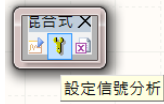
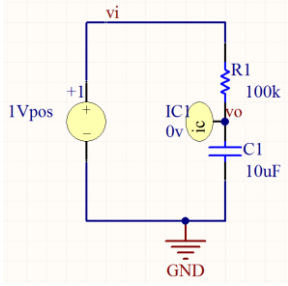


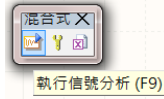
(AD 下:零件庫/安裝 C/使用者/公用/公用文件/Altium/AD13/library/simulation/simulation Sources.Intlib)

1.(a) RC 暫態分析



General Setup
設定動作的信號
Transient Analysis

0 5 0.1 0.1 使用初值條件

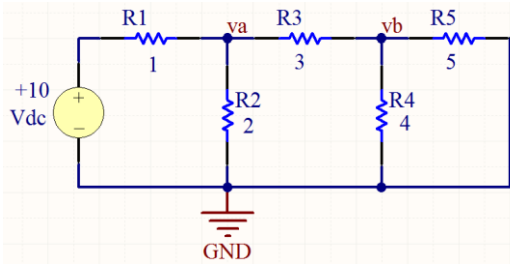


由波形找出

1 秒時 $V_o =$ _____ V

$V_o = 0.5V$ 時 $t =$ _____ 秒

(b) 直流工作點分析



General Setup

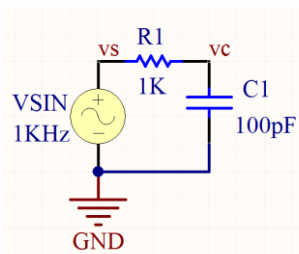
設定動作的信號

Operating Point Analysis $va =$ _____ $vb =$ _____

DC Sweep Analysis Vdc 10 20 2

2.(a) 求一階低通

$f_H =$ _____ Hz、 $V_r/V_s = 0.5$ 時 $f =$ _____ Hz



極零點分析

Pole-Zero Analysis

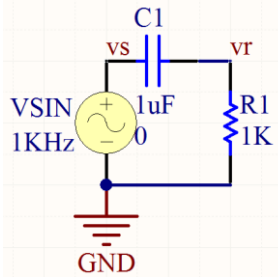
$R1 = 100k$ 、 $C1 = 10uF$

$$A_V = \frac{V_c}{V_s} = \frac{1}{S + 1}$$

極點 $S = -1$

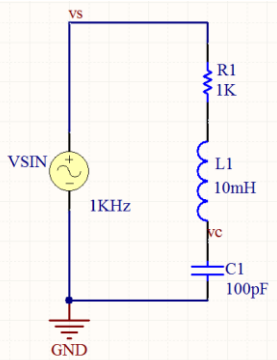
(b) 求一階高通

$f_L =$ _____ Hz、 $f = 100Hz$ 時 $V_r/V_s =$ _____



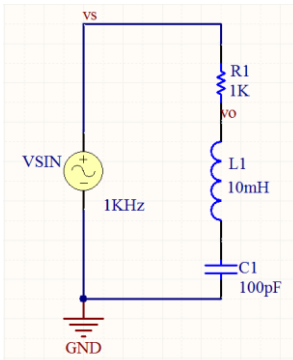
2.(a) 求二階低通

$f_H =$ _____ Hz、 $f_L =$ _____ Hz、 $f_o =$ _____ Hz



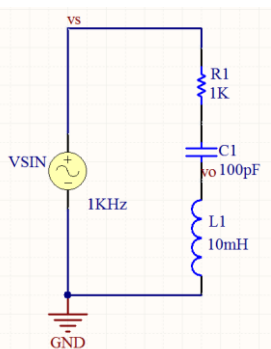
(b) 求二階帶拒

$f_r =$ _____ Hz、 $f_H =$ _____ Hz、 $f_L =$ _____ Hz



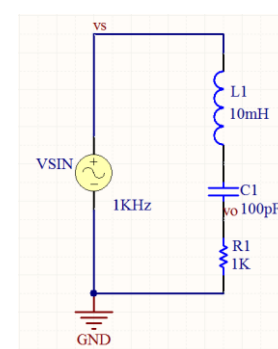
(c) 求二階高通

$f_L =$ _____ Hz



(d) 求二階帶通

$f_H =$ _____ Hz、 $f_L =$ _____ Hz、 $f_o =$ _____ Hz



頻率響應分析

AC Small Signal Analysis

1k 300k linear 200

參數掃描

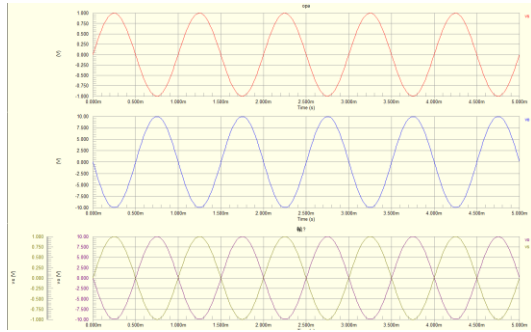
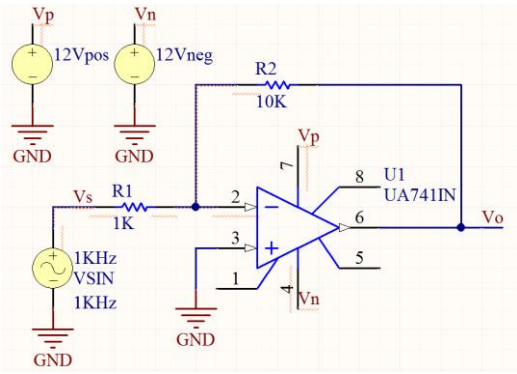
Parameter Sweep

R1 1k 5k 1k

Absolute Values

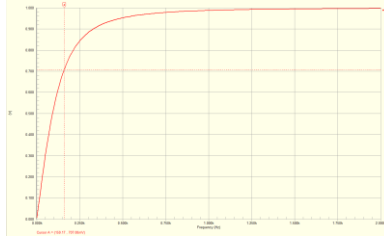
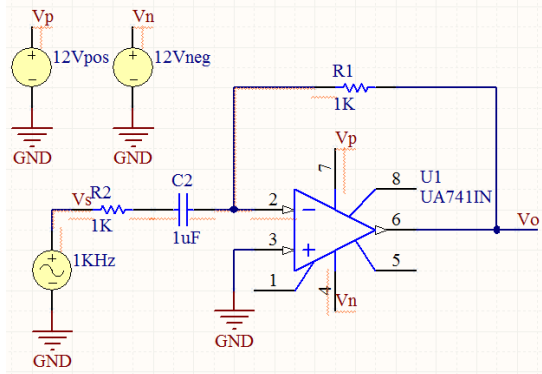
R1、C1、L1 改變之影響(頻率響應參數掃描圖)

3.(a) OPA 反相放大



f=10k Hz 時增益為_____

(b) 一階高通

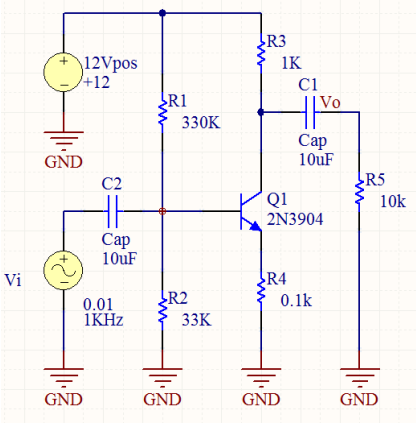


AC Small Signal Analysis

1 20k linear 200

f_L=_____ Hz

4. 電晶體電路(直流偏壓分析/交流分析)



電壓增益=Vo/Vi=_____

電流增益=I_{R5}/I_i=_____

心得:

練習題

