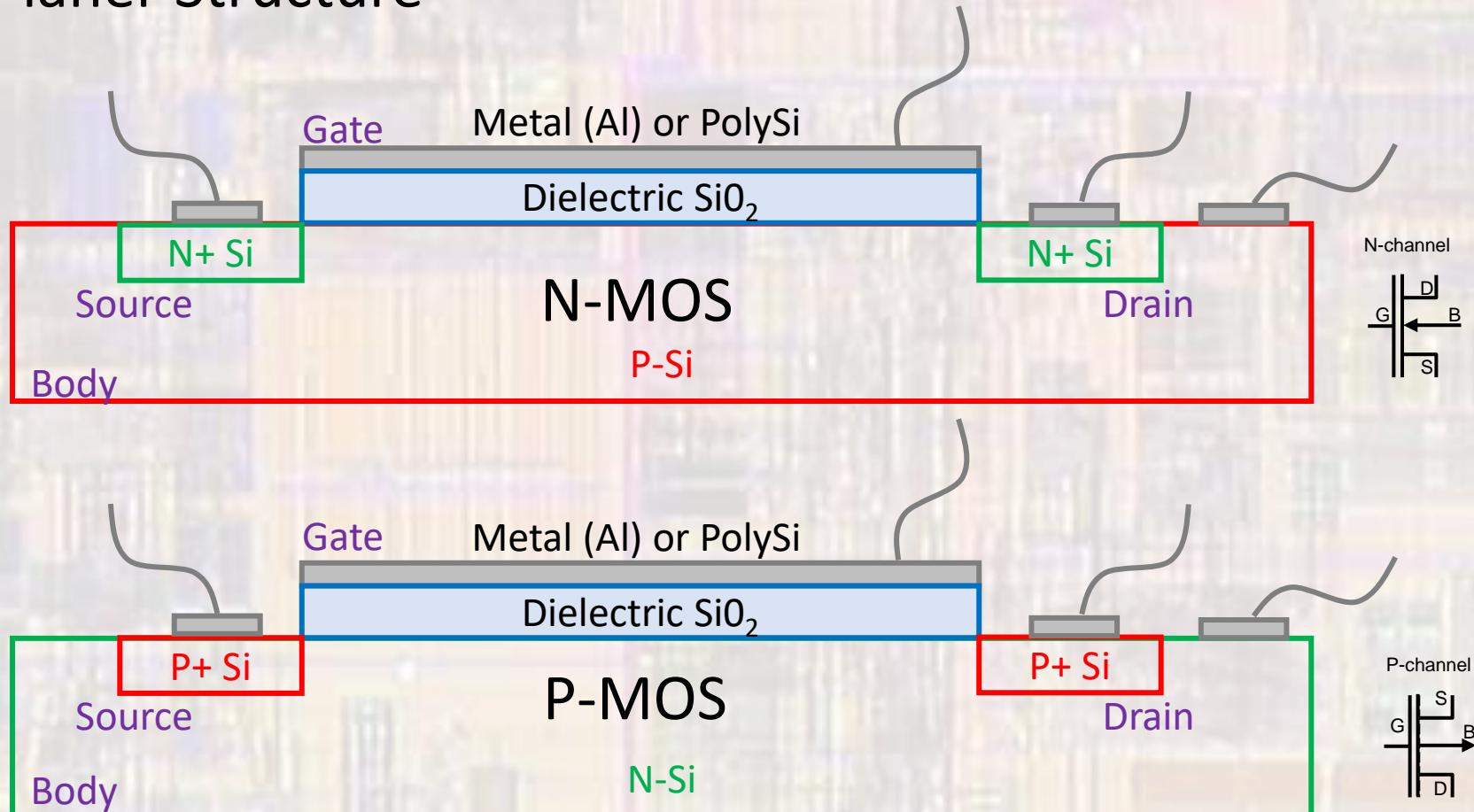


# MOS Circuit Characteristics

Last updated 12/22/23

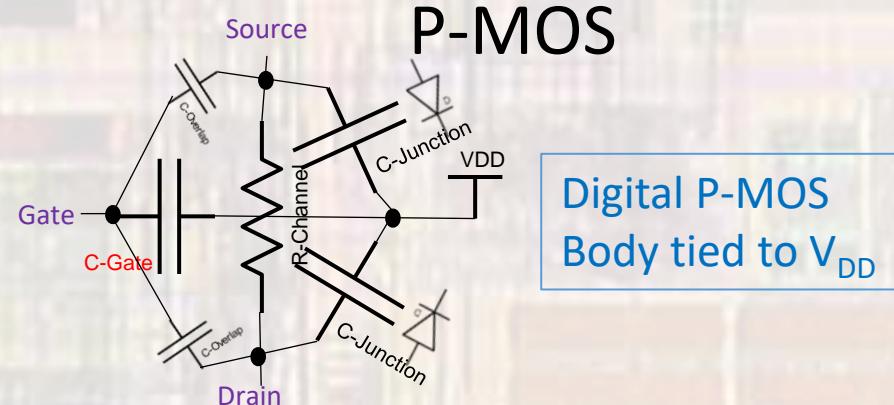
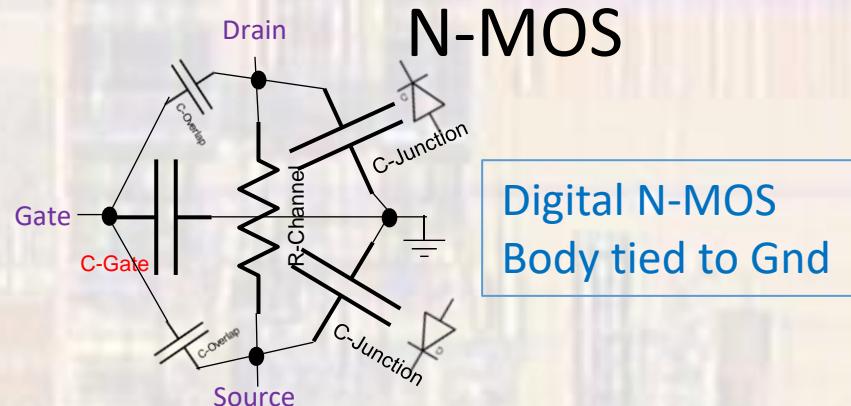
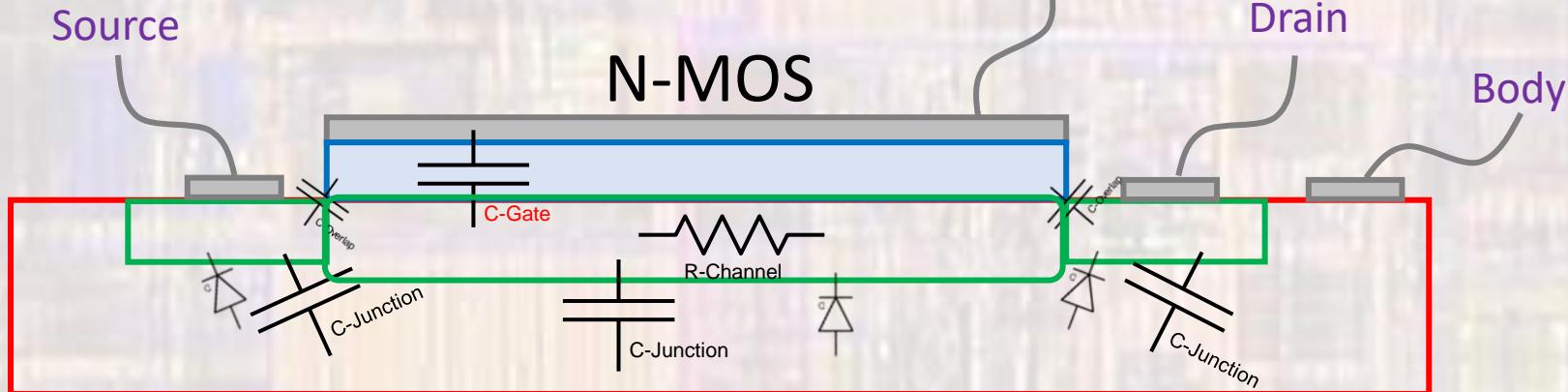
# MOS Enhancement Mode Transistor

- Planer Structure



# MOS Enhancement Mode Transistor

- Parasitic Elements



# MOS Enhancement Mode Transistor

- Parasitic Elements

- Gate
  - Capacitive
  - No DC current
  - AC/Transient current
- S/D
  - Channel – Resistive
    - Dependent on  $V_{GS}$  and  $V_{DS}$
  - Capacitive to Gnd ( $V_{DD}$ )
    - No DC current
    - AC/Transient current
  - Reverse Biased Diode to Gnd ( $V_{DD}$ )
    - Small leakage current independent of transistor action

# MOS Enhancement Mode Transistor

- MOSFET Digital Configuration – body connections

- P-MOS body tied to  $V_{DD}$



- N-MOS body tied to Gnd

