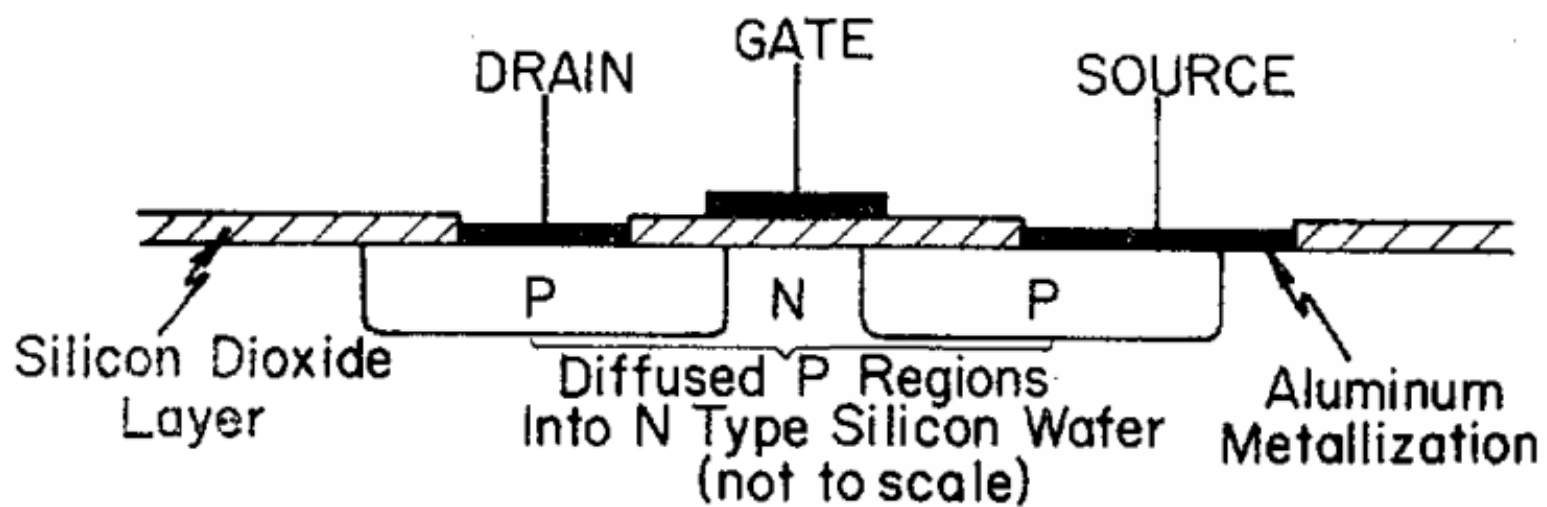
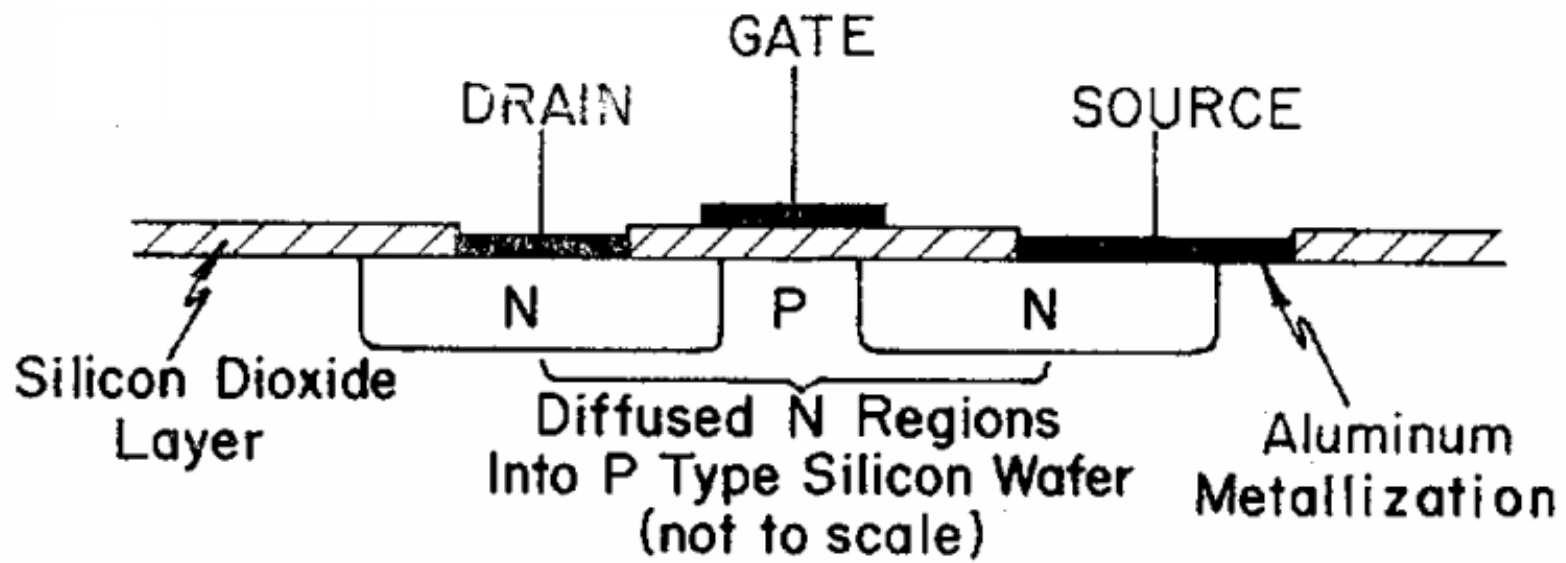


FIRST CMOS LOGIC CIRCUITS

ISSCC 1963



Nanowatt Logic Using Field-Effect Metal-Oxide Semiconductor Triodes

CMOS LOGIC WAS first introduced at ISSCC in 1963, with a promise of allowing an accelerated increase in achievable integration levels. Compared to bipolar circuit families, CMOS provided for low-power, robust operations. Manufacturing difficulties impeded its acceptance, and the first applications of MOS transistor logic employed only PMOS transistors. It took almost two more decades before CMOS became the mainstream technology. However, this paper marked a significant step forward on the path to today's microprocessor chips, with their hundreds of millions of transistors, implemented primarily with CMOS logic.