

Essentials of MOSFETs

Lecture 4.7: Analysis of Experiments

Short Problem

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Assume the following for an N-MOSFET:

$$C_{inv} = 2.0 \mu\text{F}/\text{cm}^2$$

$$V_T = 0.25 \text{ V}$$

$$R_{SD} = 100 \Omega - \mu\text{m}$$

$$V_{DD} = 1.0 \text{ V}$$

$$W = 1 \mu\text{m}$$

You may also assume that $v_T = 1.14 \times 10^7 \text{ cm/s}$.

- 1) Assuming that $\mathcal{T}_{SAT} = 0.80$, what on-current would be measured?