Define Moore’s law

Moore’s law is a prediction that every 2 years the number of transistors that can be packed in chip will be doubled since the transistors gets smaller. When the number of transistors increase, the hardware needs more heat dissipation and cooling to get off the heat and temperature if not the hardware will physically melt. Due to this reason, it will be nearly impossible to create smaller hardware with 2x transistors every 2 years.

Transistors also need minimum voltage to switch between 0’s and 1’s and reducing voltage will be difficult to reduce noise. Dynamic power consumption is reduced by voltage scaling but this does not prevent power leakage due to thin insulation forced by the reduction in size of the chip.