

# 第三次仿真实验报告

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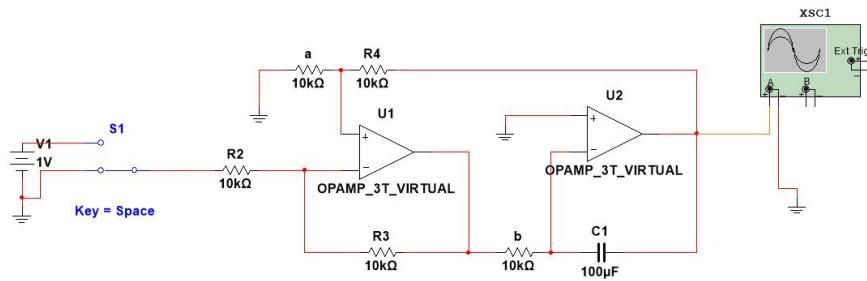


Fig. 1: 求解一阶微分方程的运算电路

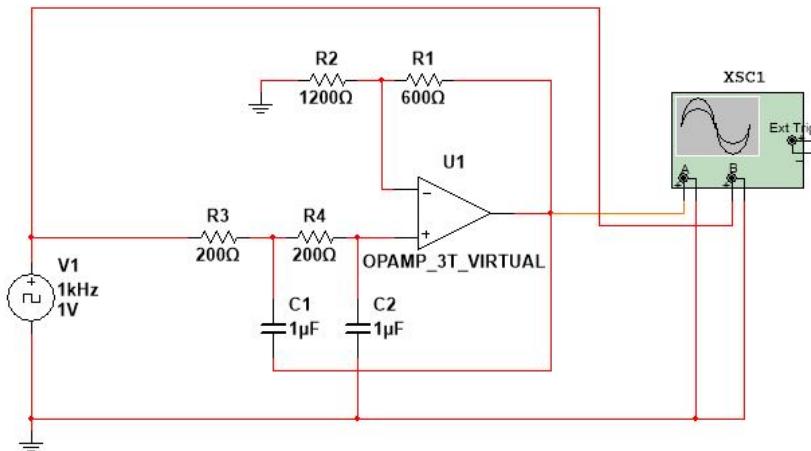


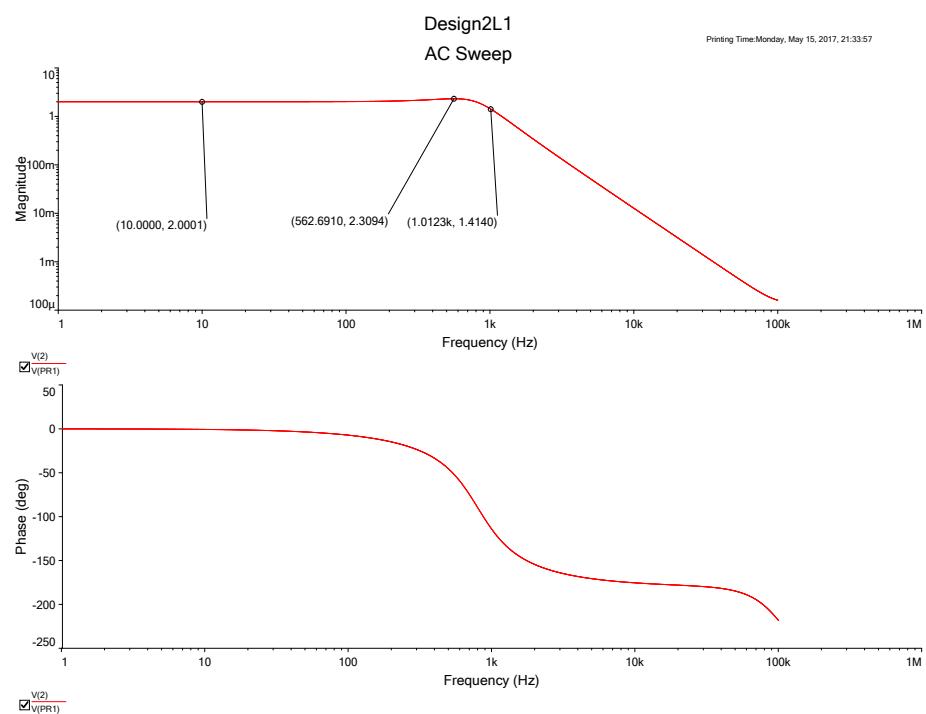
Fig. 2: VCVS低通滤波电路

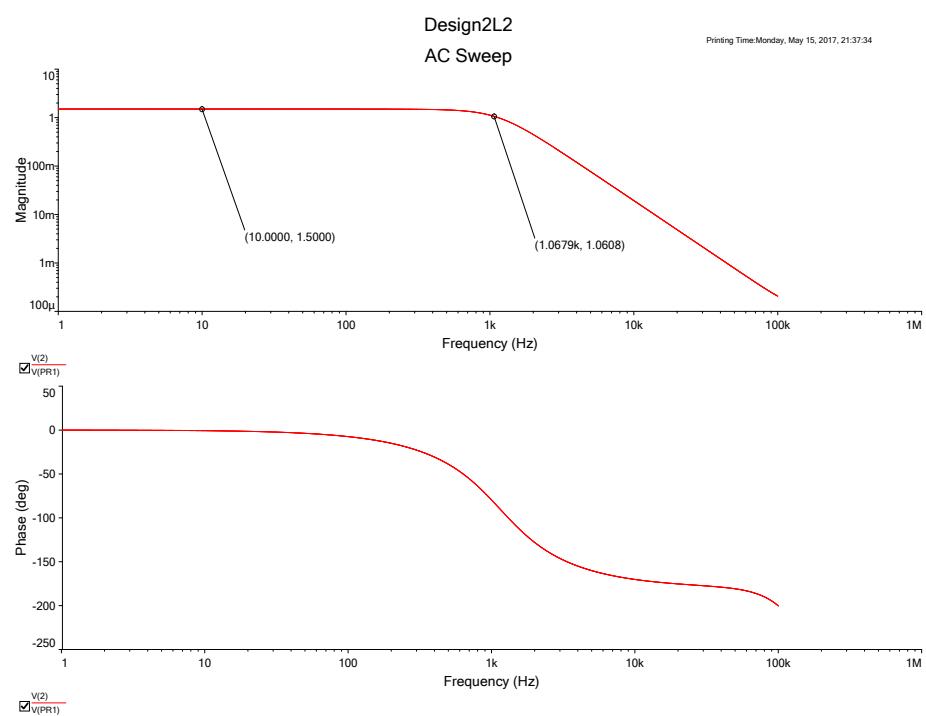
## 1 一阶微分方程求解电路

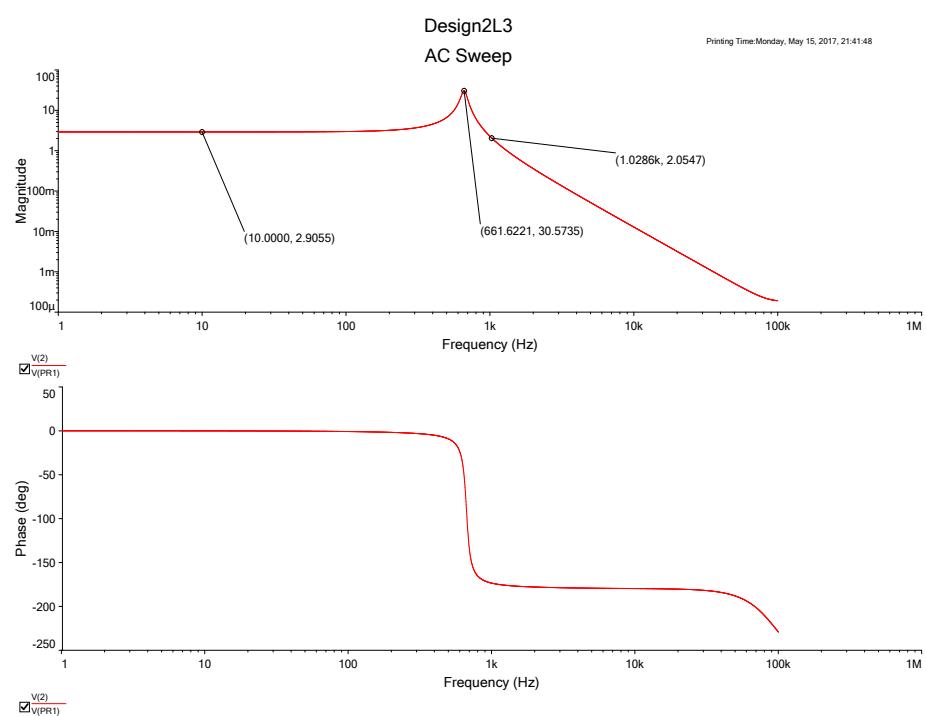
### 2 VCVS电路搭建和测试

#### 2.1 辐频相频特性的测量

##### 2.1.1 VCVS低通滤波电路搭建和测试

Fig. 3:  $Q=1$

Fig. 4:  $Q = 2/3$

Fig. 5:  $Q = 10.5$

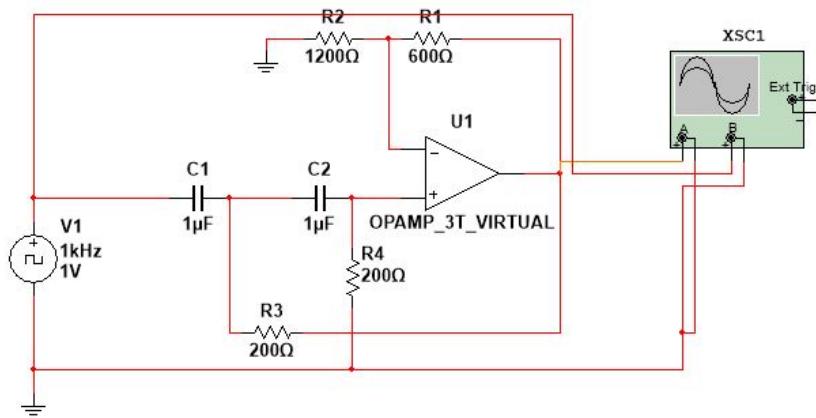
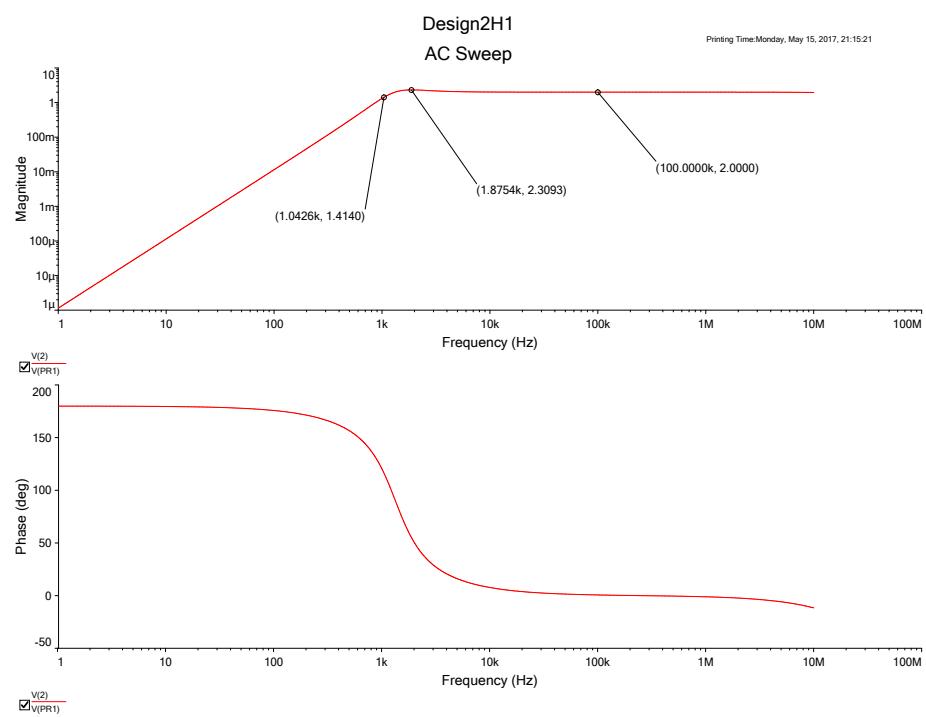
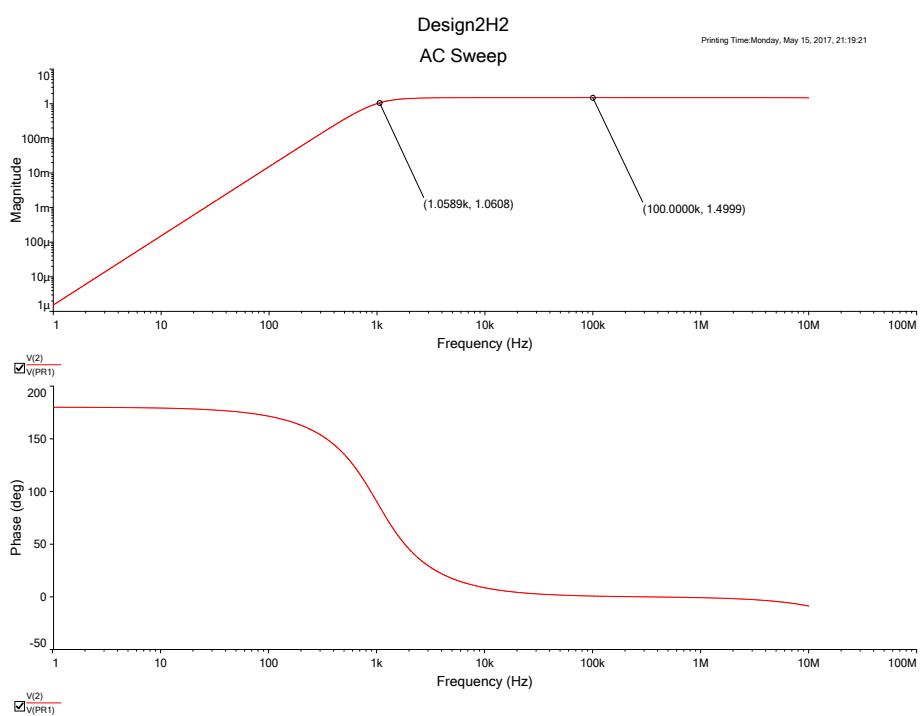
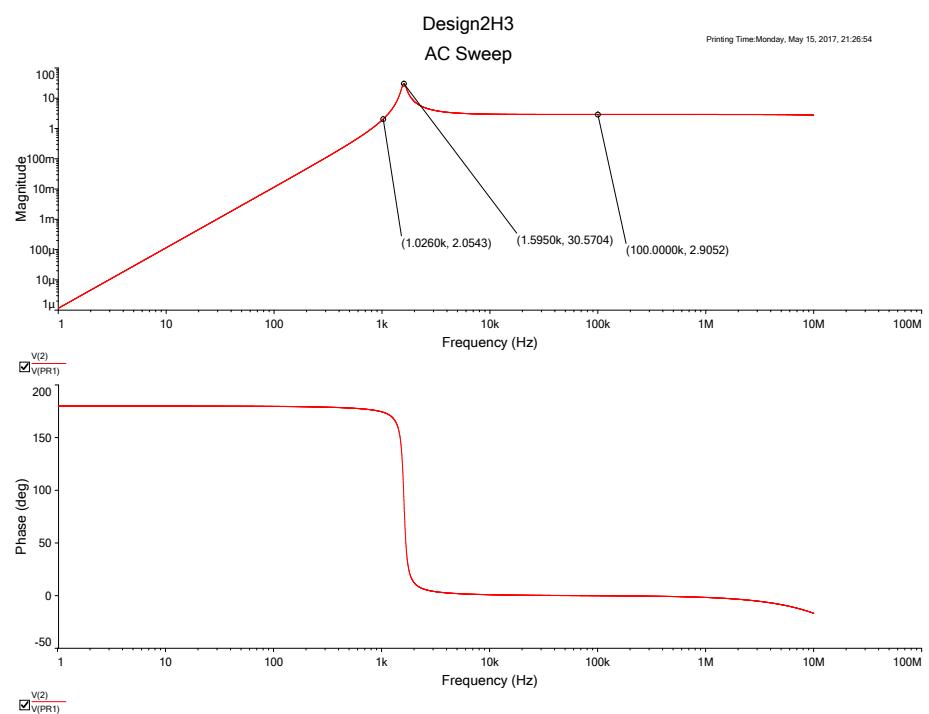


Fig. 6: VCVS高通滤波电路

### 2.1.2 VCVS高通滤波电路搭建和测试

Fig. 7:  $Q=1$

Fig. 8:  $Q = 2/3$

Fig. 9:  $Q = 10.5$

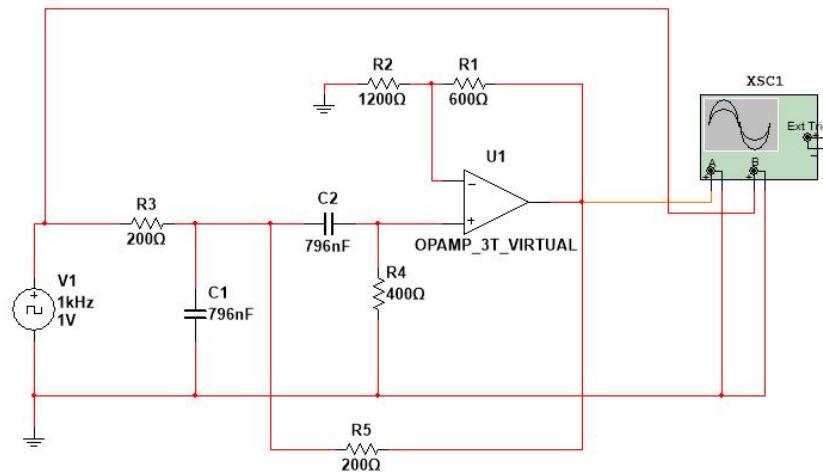


Fig. 10: VCVS带通滤波电路

### 2.1.3 VCVS带通滤波电路搭建和测试

### 2.1.4 倒T型网络带阻滤波器搭建和测试

## 2.2 输出波形的研究

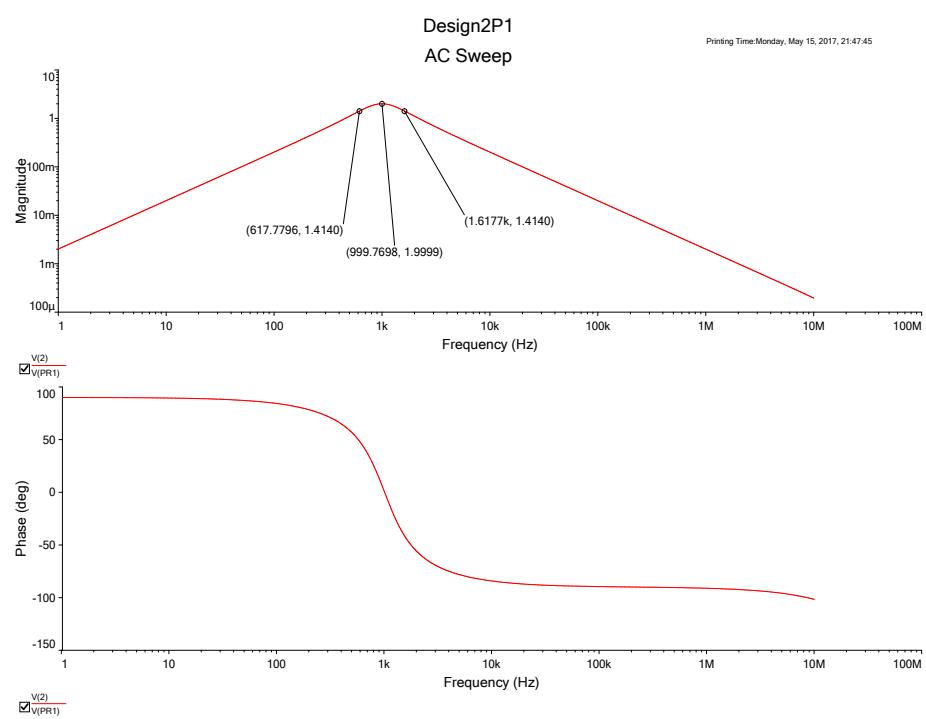
### 2.2.1 低通滤波器波形研究

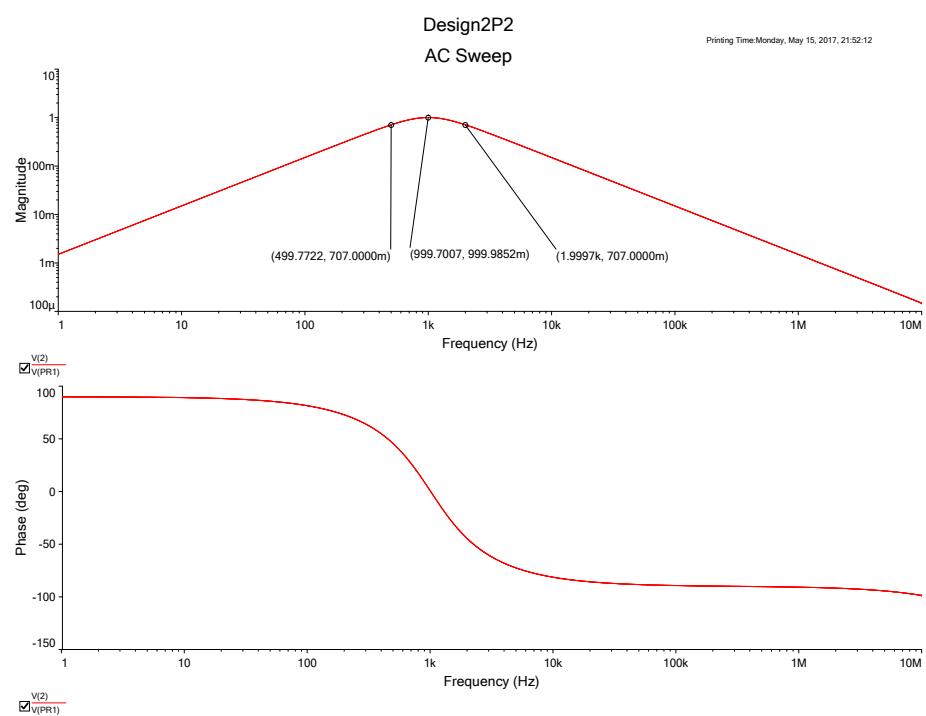
### 2.2.2 高通滤波器波形研究

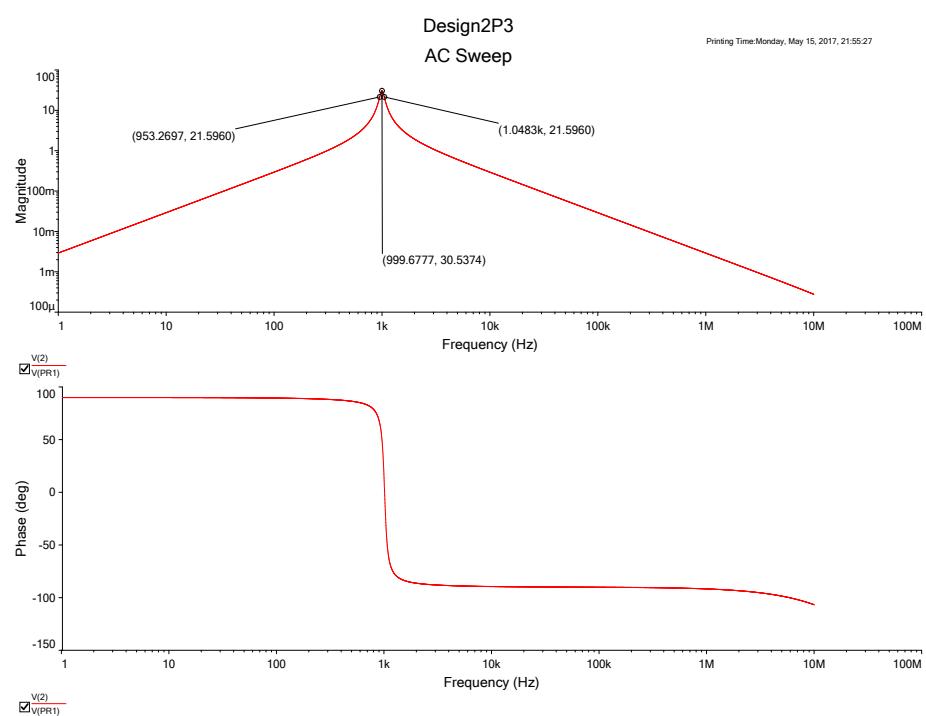
### 2.2.3 带通滤波器波形研究

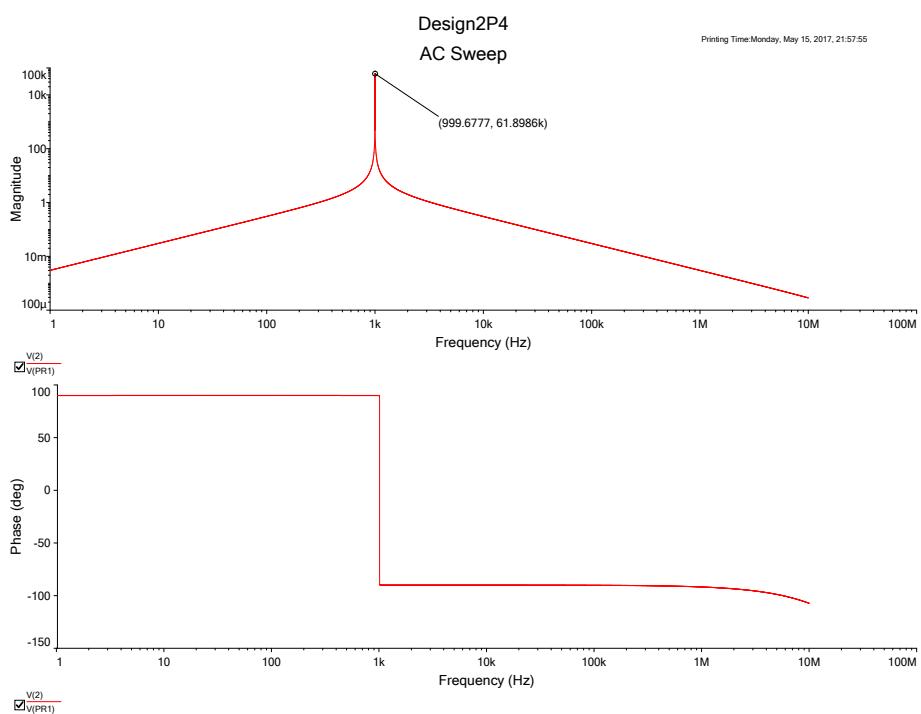
### 2.2.4 带阻滤波器波形研究

## 3 波形变换电路（习题7.29）

Fig. 11:  $Q=1$

Fig. 12:  $Q = 2/3$

Fig. 13:  $Q = 10.5$

Fig. 14:  $Q = \infty$

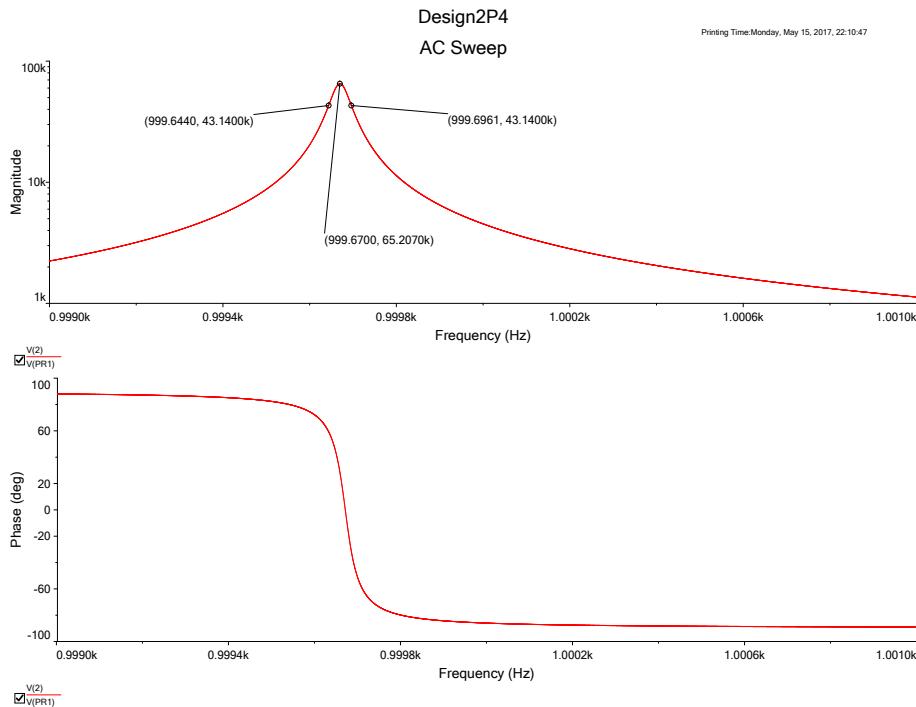
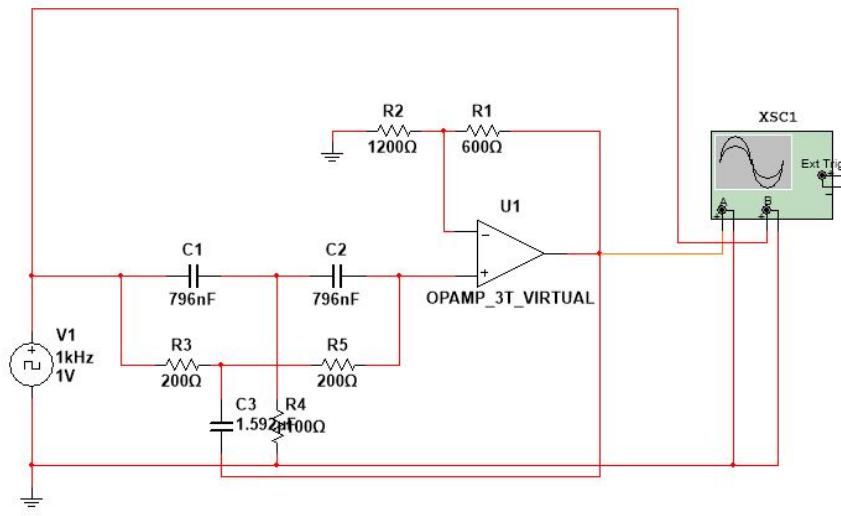
Fig. 15:  $Q = \infty$ 

Fig. 16: 倒T型网络带阻滤波器

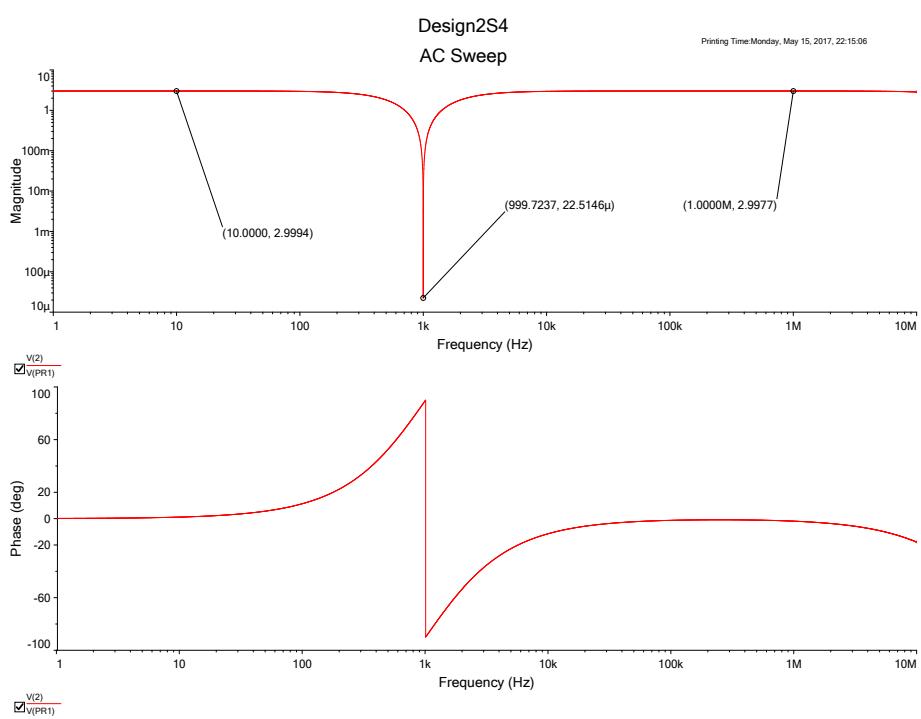


Fig. 17: 倒T型网络带阻滤波器

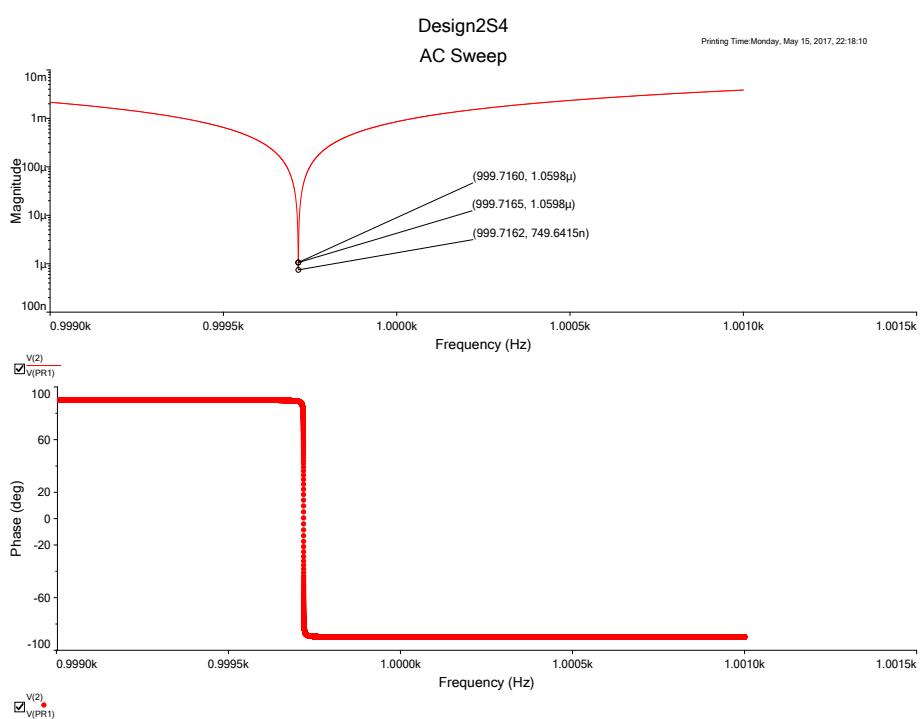


Fig. 18: 倒T型网络带阻滤波器

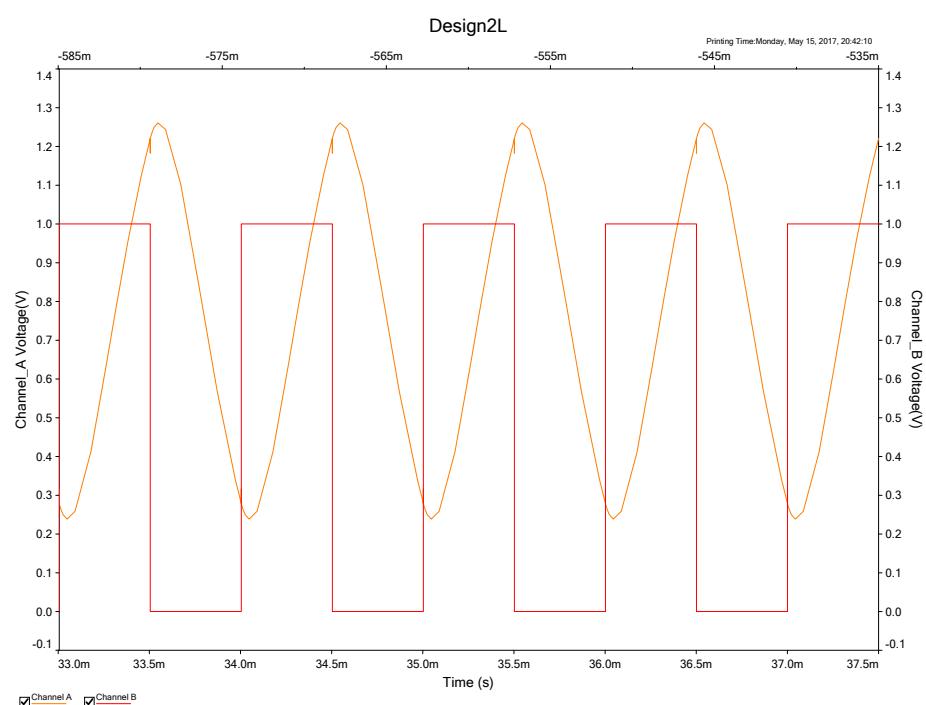


Fig. 19: 方波通过低通滤波器的波形

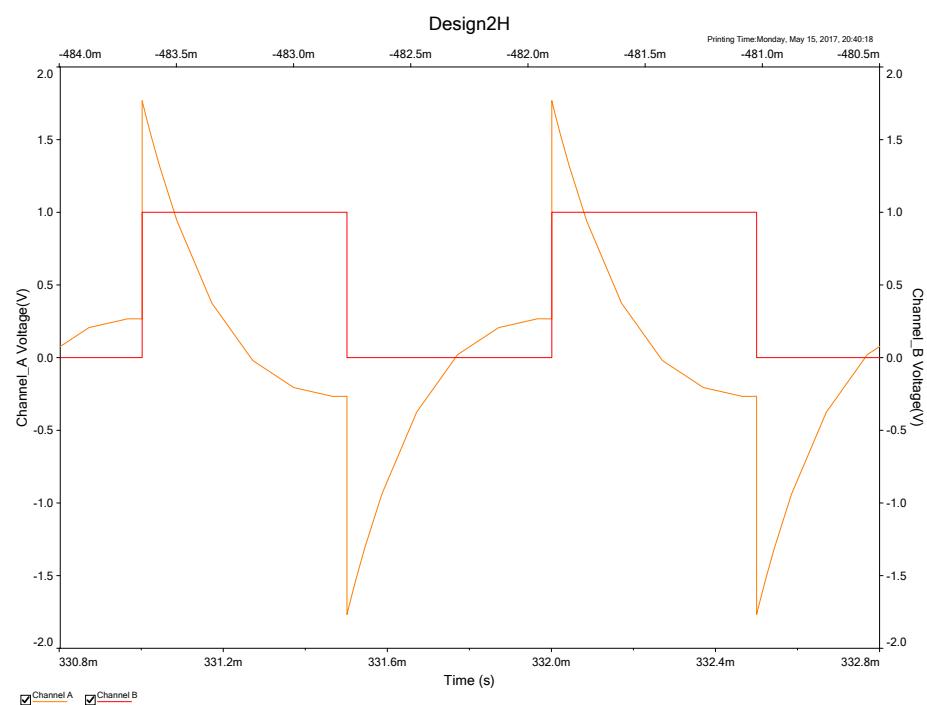


Fig. 20: 方波通过高通滤波器的波形

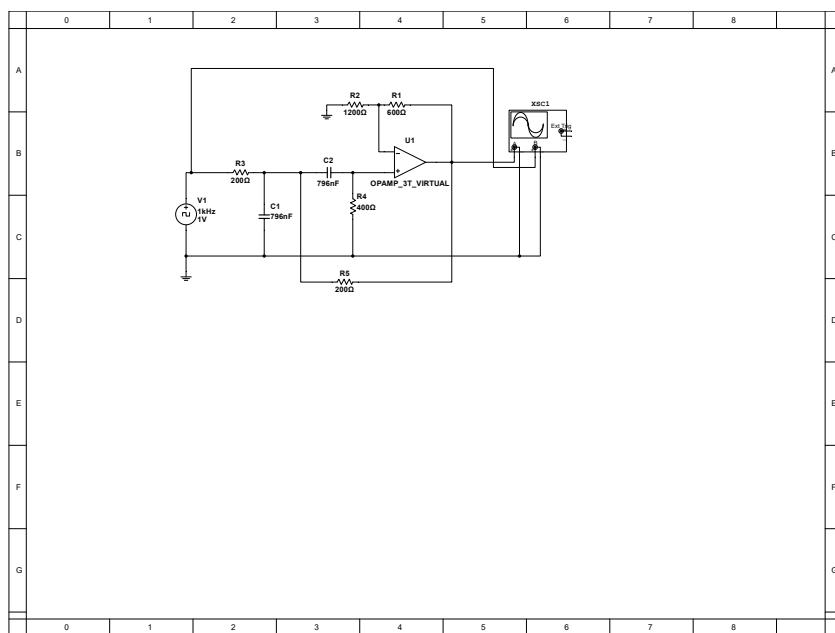


Fig. 21: 方波通过带通滤波器的波形

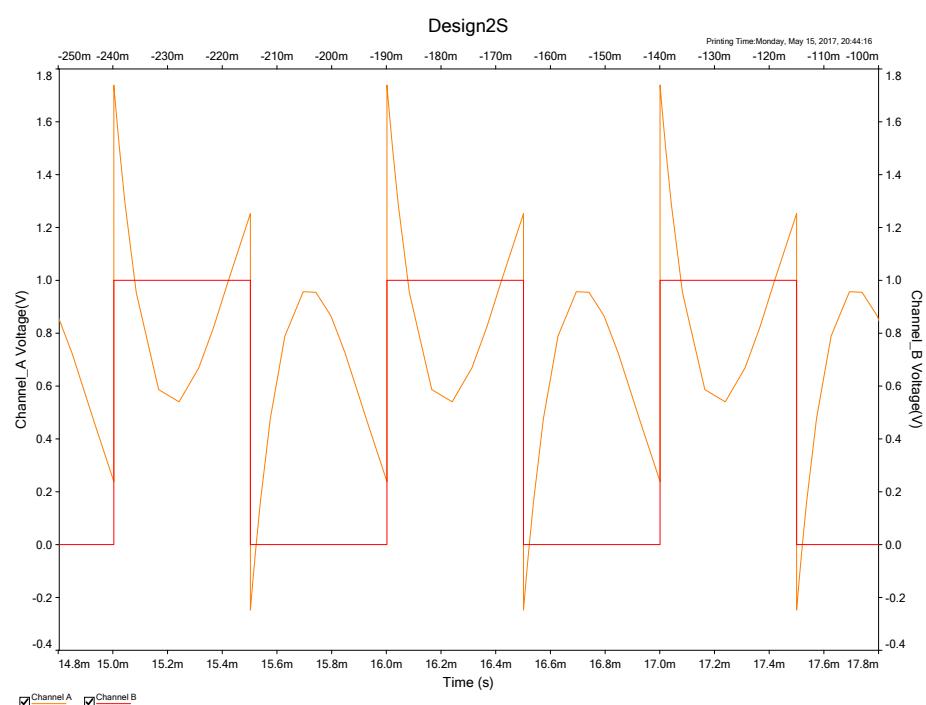


Fig. 22: 带阻通过低通滤波器的波形

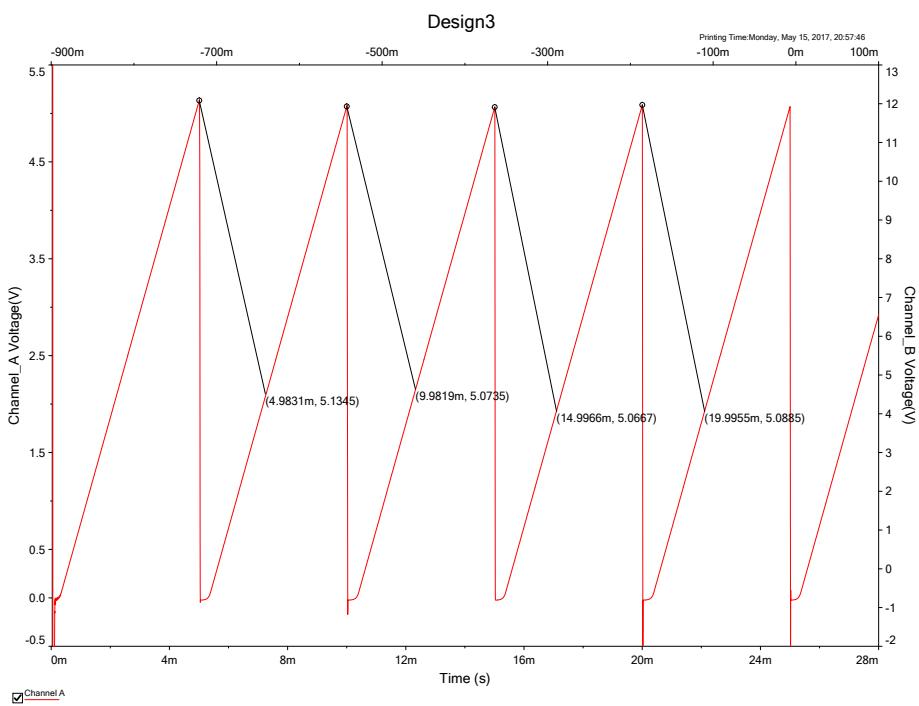


Fig. 23: 波形