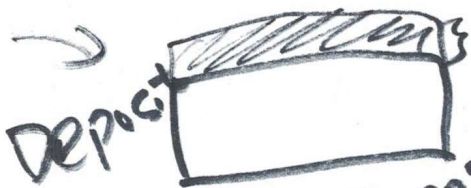
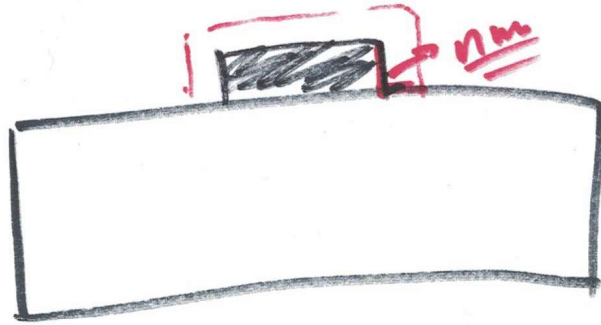
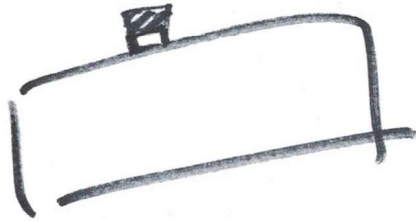
2

Bottom-up

Photo-lithography

Final Product

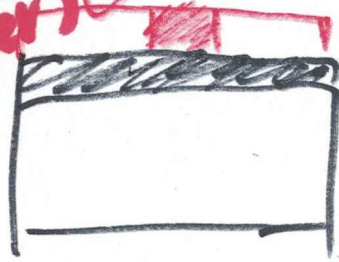
Photo resist

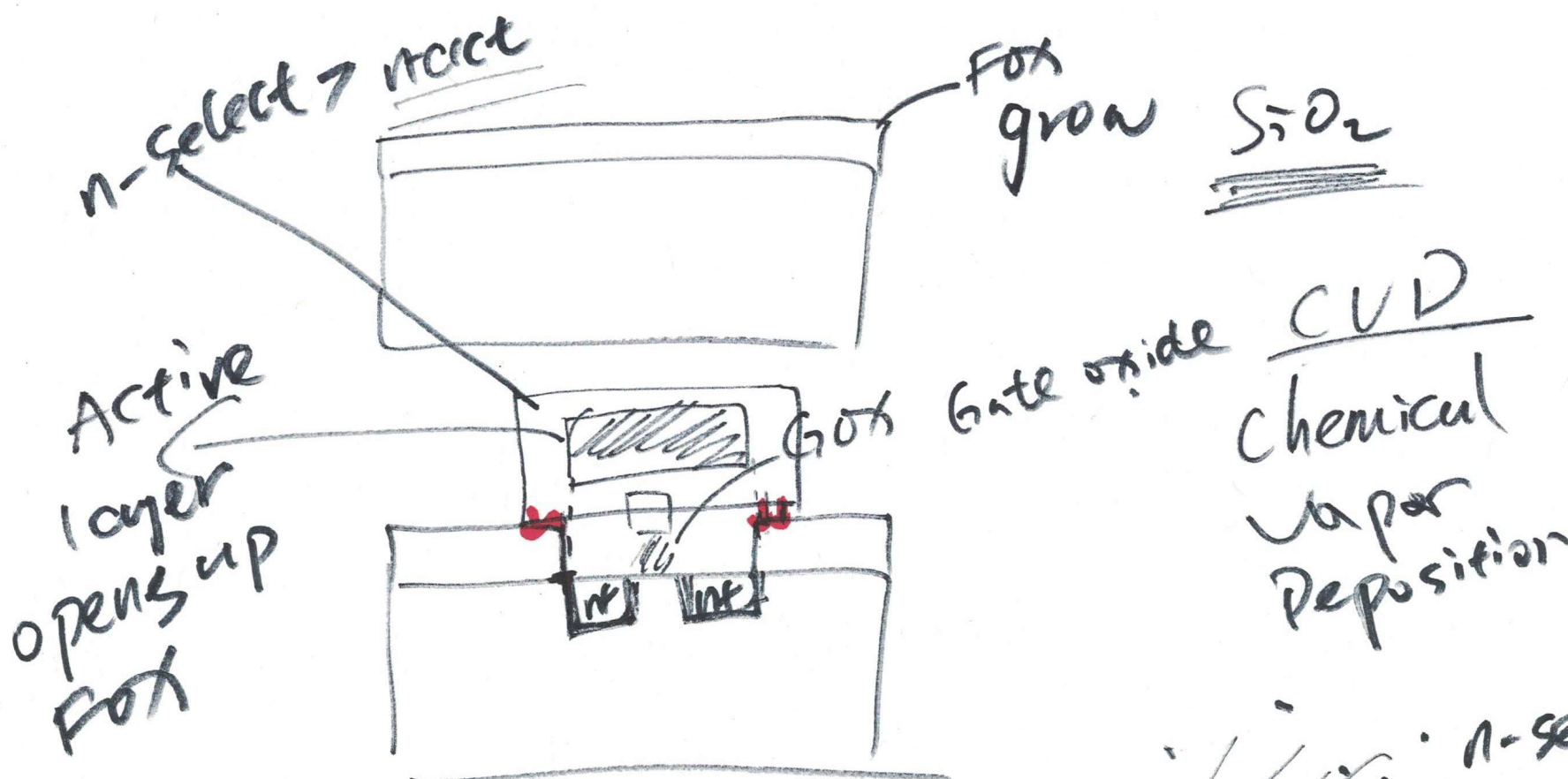


skipper

Spin Coater
Acid

immerse
in a chemical
(Developer)





n-select layer defines the ~~addition~~ that dopes n+ into the wafer

n-select > n-act to reduce misalignment

