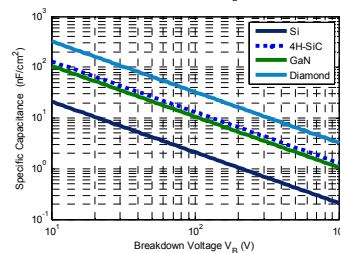
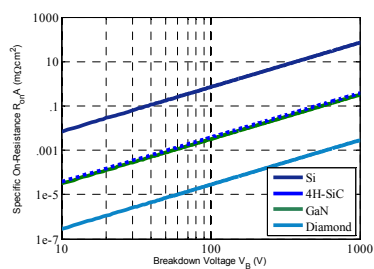
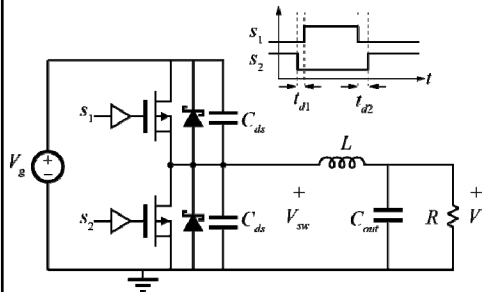


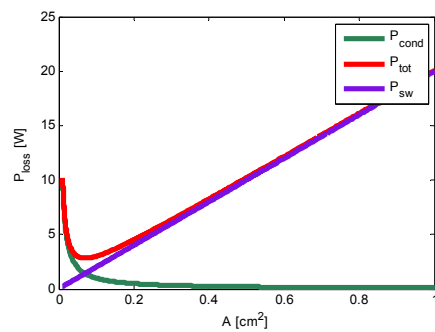


Buck Converter Example



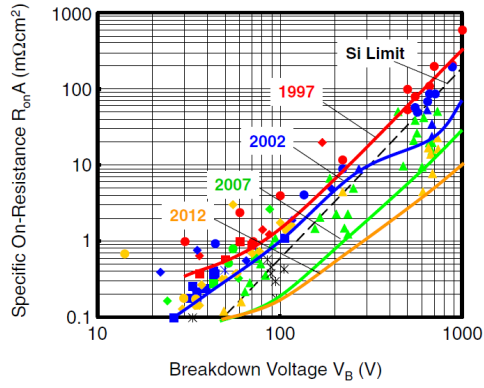


Ideal Device Power Loss





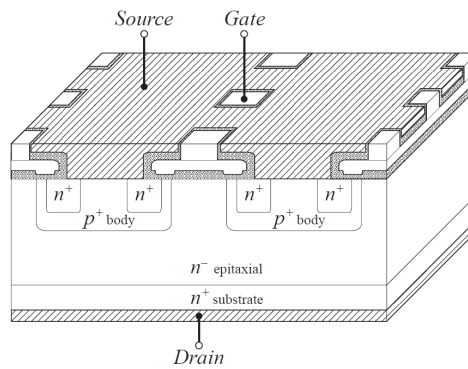
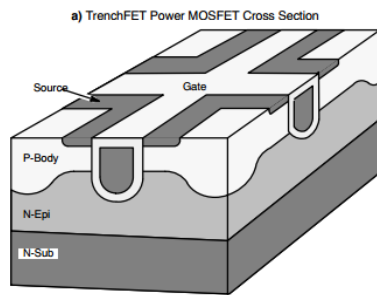
Si Limits



W. Saito, "Power device trends for high-power density operation of power electronics system"



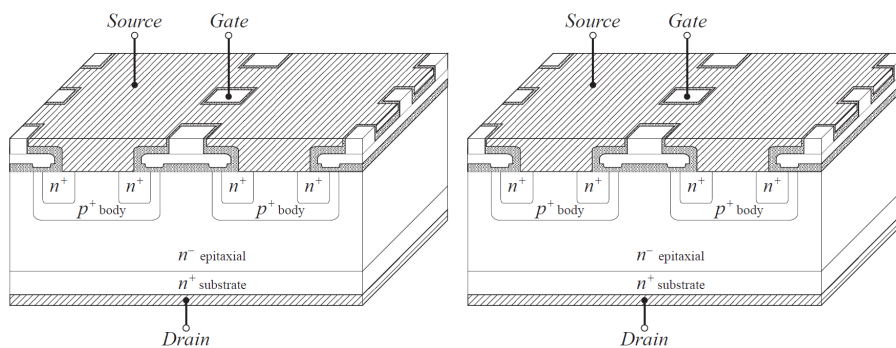
Trench MOSFETs



J. Brown & G. Moxey, "Power MOSFET Basics: Understanding MOSFET Characteristics Associated With The Figure of Merit"



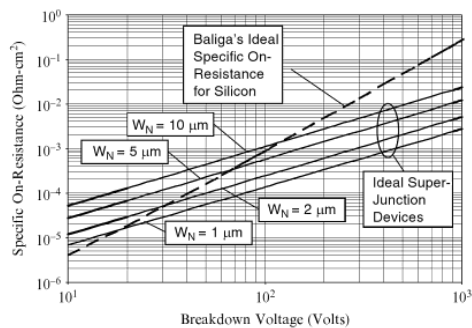
Superjunction MOSFETs



Charge Coupling



Charge Coupled FOM



Baliga, B J, "Advanced Power MOSFET Concepts"



SJ MOSFET Experimental Potential

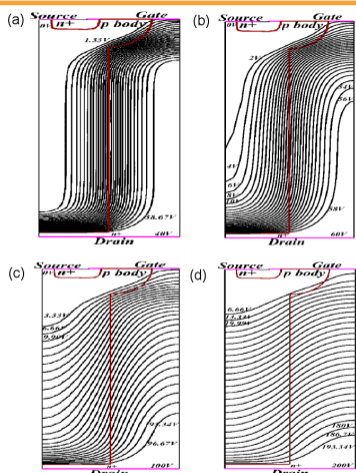


Fig. 3. Potential contours in the CoolMOS structure for (a) V_{DS} = 40 V, (b) V_{DS} = 60 V, (c) V_{DS} = 100 V, and (d) V_{DS} = 200 V for V_{GS} = 0 V.

P. Kondekar et al., "Study of the Degradation of the Breakdown Voltage of a Super-Junction Power MOSFET due to Charge Imbalance"