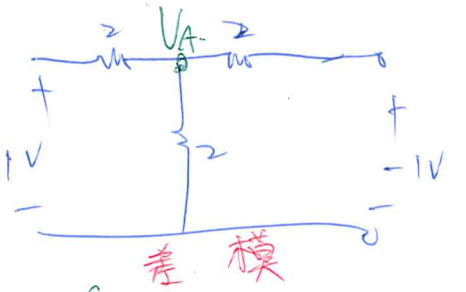
* 完全对称电路

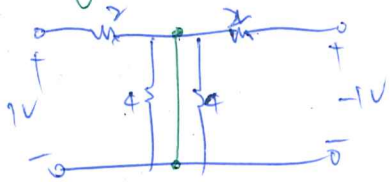


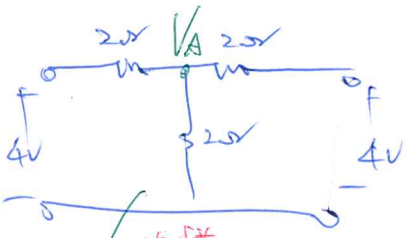
差模

$$\frac{V_A-1}{2}+\frac{V_A}{2}+\frac{V_A+1}{2}=0$$

$$V_A=0\,V$$

差等效电路





共模

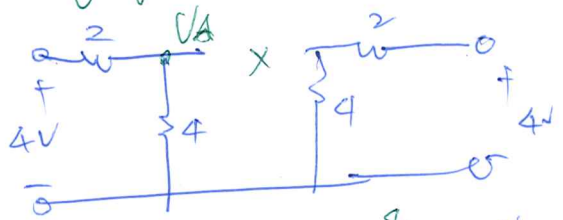
$$\frac{V_A-4}{2}+\frac{V_A}{2}+\frac{V_A-4}{2}=0$$

$$3V_A-8=0$$

$$V_A=\frac{8}{3}\,V$$

equivalent.

相同



$$V_A=4\times\frac{4}{2+4}=\frac{16}{6}=\frac{8}{3}\,V$$

⇒结论：左右电路之分析，differential-mode signal, V_d.

可将 signal 拆成 [差模信号：差等值且大小相同

共模信号：同极且大小相同

common-mode signal, V_c

diffiction

$$V_c=\frac{V_1+V_2}{2}$$

$$V_d=V_1-V_2$$

$$\begin{cases}V_1=V_c+\frac{V_d}{2}\\ V_2=V_c-\frac{V_d}{2}\end{cases}$$

$$A_c=\frac{V_{o1}}{V_c}$$

$$A_d=\frac{V_{o1}}{V_d}$$

$$V_o=A_dV_d+A_cV_c$$