

Essentials of MOSFETs

Lecture 4.4: Velocity at the Virtual Source

Short Problem

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At room temperature, the measured electron mobility of a modern, $L = 20$ nm MOSFET is about $250 \text{ cm}^2/\text{V}\cdot\text{s}$.

- 1) What is the ballistic mobility for this MOSFET? (The appropriate effective mass to use is $m^* = 0.19m_0$.)