Moore’s law:

This law is the observation that, [the number](https://en.wikipedia.org/wiki/Transistor_count) of [transistors](https://en.wikipedia.org/wiki/Transistor) in a dense [integrated circuit](https://en.wikipedia.org/wiki/Integrated_circuit) doubles about every two years. This law is a prediction that semiconductor technology will double its effectiveness every 18 months (approx. 2years)

The physical limitations of More's law are:

1. **Temperature Increases as power increases.**

More no transistor leads to increase in temperature as power consumption increases. Temperature makes circuits to melt.

1. **Power increases as transistor density increases.**

More no transistor leads to increase in power consumption.

1. **Voltage scaling reduces dynamic power consumption.**

Dynamic voltage scaling to decrease voltage is known as undervolting. Undervolting is done in order to [conserve power](https://en.wikipedia.org/wiki/Energy_conservation)

1. **Voltage scaling cannot prevent leakage power loss.**
2. **Voltage scaling is limited due to noise or threshold voltage.**

voltage need be maintained by specific threshold according to the transistor.