SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF MECHATRONICS

TOPIC –MOSFET

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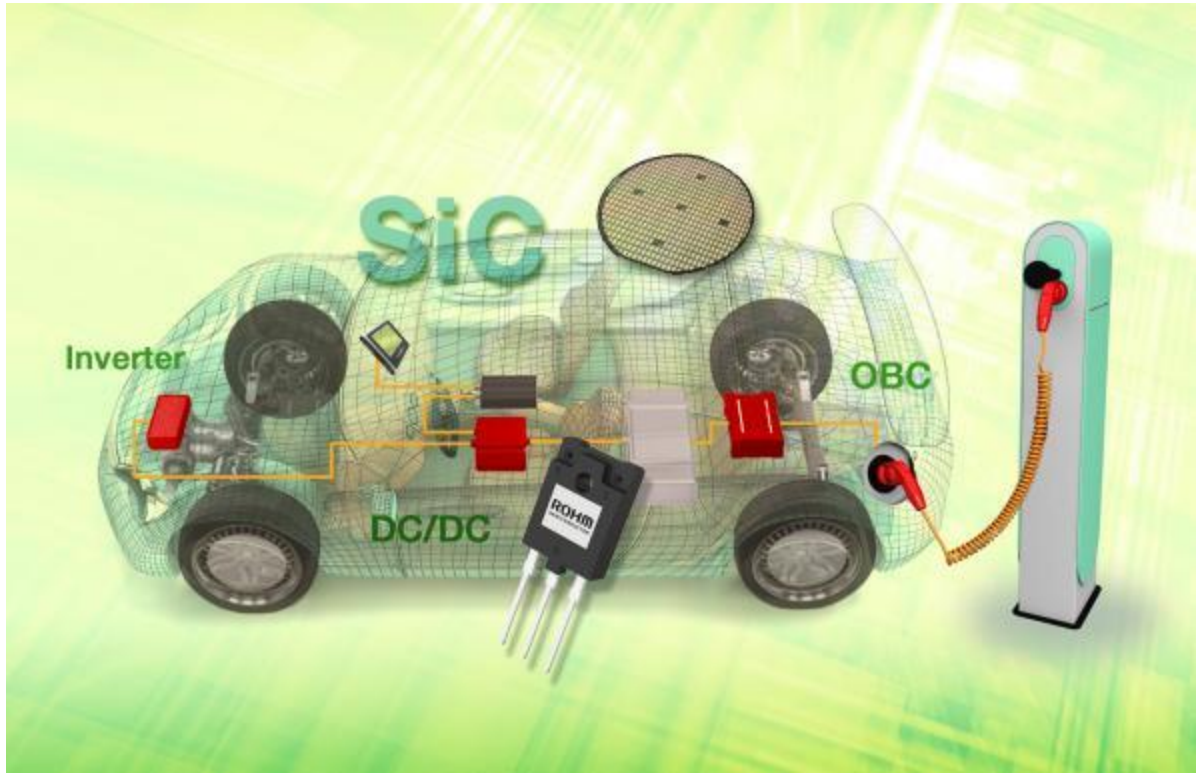
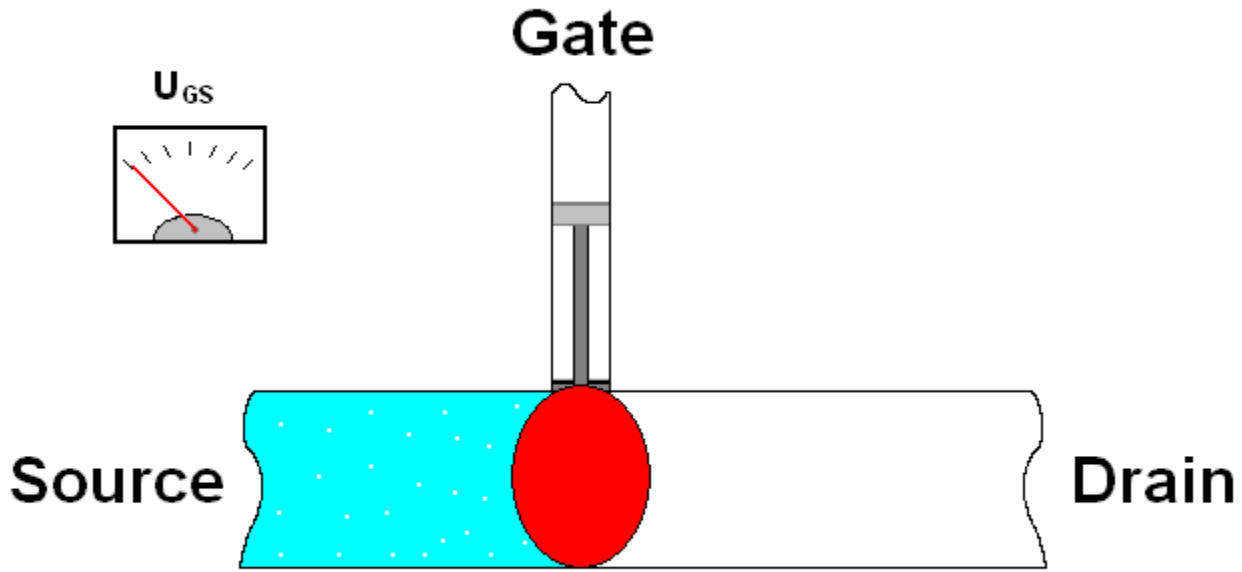
APPLICATION

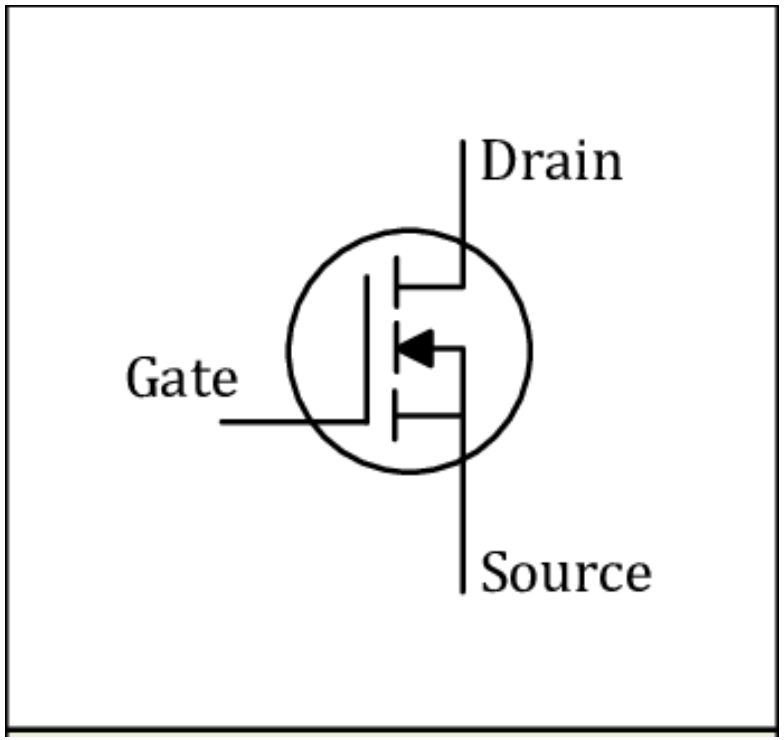


MOSFET

Power **MOSFETs** are commonly used in automotive electronics, particularly as switching devices in electronic control units, and as power converters in modern electric vehicles..



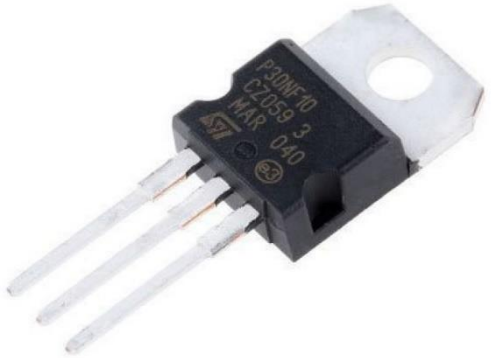
Symbol:



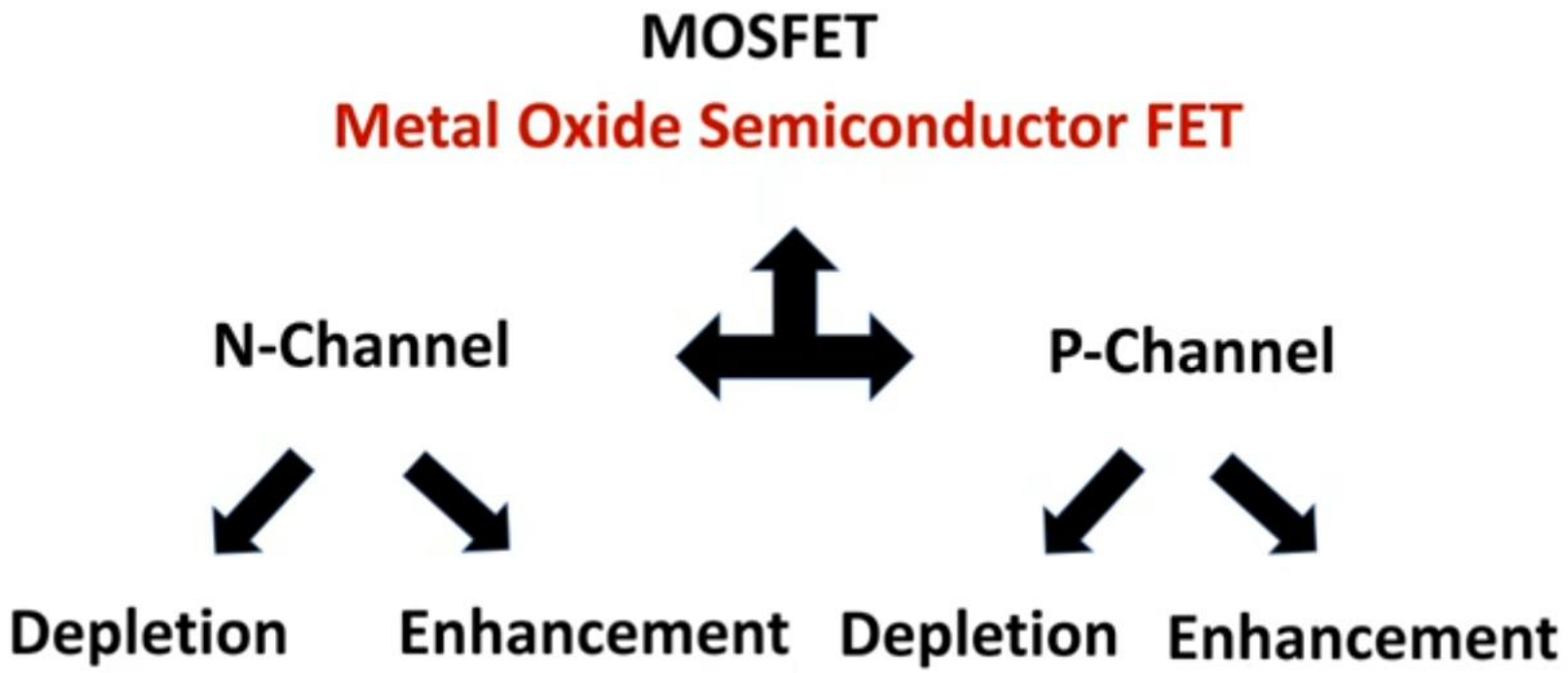
3 Terminal device

3 layer device

2 Junction device

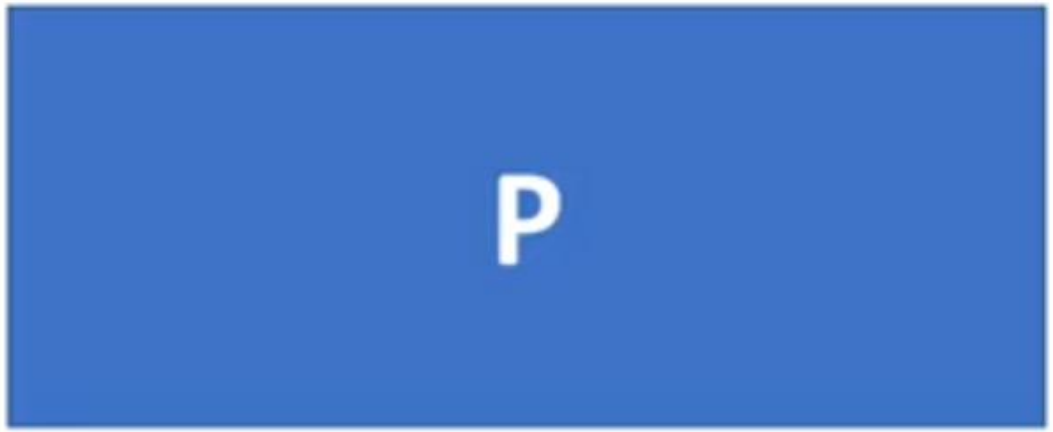


Types:


MOSFET
Metal Oxide Semiconductor FET
N-Channel
P-Channel
Depletion
Enhancement
Depletion
Enhancement

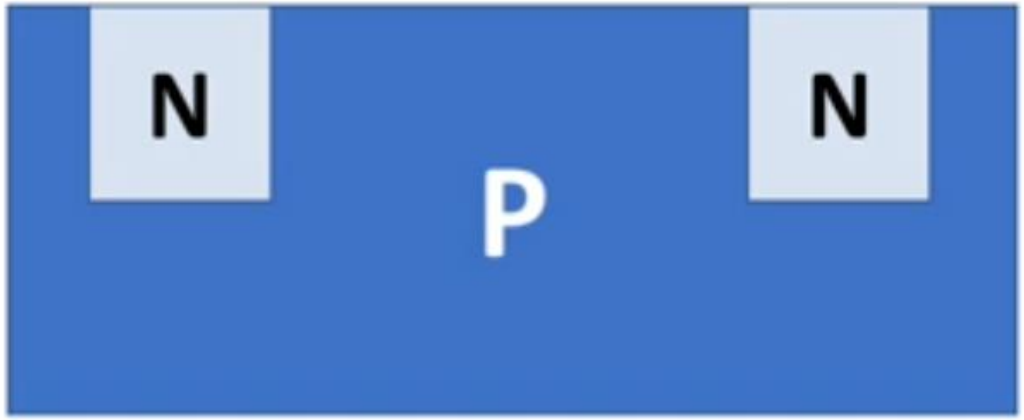
Working

N-Channel enhancement MOSFET



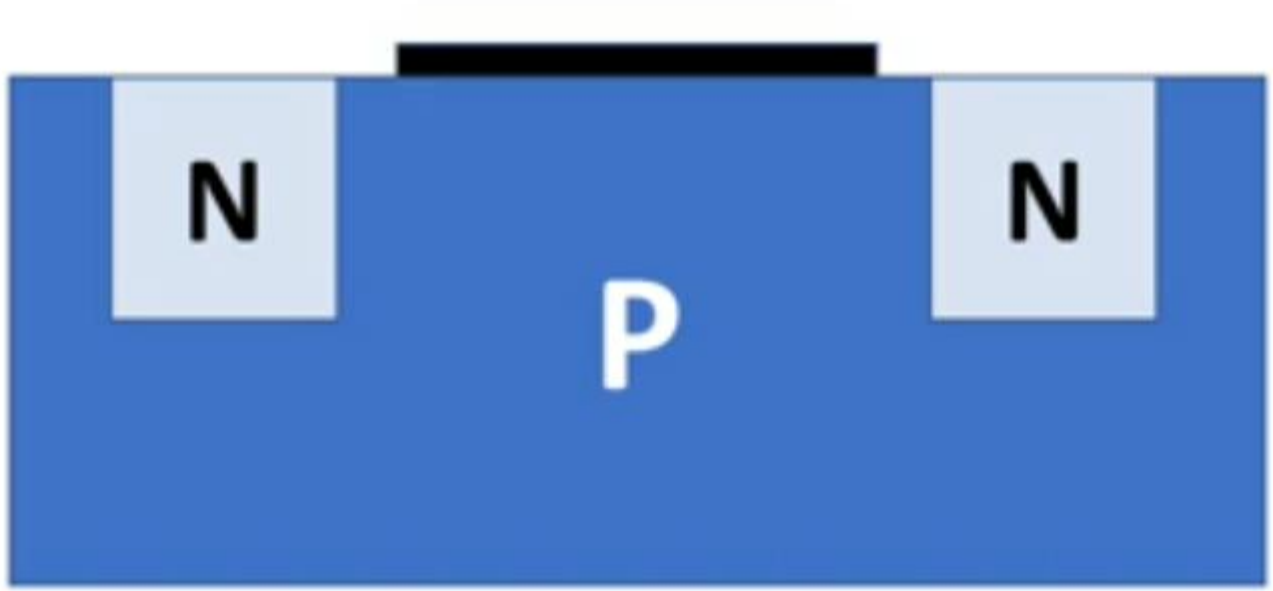
Working

N-Channel enhancement MOSFET



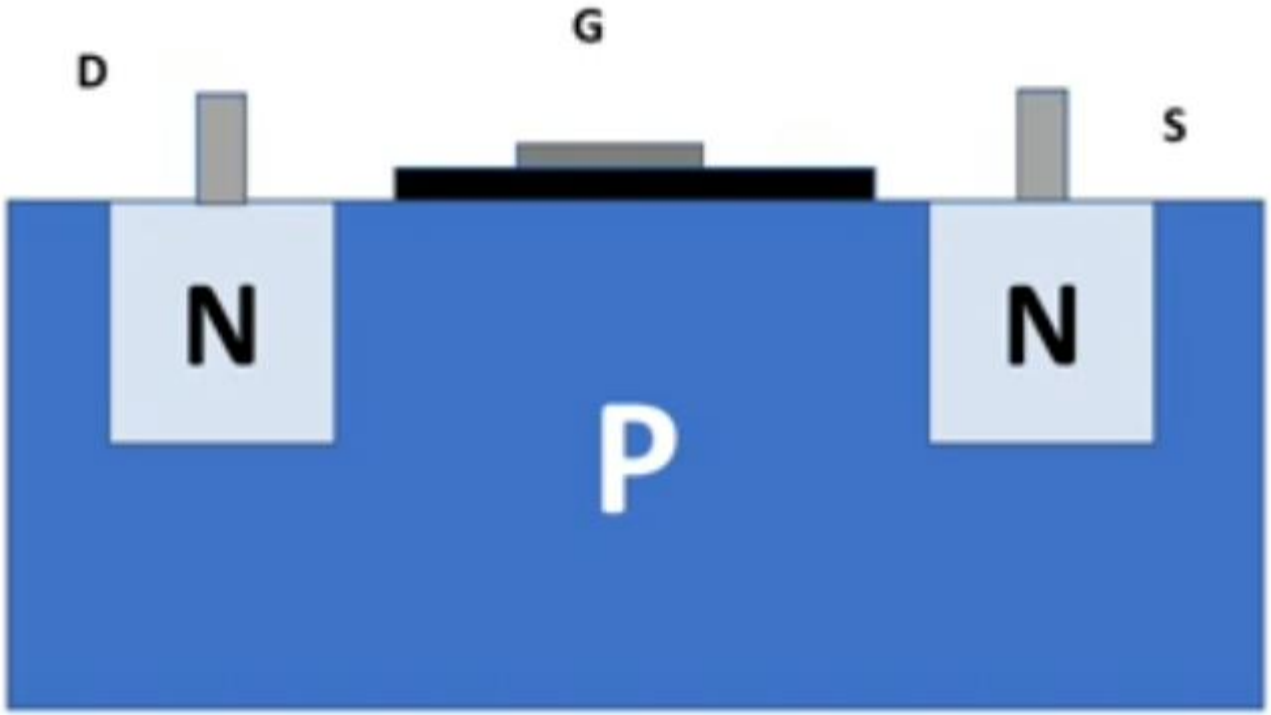
N-Channel enhancement MOSFET

Working



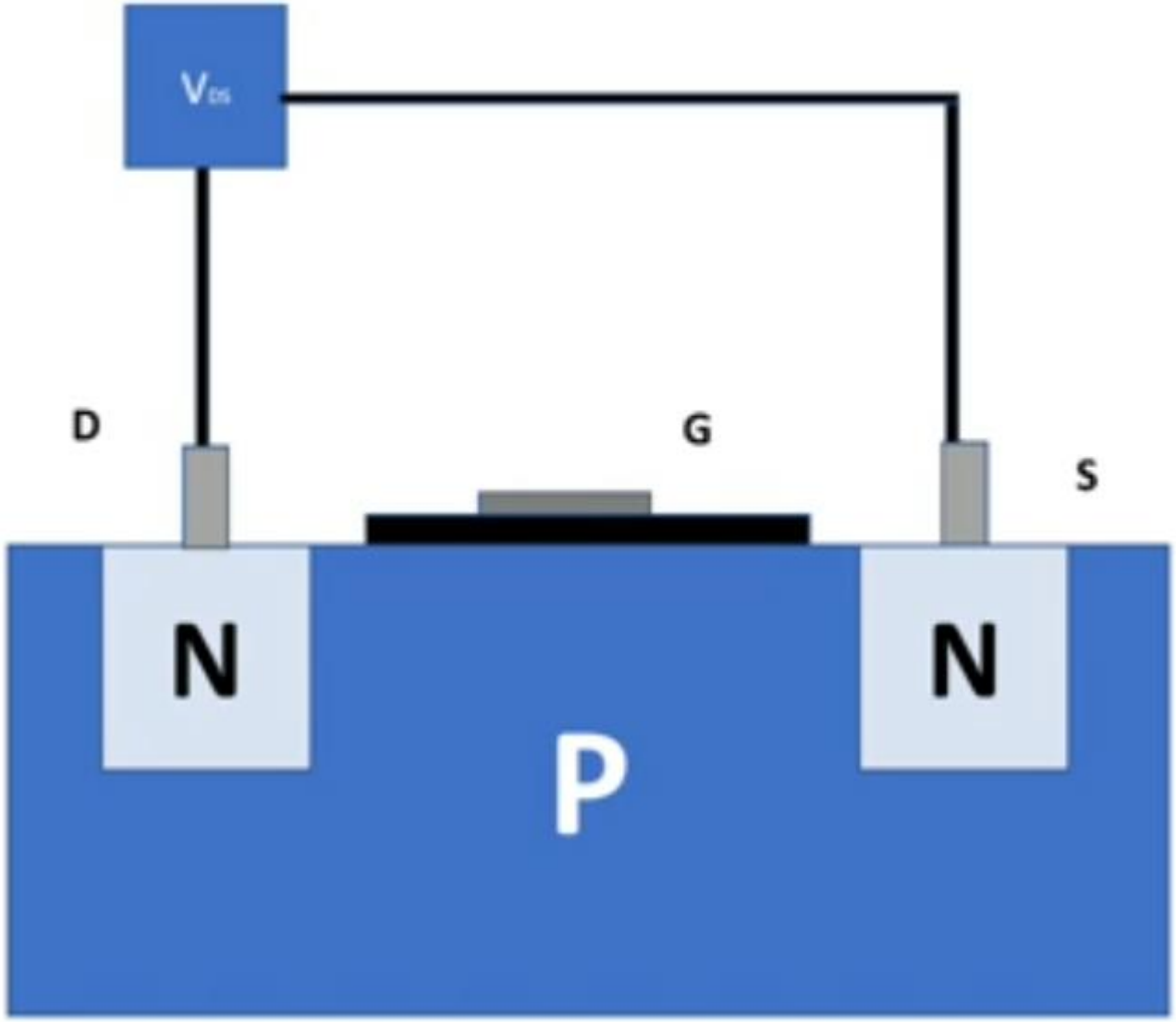
N-Channel enhancement MOSFET

Workin



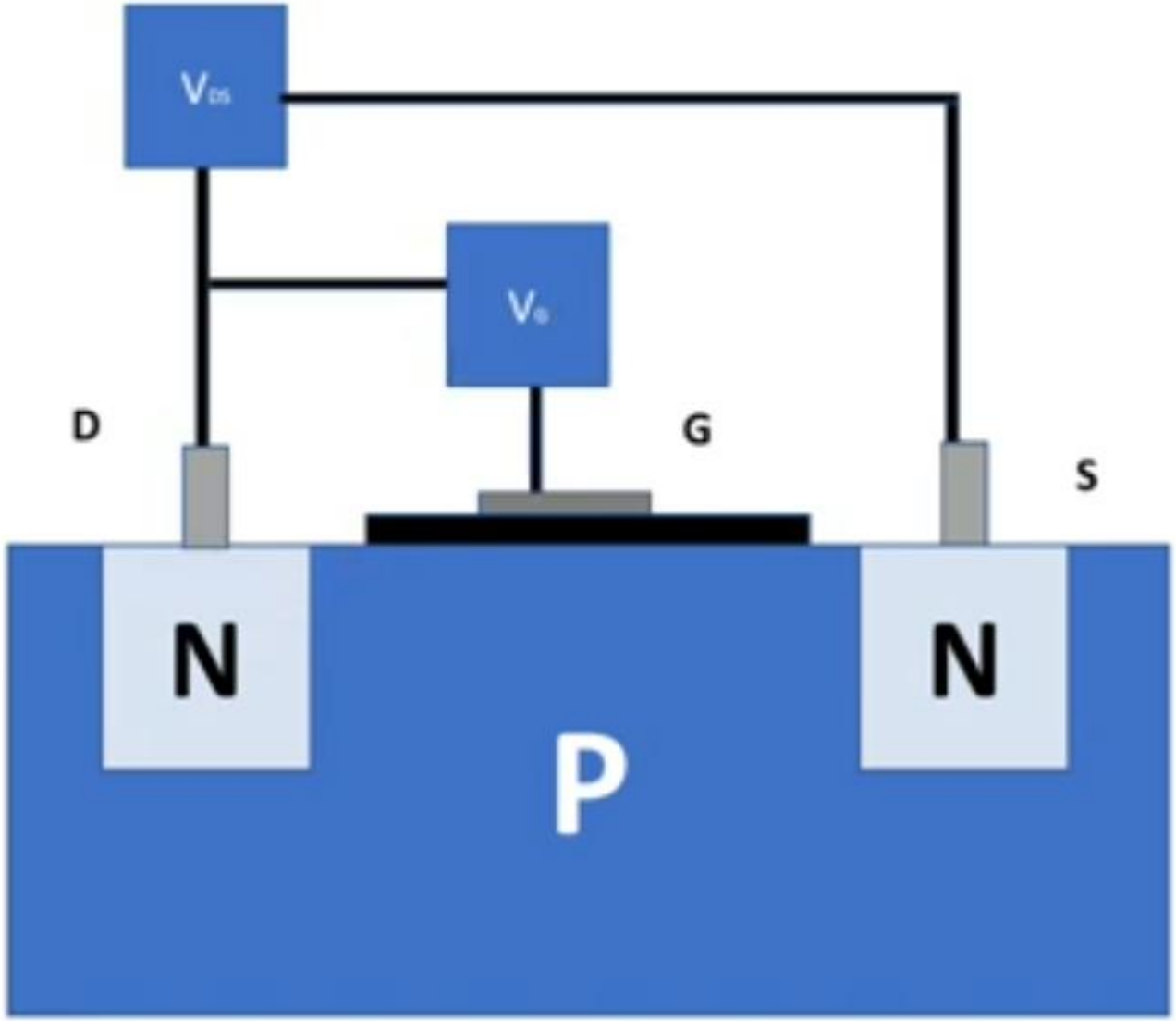
N-Channel enhancement MOSFET

Workin



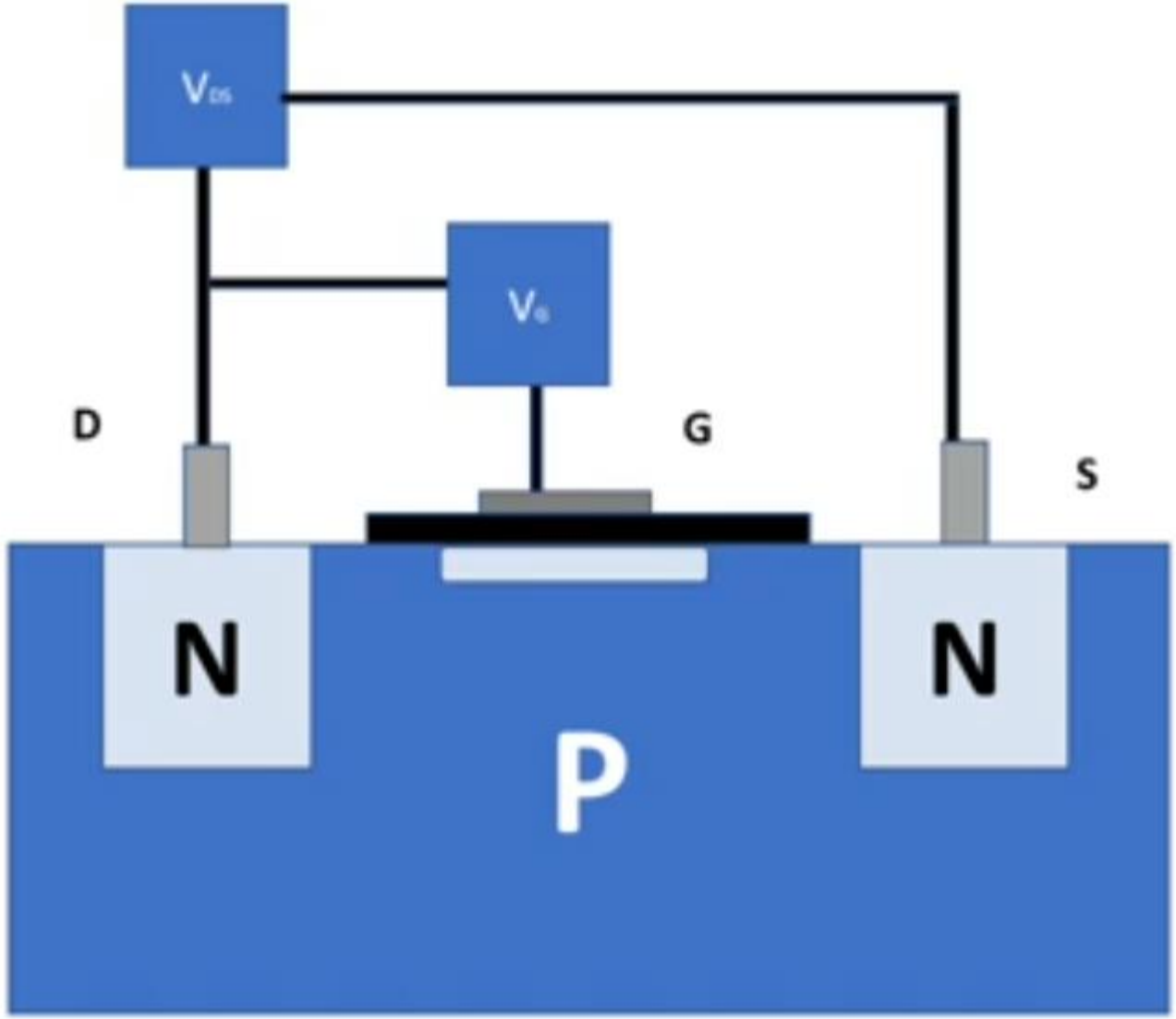
N-Channel enhancement MOSFET

Workin



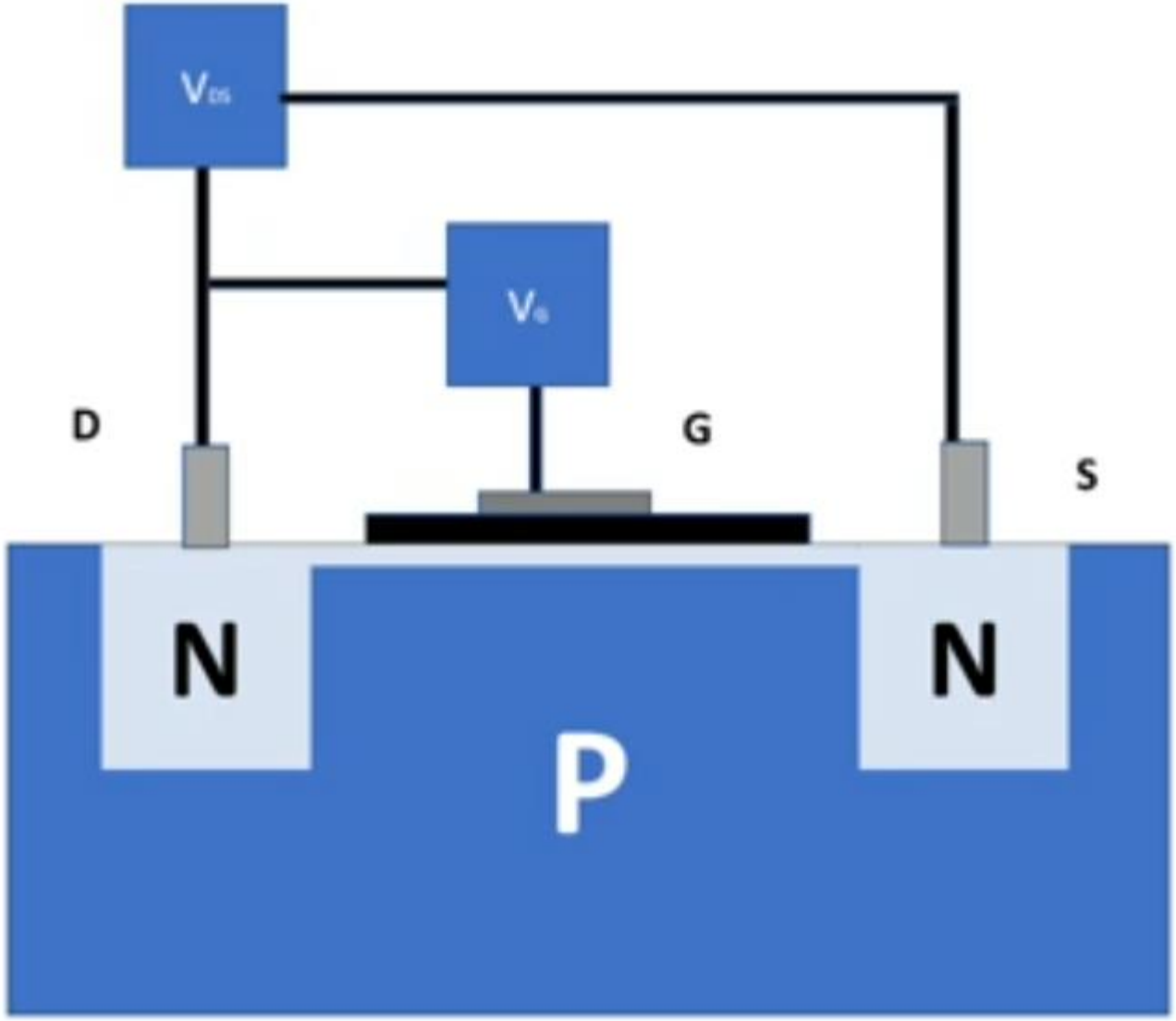
N-Channel enhancement MOSFET

Workin



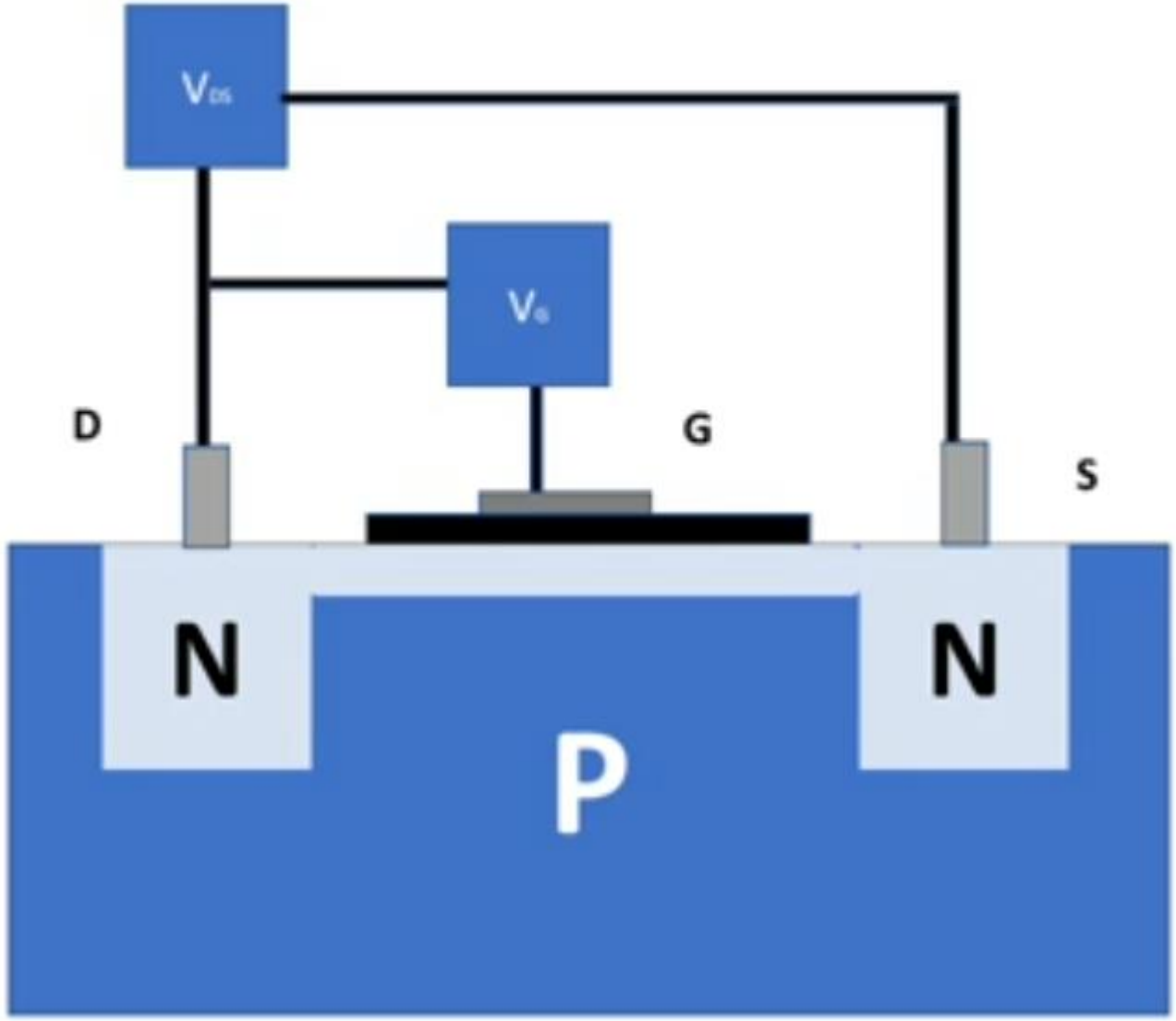
N-Channel enhancement MOSFET

Workir

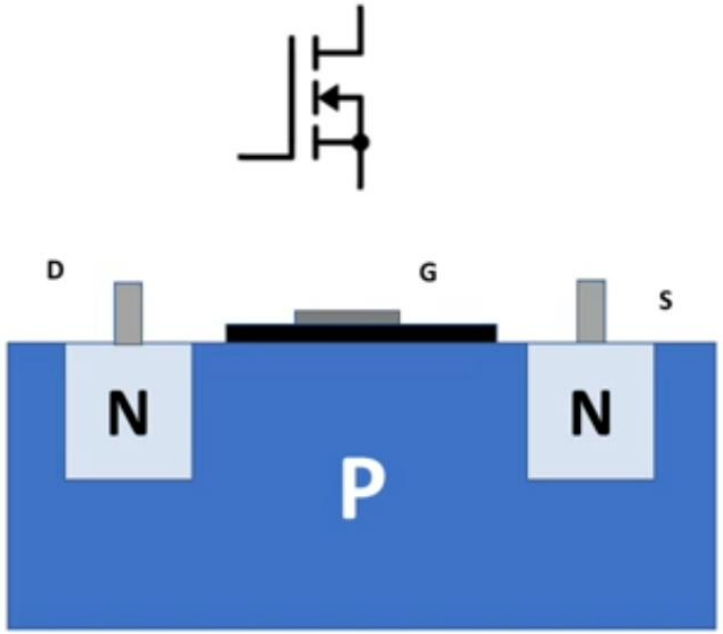


N-Channel enhancement MOSFET

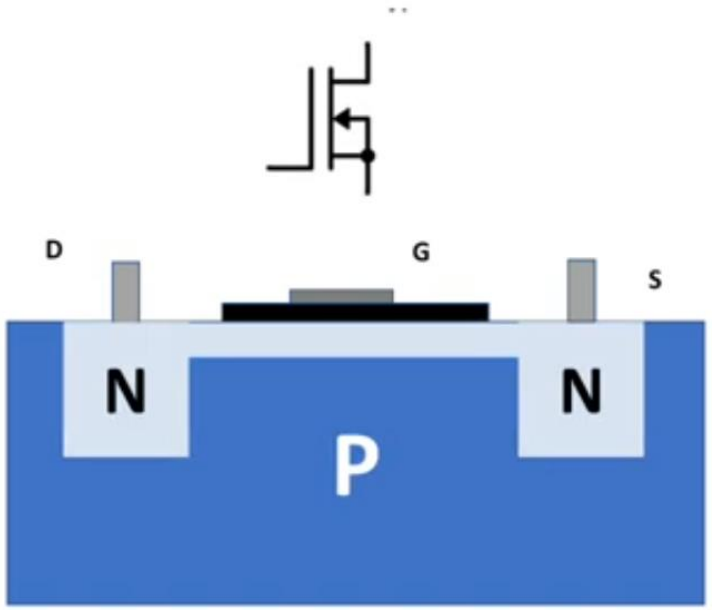
Work



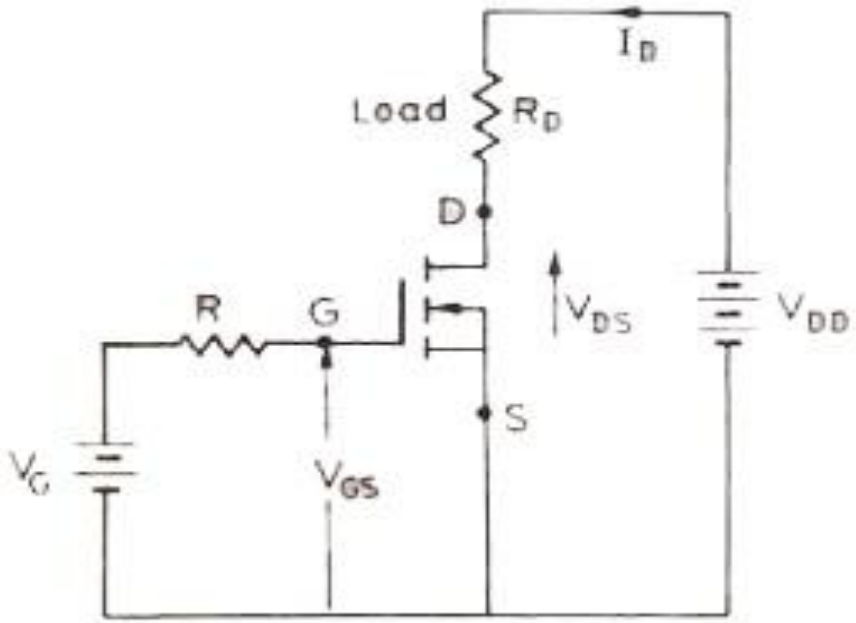
N-Channel enhancement MOSFET



N-Channel Depletion MOSFET

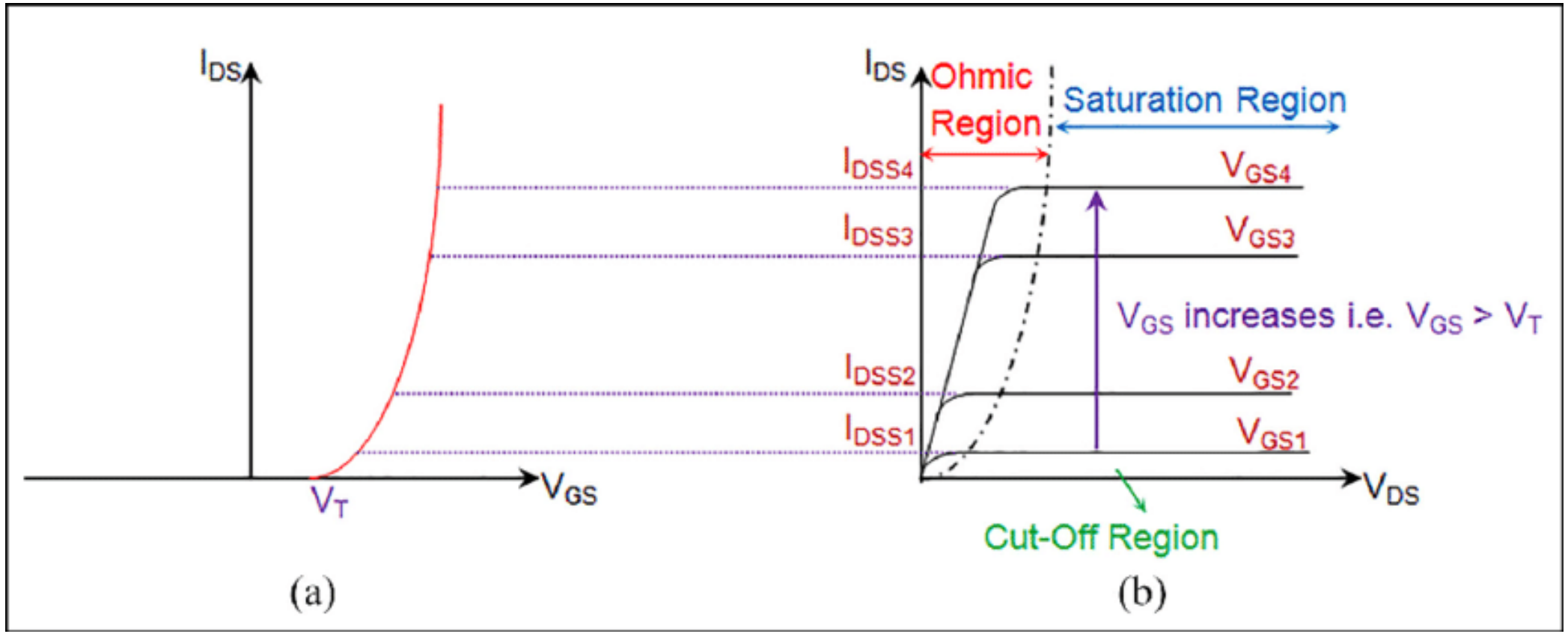


CIRCUIT DIAGRAM



https://www.youtube.com/watch?v=p34w6ISouZY

CHARACTERISTIC DIAGRAM



Advantages of MOSFET

- MOSFETs provide greater **efficiency** while operating at lower voltages.
- Absence of gate current results in high input impedance producing high switching **speed**.
- They operate at lower **power** and draws no current.

Two Marks Quesions

1. Differentiate the charecteristics of IGBT and MOSFET
2. Classify MOSFET
3. Outline the swithcing charecteristics of MOSFET

References

1. https://www.tutorialspoint.com/basic_electronics/basic_electronics_mosfet.htm
2. https://www.electronics-tutorials.ws/transistor/tran_6.html
3. https://www.electronics-tutorials.ws/transistor/tran_6.html
4. https://www.youtube.com/watch?v=ItOV1nkTlPU
5. https://www.youtube.com/watch?v=jiNJIM6PC34