

Caltech 1975 PhD Thesis by Yoshiaki Daimon Hagiwara.pdf

P.96

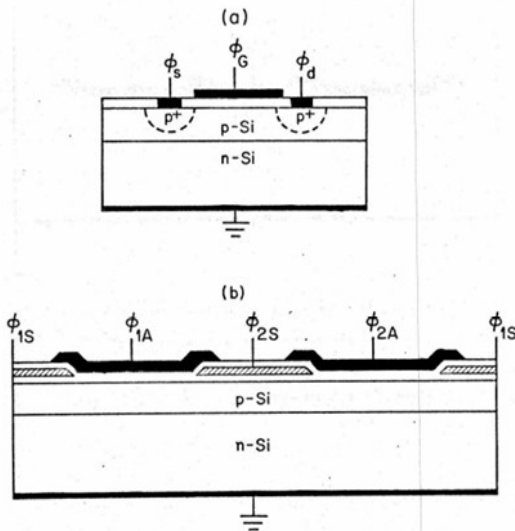


Fig. 4.1a The structure of a surface field effect transistor with a metallurgical channel. The channel is p-type, epitaxially grown.

Fig. 4.1b One unit cell of overlapping gate buried channel CCD.

P.106

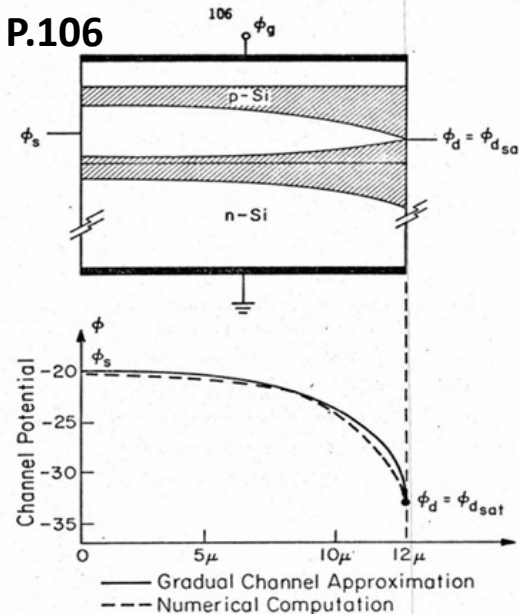


Fig. 4.2a The ideal condition at the onset of saturation is illustrated. $\phi_d = \phi_{d\text{sat}} = -32.8$ volt and $\phi_s = -20$ volt.

Fig. 4.2b The channel potentials computed by the gradual channel approximation and the numerical computation are compared. The gate length L is 12 μ . $\phi_{SF} = -18$ volt.

P.108

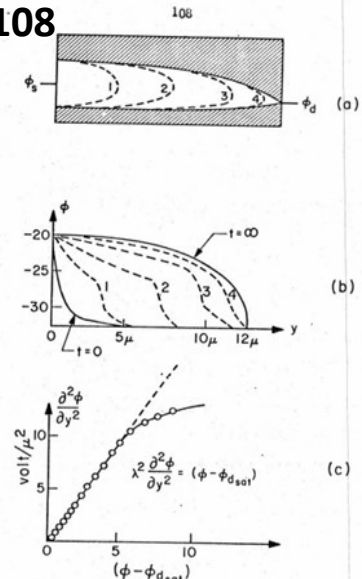


Fig. 4.3a The boundary of the channel at the transition period when the drain voltage changes suddenly from ϕ_s to $\phi_{d\text{sat}}$.

Fig. 4.3b The channel potential at transit times. The profiles at $t=0$ and $t=\infty$ are calculated exactly.

Fig. 4.3c The curvature of the channel potential.