

Lecture #34:
Metal-Oxide-Semiconductor
Field Effect Transistors

ECEN5355
 Lecture # 34
 11/13/98

- Overview
- Introduction
- Structure
- Principle of operation
- Basic Theory

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MOSFET Overview

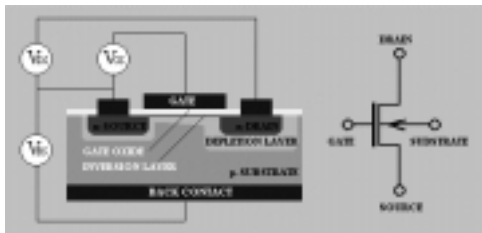
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- Introduction
- Basic theory
- MOSFET circuit parameters
- MOSFET technology and memory
- CMOS
- Advanced MOSFET issues and scaling

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MOSFET
structure and circuit symbol

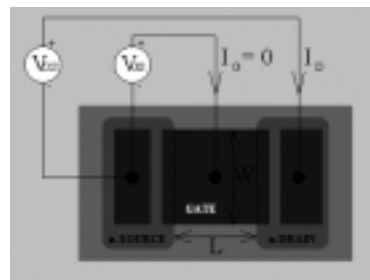
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MOSFET
Top view

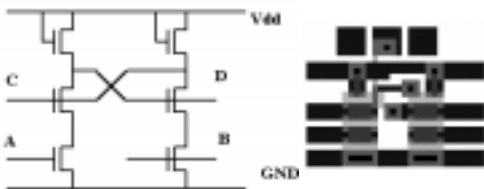
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Circuit layout

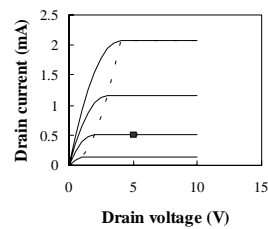
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Quadratic Model

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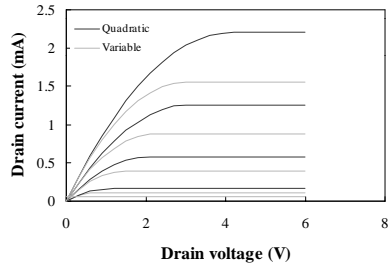
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Variable depletion-layer model

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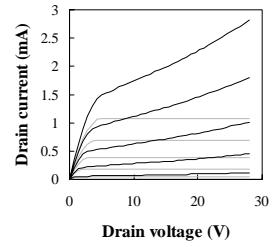
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Channel length modulation

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