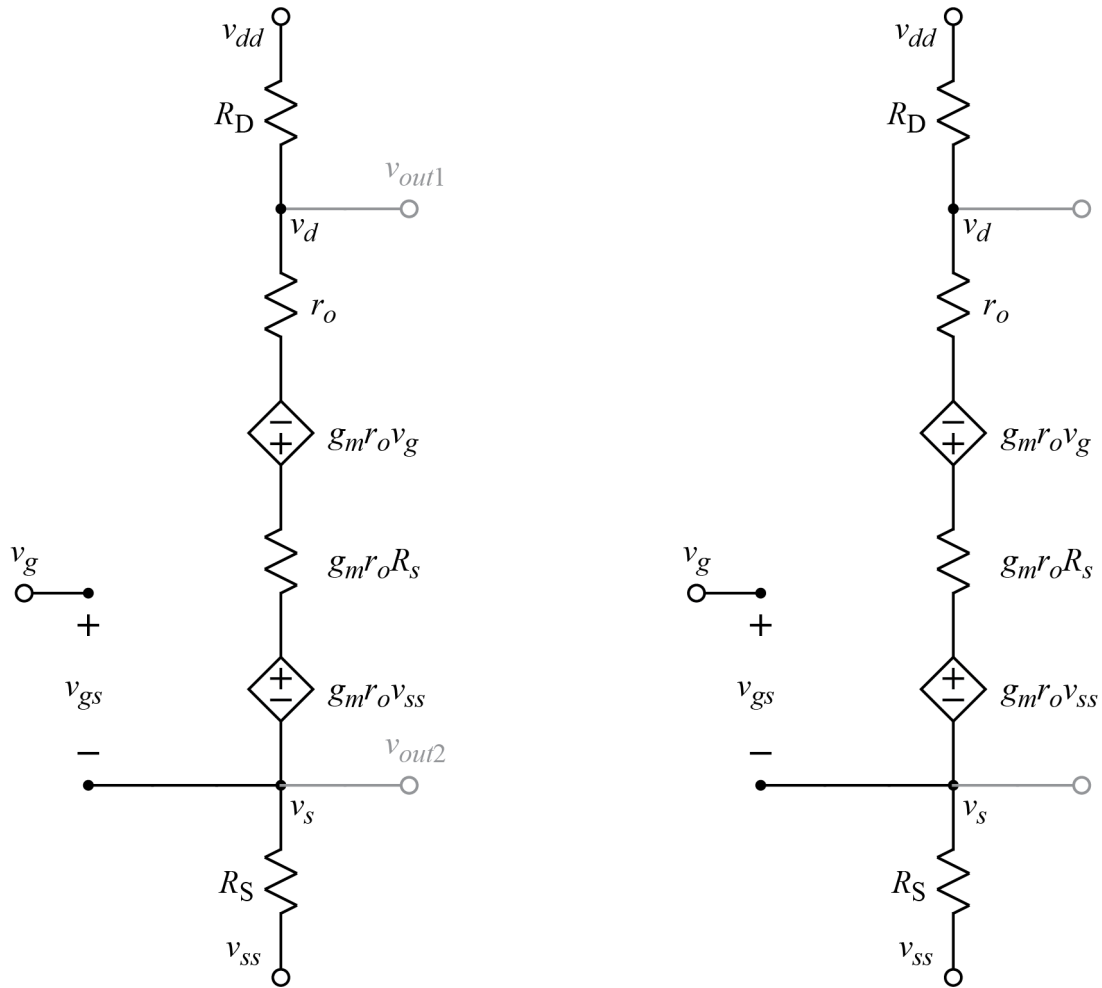


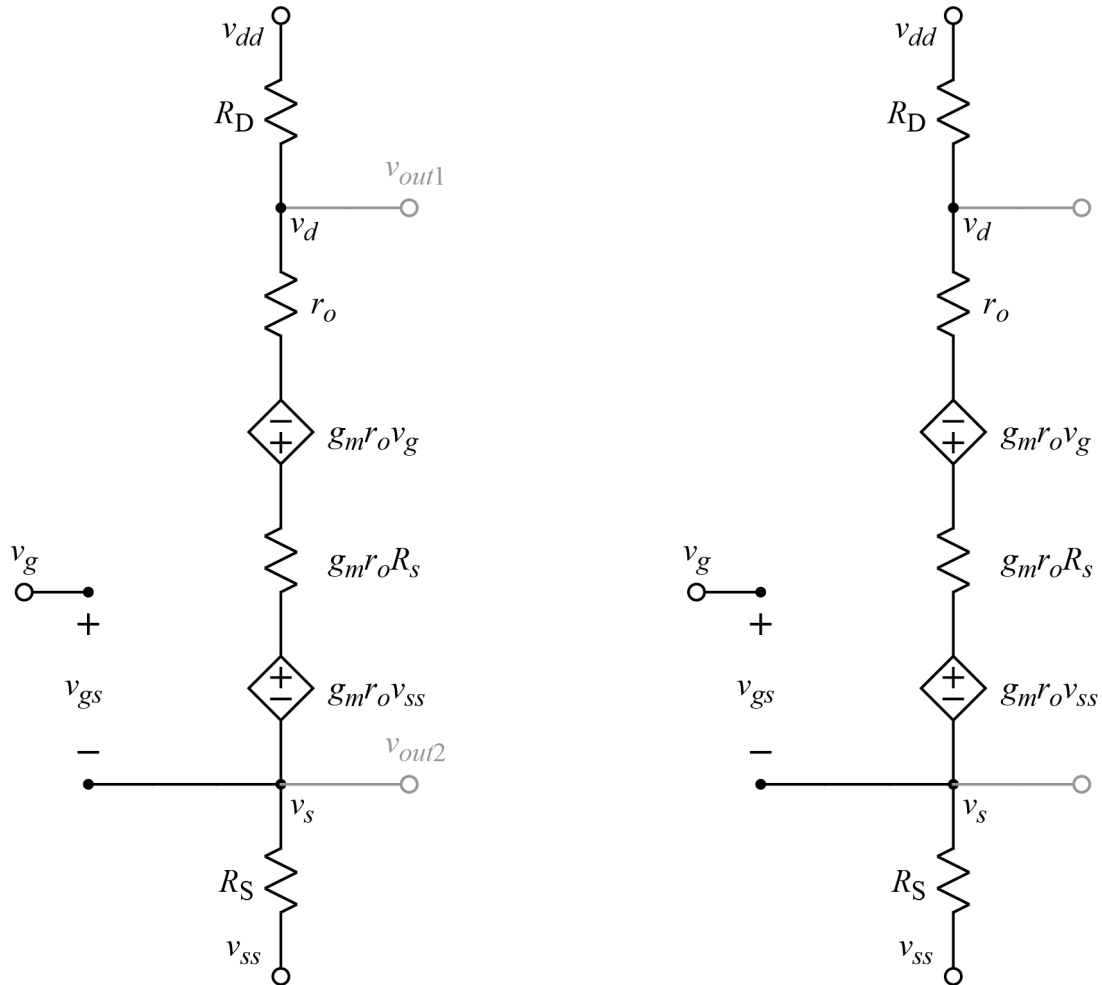


MODEL: (Sat)

Without channel modulation: $I_D = \frac{k_n}{2}(V_{GS} - V_{TH})^2$

$$i_d = g_m v_{gs}$$

$$g_m = \frac{dI_D}{dV_{GS}} = k_n(V_{GS} - V_{TH}) = \frac{2I_D}{V_{GS} - V_{TH}} = \sqrt{2\mu_n C_{ox} \frac{W}{L} I_D}$$



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