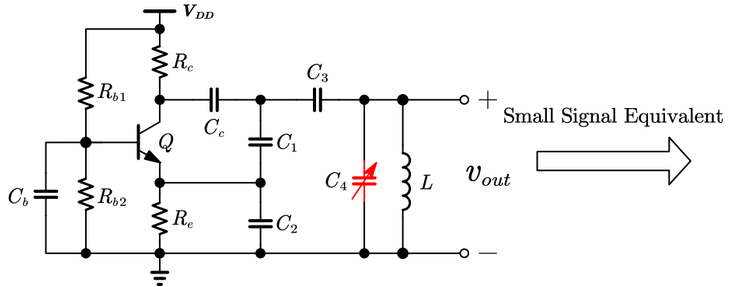
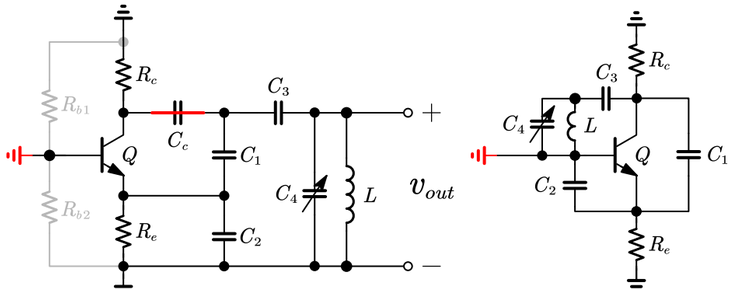
西勒振荡器

Seiler Oscillator (CB)



Small Signal Equivalent



$$\omega_{\text{osc}} \approx \omega_0 = \frac{1}{\sqrt{L[(C_1 \parallel C_2 \parallel C_3) + C_4]}} \approx \frac{1}{\sqrt{L(C_3 + C_4)}}, \quad C_3 \approx C_4 \ll C_1,\ C_2$$

回路总电容 $C_\Sigma = (C_1 \parallel C_2 \parallel C_3) + C_4$ 即为电感两端等效电容

$$K = \frac{f_{osc,\max}}{f_{osc,\min}} = 1.6 \sim 1.8$$