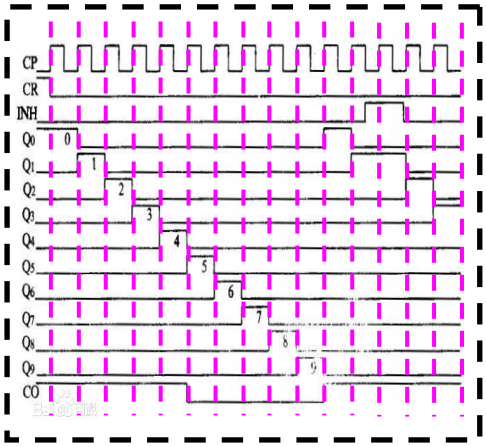
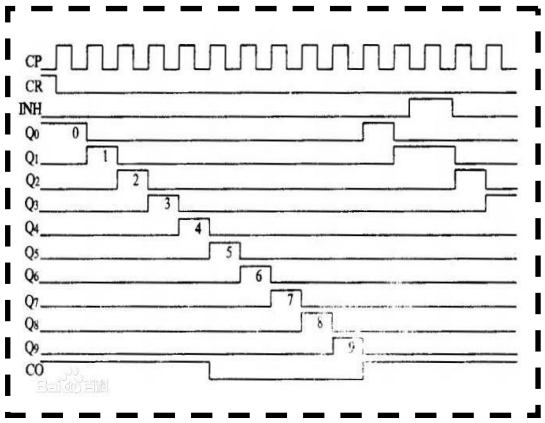
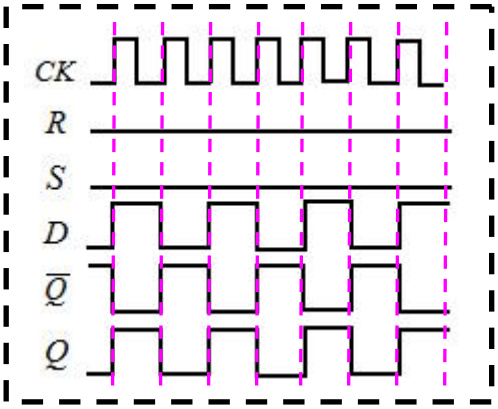
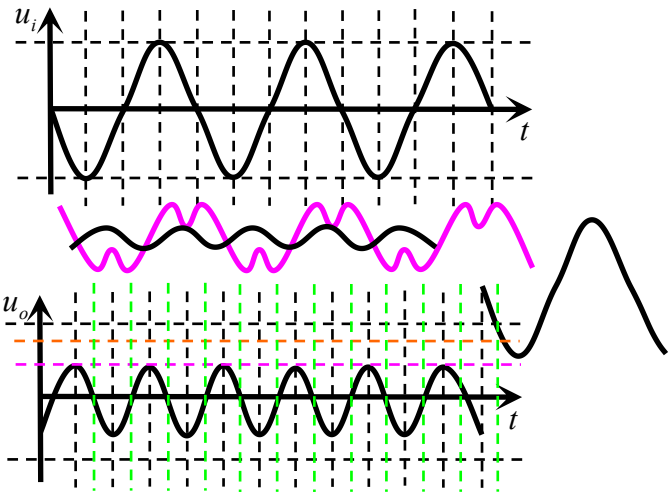
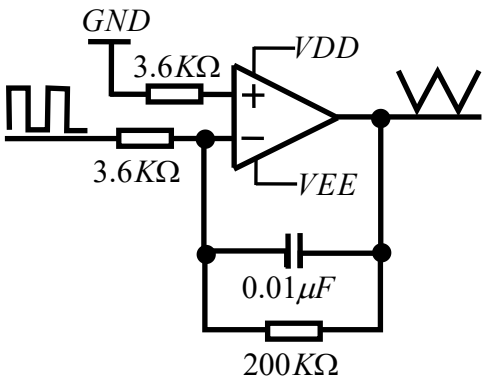
RD(复位端)	SD(置位端)	Q(输出端)
0	0	D
0	1	0
1	0	1
1	1	x

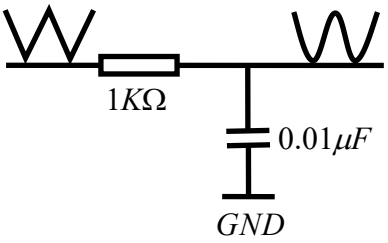


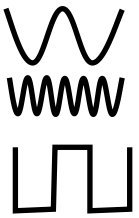


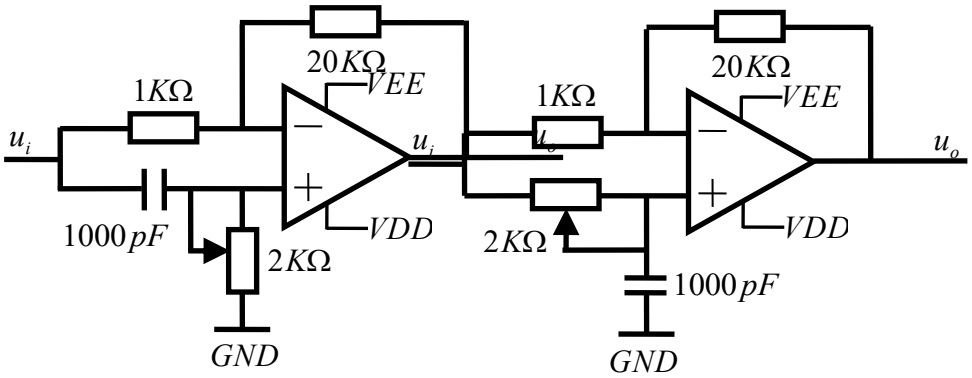












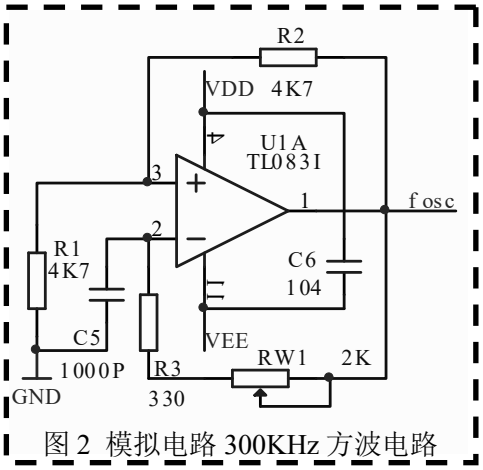
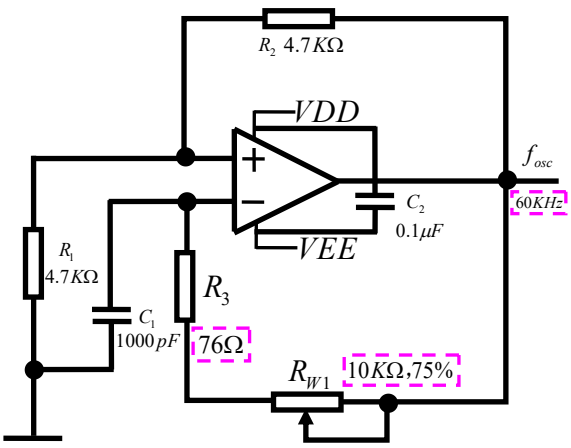
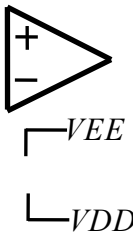
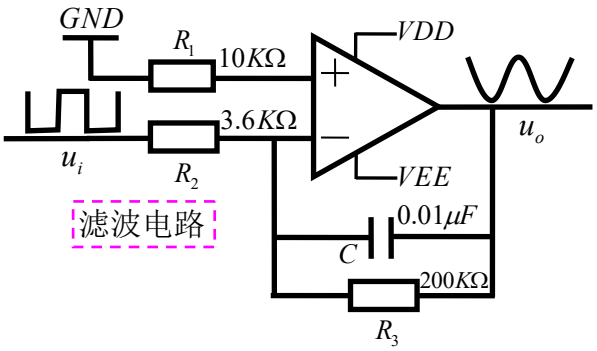


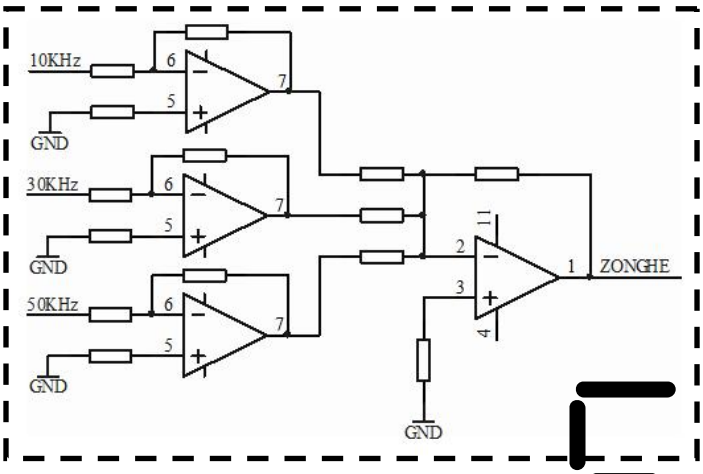
图 2 模拟电路 300KHz 方波电路

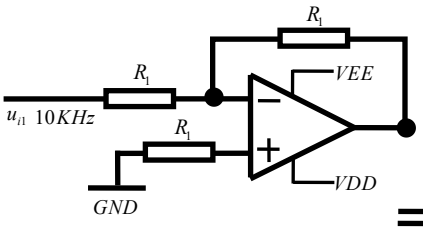


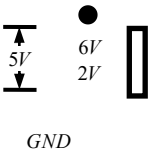


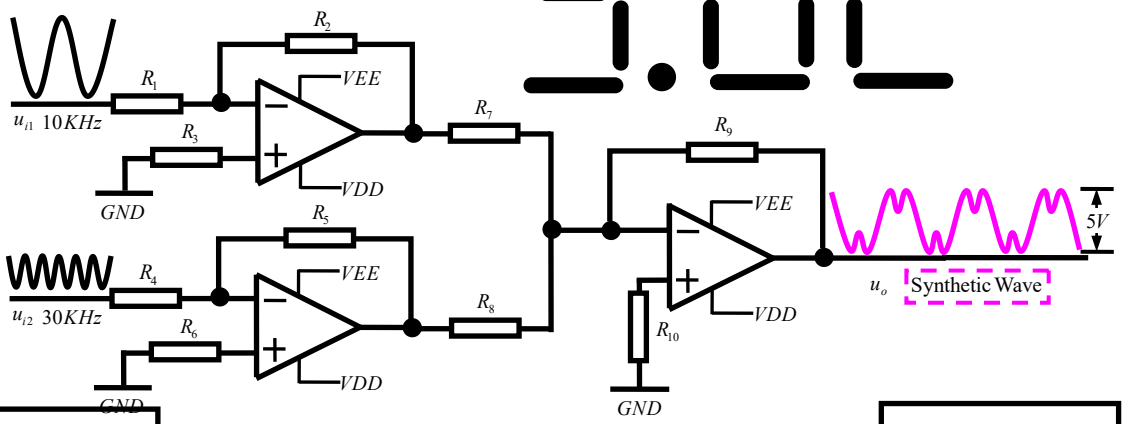


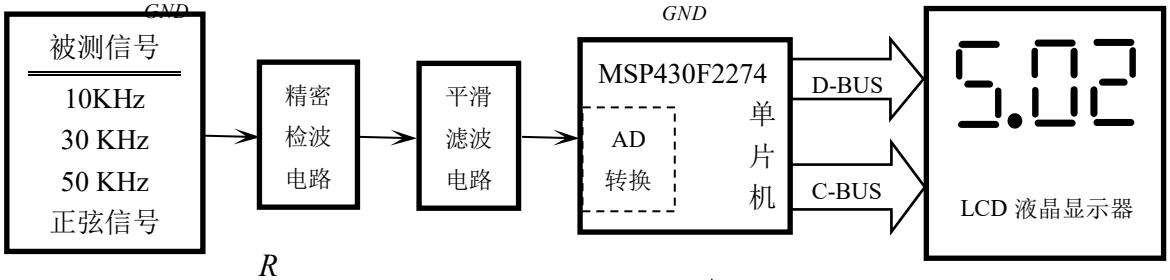
滤波电路

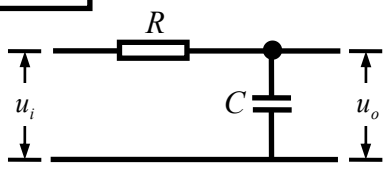


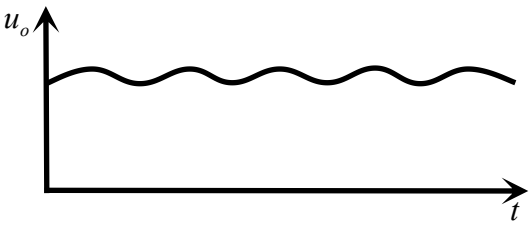


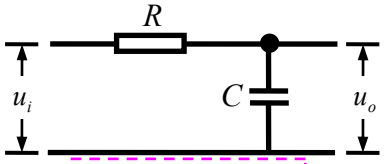




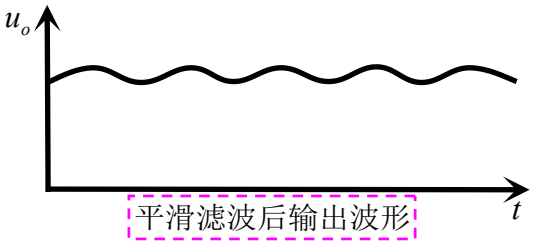




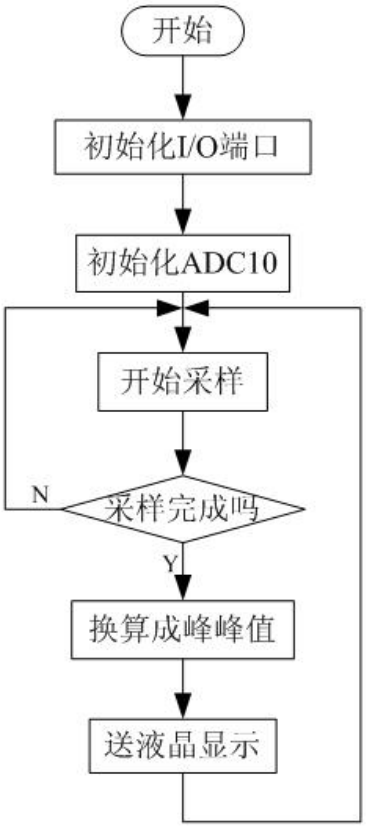


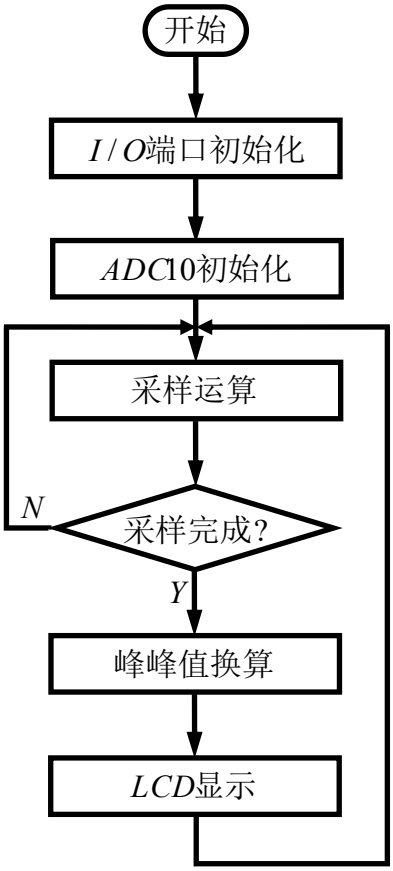


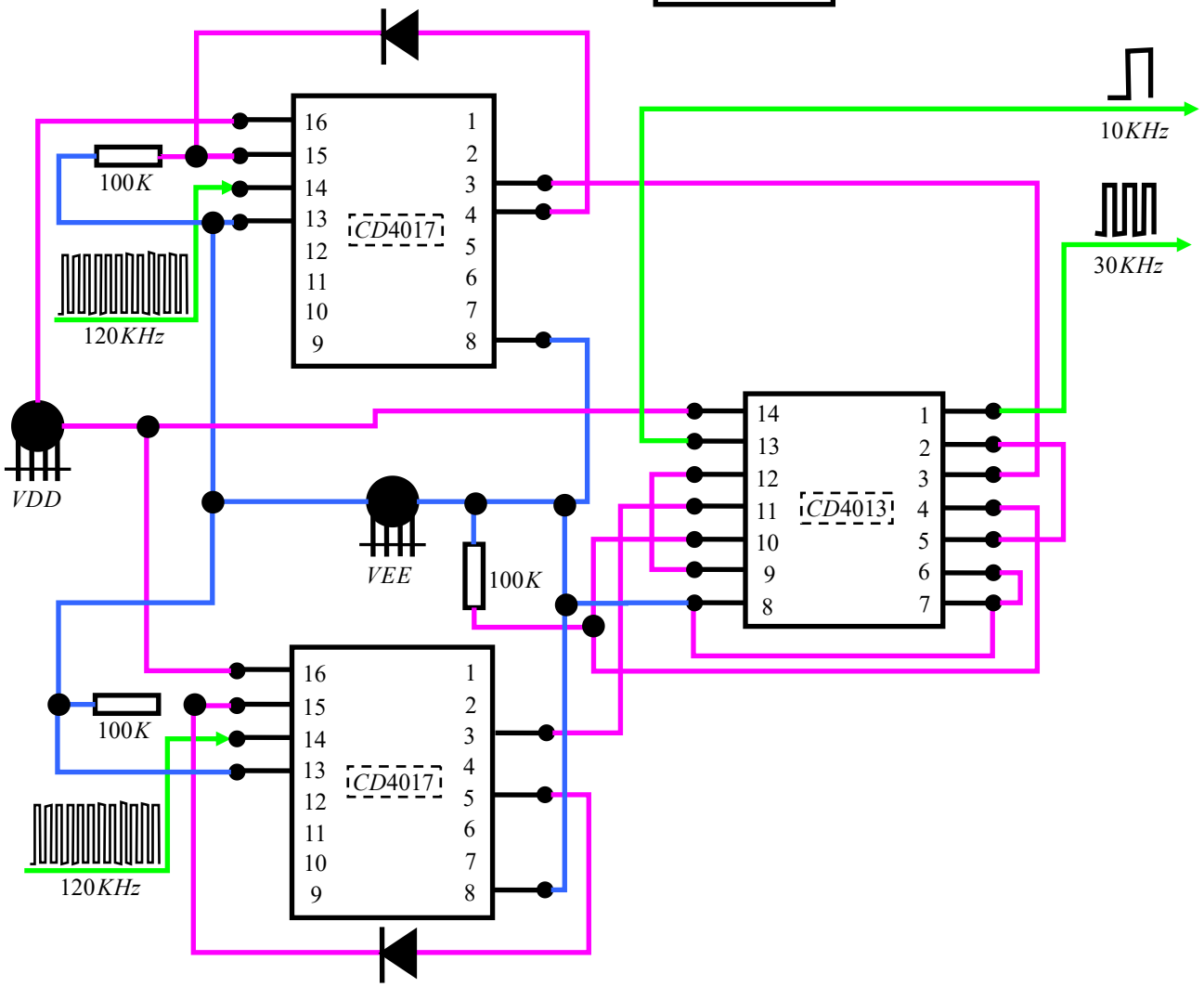
RC平滑滤波电路

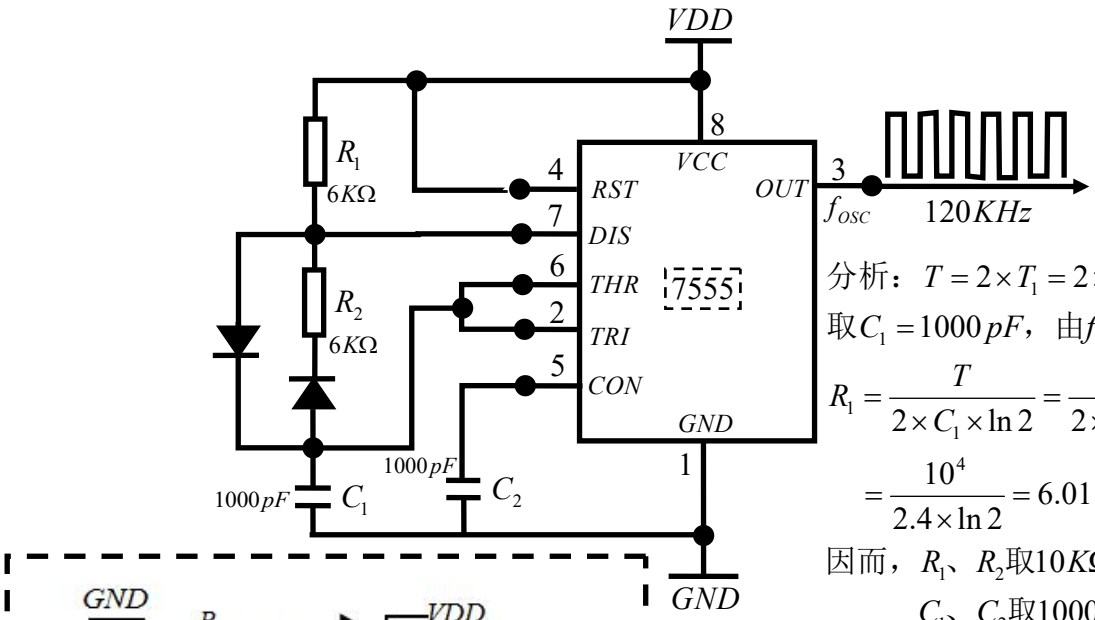


平滑滤波后输出波形


开始
初始化I/O端口
初始化ADC10
开始采样
N
采样完成吗
Y
换算成峰峰值
送液晶显示


开始
I / O端口初始化
ADC10初始化
采样运算
N
采样完成?
Y
峰峰值换算
LCD显示


16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
CD4017
100K
120KHz
VDD
VEE
100K
CD4013
10KHz
30KHz



分析：$T = 2 \times T_1 = 2 \times R_1 \times C_1 \times \ln 2$

取$C_1 = 1000\,pF$，由$f_{osc} = 120KHz$得，

$$R_1 = \frac{T}{2 \times C_1 \times \ln 2} = \frac{1}{2 \times f_{osc} \times C_1 \times \ln 2}$$

$$= \frac{10^4}{2.4 \times \ln 2} = 6.011K\Omega$$

因而，R_1、R_2取10$K\Omega$的滑阻，

C_1、C_2取1000pF的电容。

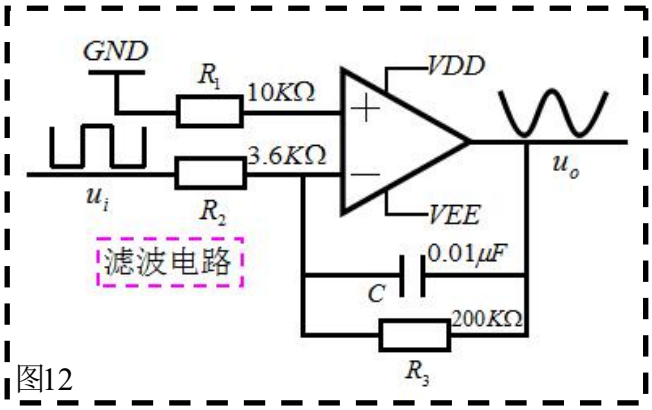
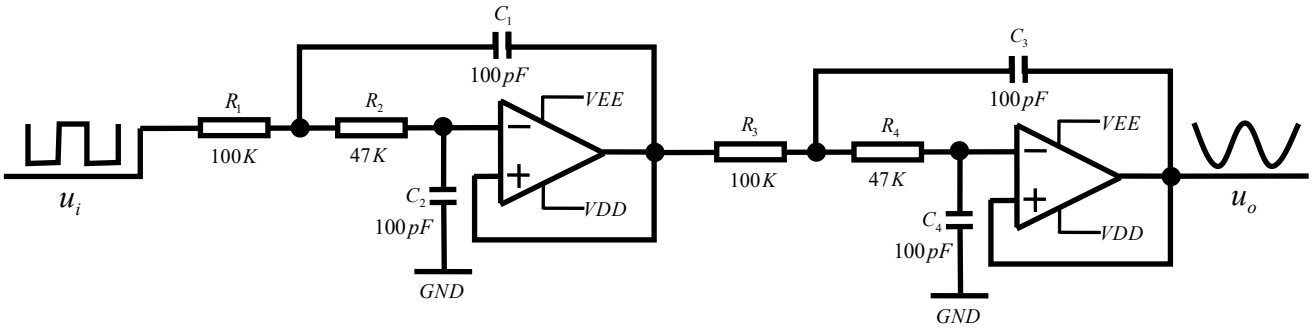
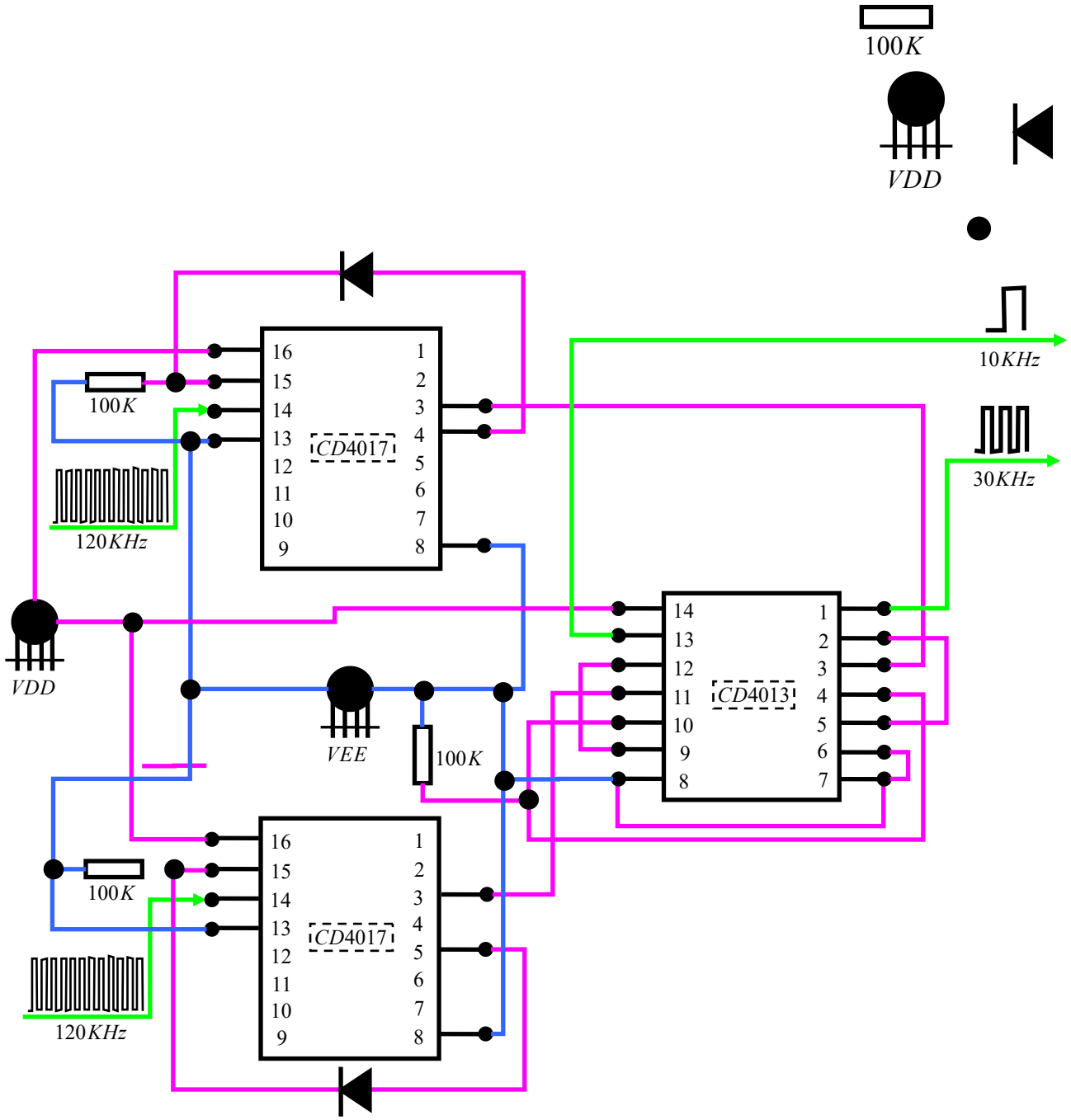


图12




100K
VDD
10KHz
30KHz
100K
120KHz
CD4017
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
VDD
VEE
100K
CD4013
14
13
12
11
10
9
8
1
2
3
4
5
6
7
100K
120KHz
CD4017