



PCB 교육 정리

Pspice Simulation

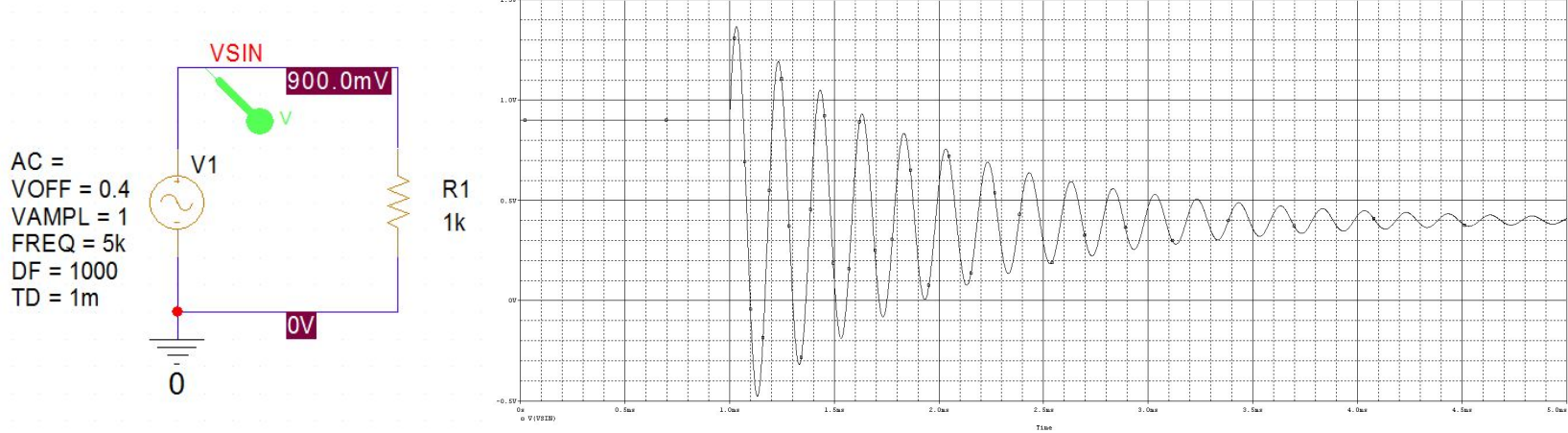
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wu3643@gmail.com

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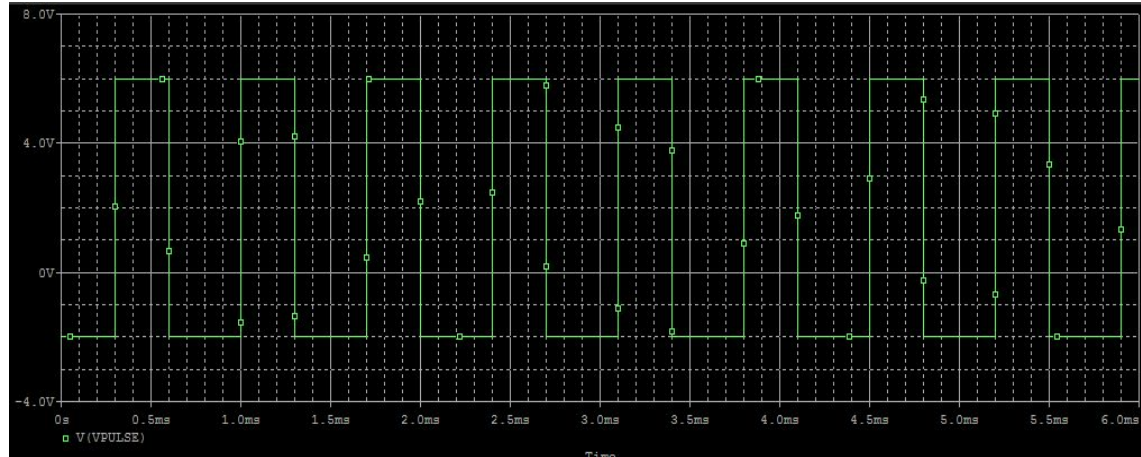
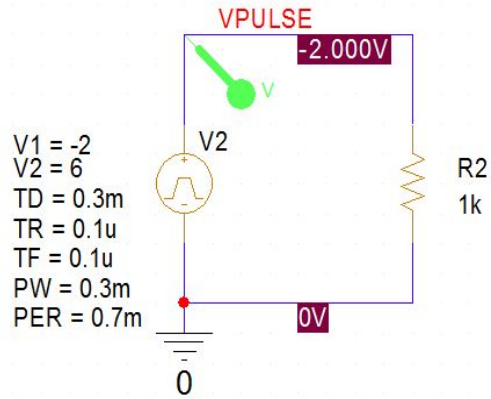
Voltage source

VSIN



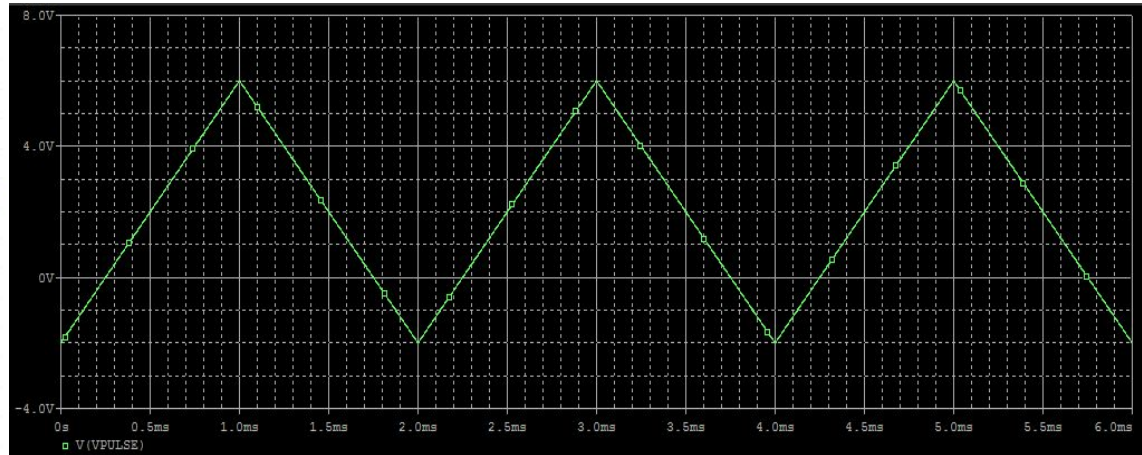
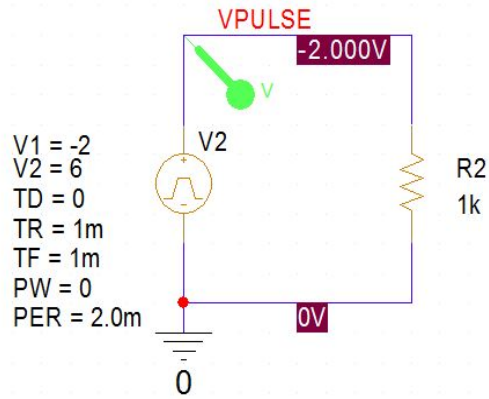
Voltage source

VPULSE



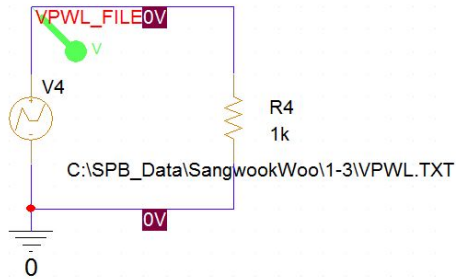
Voltage source

삼각파

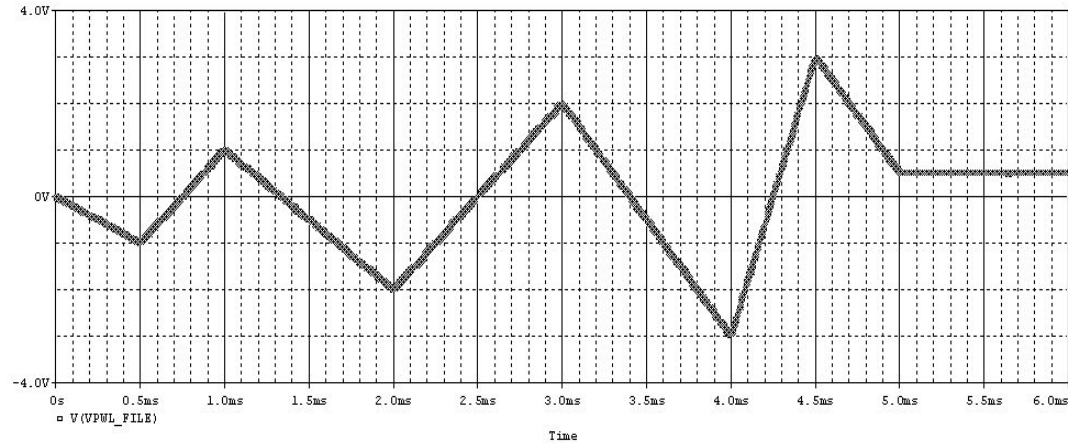


Voltage source

삼각파



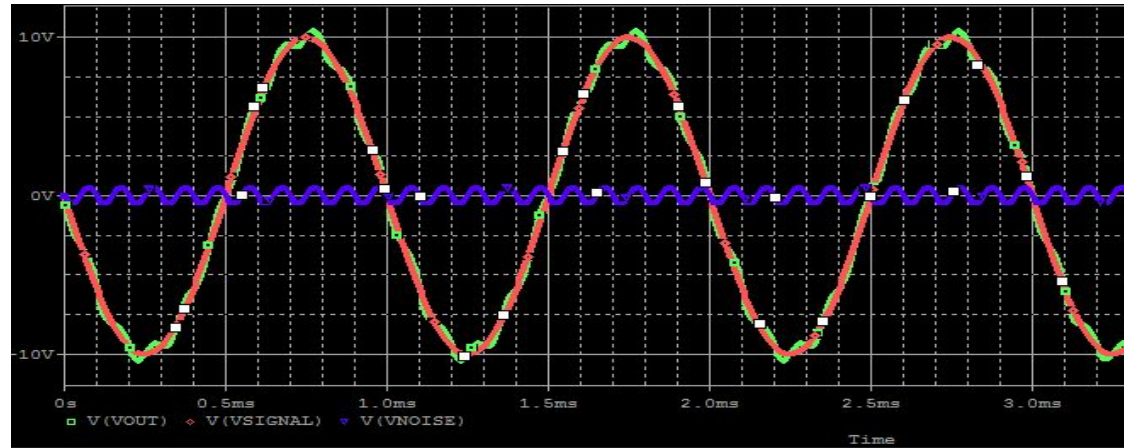
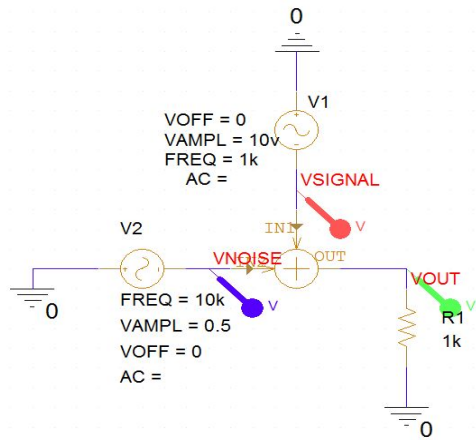
0	0
0.5m	-1
1m	1
2m	-2
3m	2
4m	-3
4.5m	3
5m	0.5



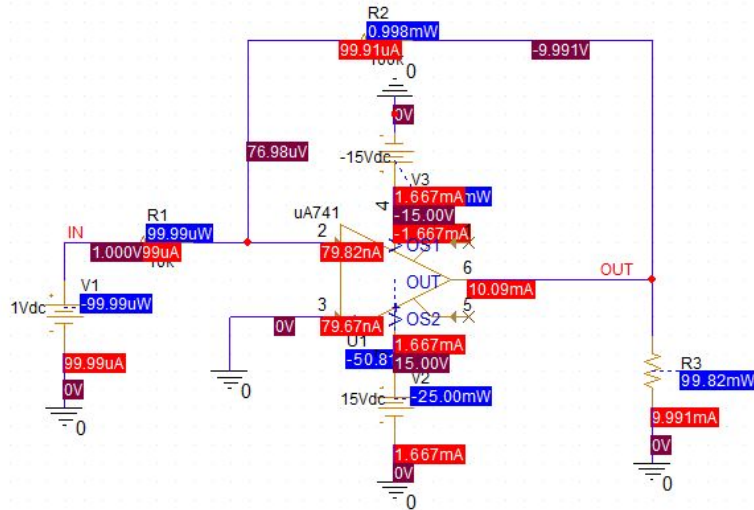
text file을 각 초에 맞게 값을 지정하여 활용한다.

Voltage source

과제 1 : 신호 합성



Bias point



SMALL-SIGNAL CHARACTERISTICS

$$V(OUT)/V_{V1} = -9.993E+00$$

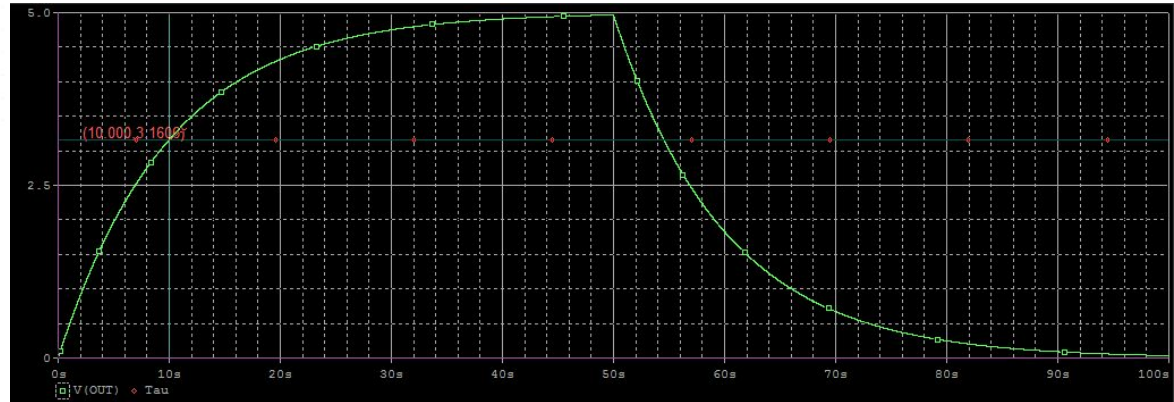
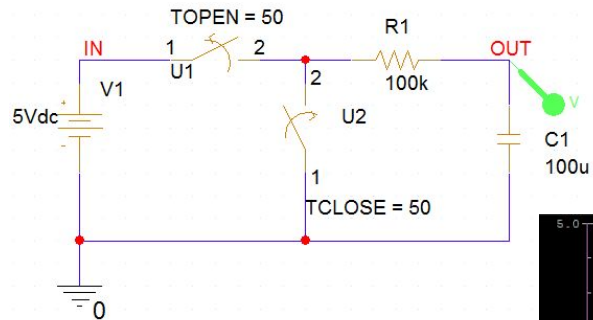
$$\text{INPUT RESISTANCE AT } V_{V1} = 1.000E+04$$

$$\text{OUTPUT RESISTANCE AT } V(OUT) = 8.451E-03$$

JOB CONCLUDED

♀

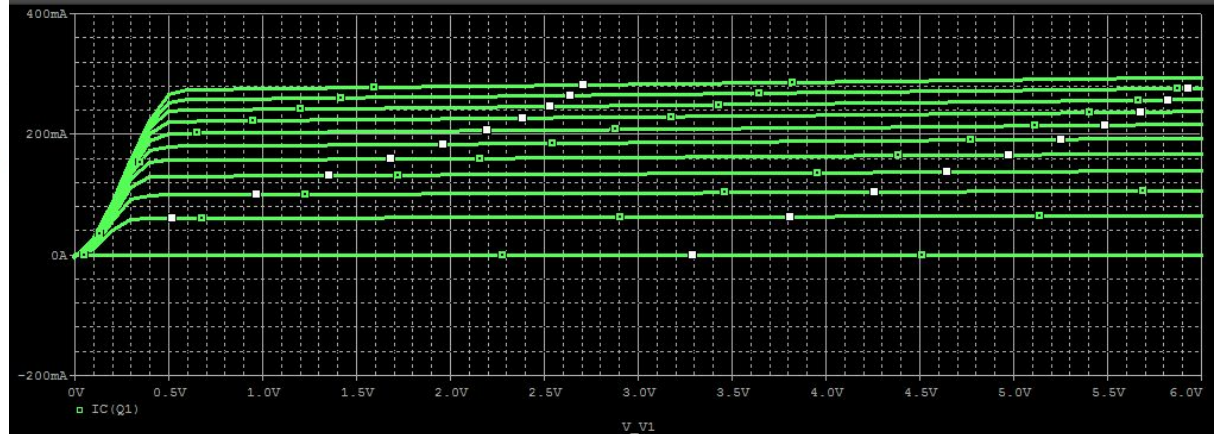
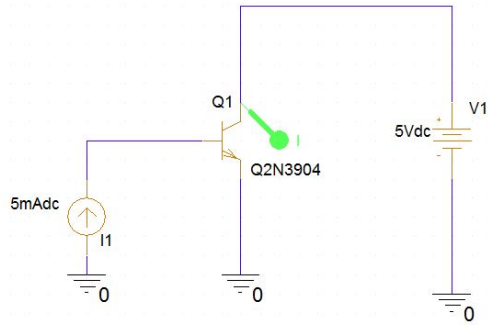
Simulation



Simulation

parametric sweep

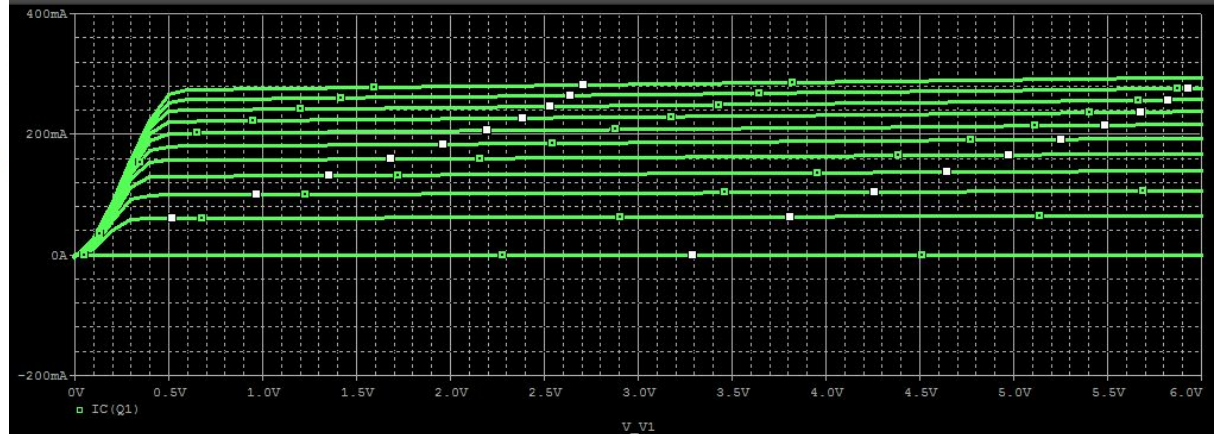
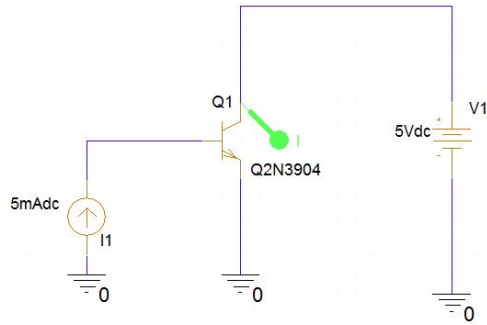
VI 특성 곡선 확인



Simulation

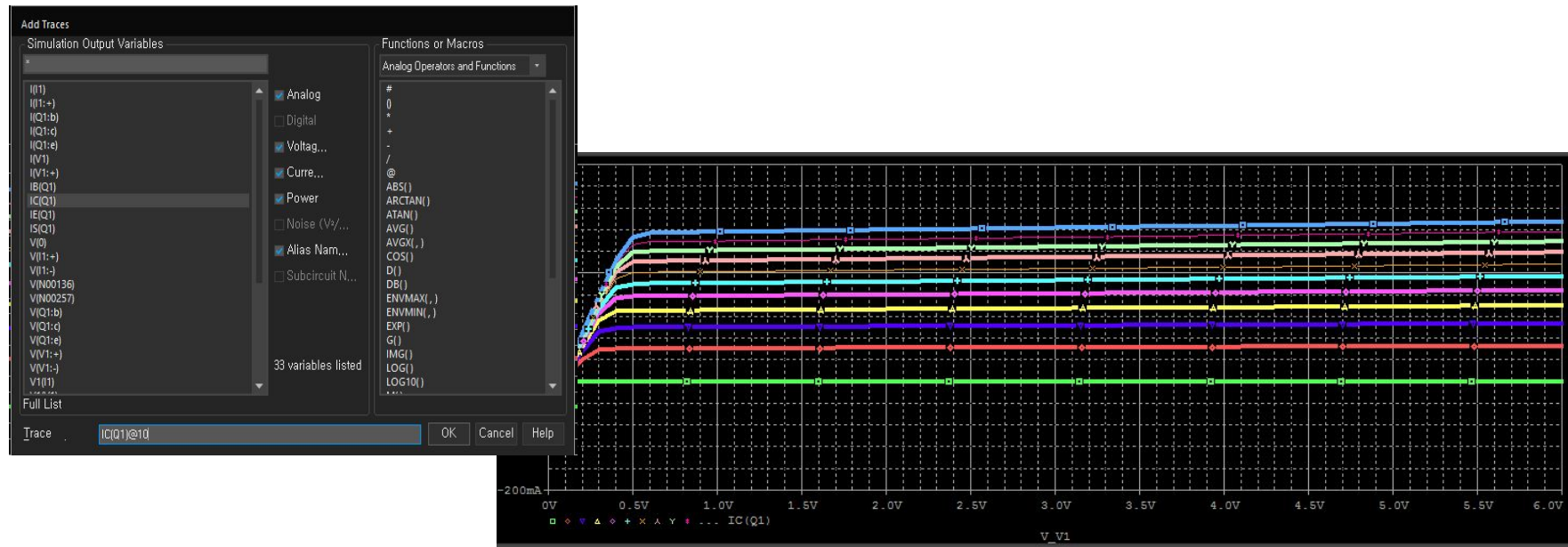
DC sweep with secondary sweep

VI 특성 곡선 확인



parametric sweep

VI 특성 곡선 확인



Simulation

AC SWEEP

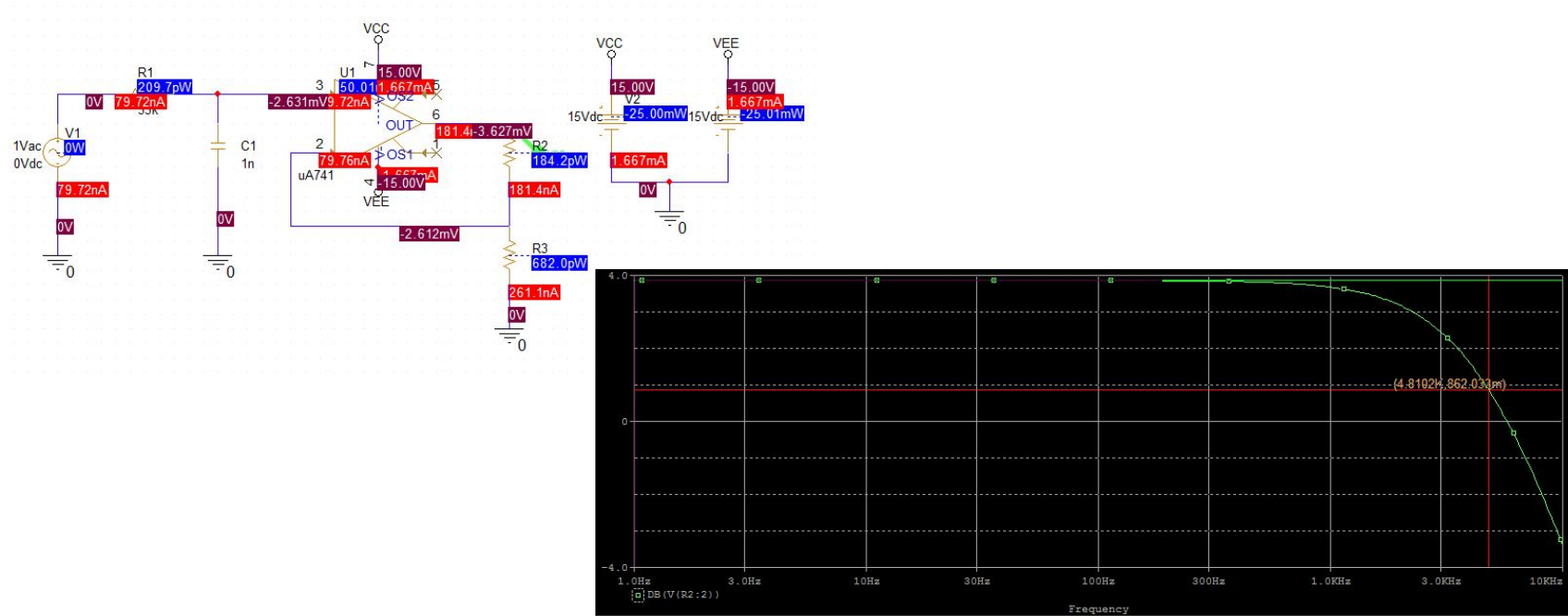


Figure 1 displays 16 digital logic circuit diagrams (DSTM11 to DSTM20) and their corresponding truth tables. Each diagram shows a specific logic gate configuration and its output for various input combinations.

DSTM11: 7408 (AND gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 0, COMMAND3 = 0.2m 1, COMMAND4 = 0.3m 1. Output: Xand.

DSTM12: 7408 (AND gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 1, COMMAND3 = 0.2m 0, COMMAND4 = 0.3m 1. Output: Xand.

DSTM13: 7432 (OR gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 0, COMMAND3 = 0.2m 1, COMMAND4 = 0.3m 1. Output: Xor.

DSTM14: 7432 (OR gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 1, COMMAND3 = 0.2m 0, COMMAND4 = 0.3m 1. Output: Xor.

DSTM15: 7400 (NAND gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 0, COMMAND3 = 0.2m 1, COMMAND4 = 0.3m 1. Output: Xnand.

DSTM16: 7400 (NAND gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 1, COMMAND3 = 0.2m 0, COMMAND4 = 0.3m 1. Output: Xnand.

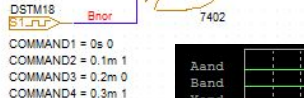
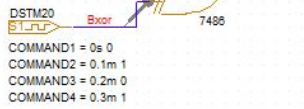
DSTM17: 7402 (NOR gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 0, COMMAND3 = 0.2m 1, COMMAND4 = 0.3m 1. Output: Xnor.

DSTM18: 7402 (NOR gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 1, COMMAND3 = 0.2m 0, COMMAND4 = 0.3m 1. Output: Xnor.

DSTM19: 7486 (XOR gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 0, COMMAND3 = 0.2m 1, COMMAND4 = 0.3m 1. Output: Xxor.

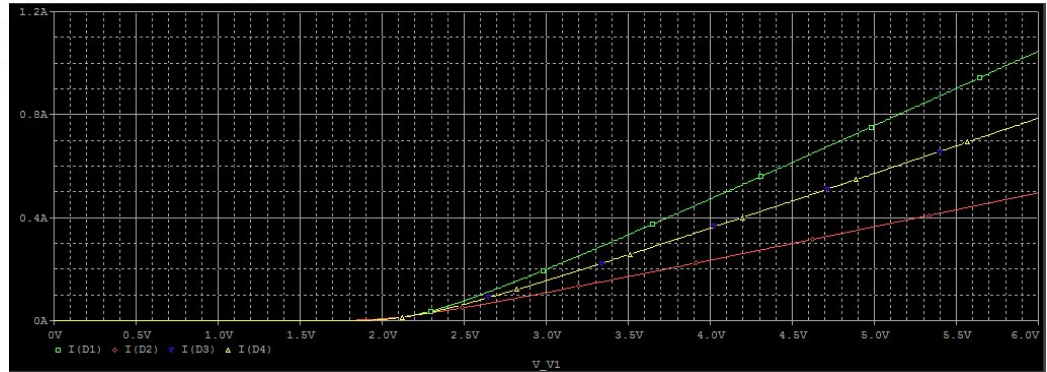
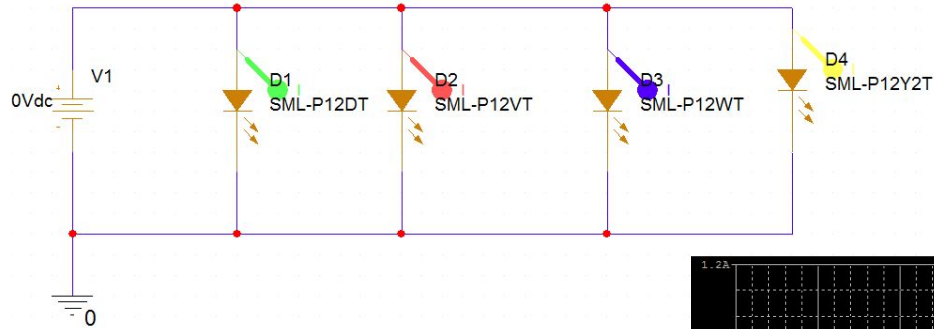
DSTM20: 7486 (XOR gate). COMMAND1 = 0s 0, COMMAND2 = 0.1m 1, COMMAND3 = 0.2m 0, COMMAND4 = 0.3m 1. Output: Xxor.

The truth tables for each circuit are provided below the diagrams, showing the output (X) for all possible combinations of the four inputs (COMMAND1, COMMAND2, COMMAND3, COMMAND4).

[illegible]

Simulation

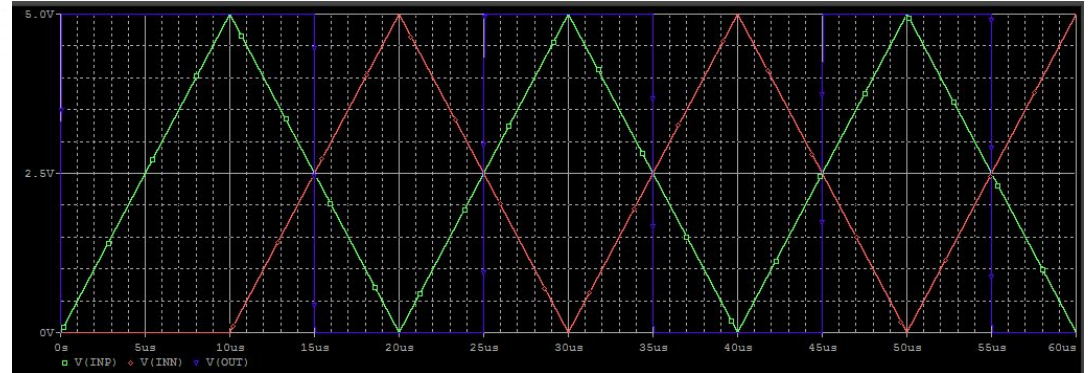
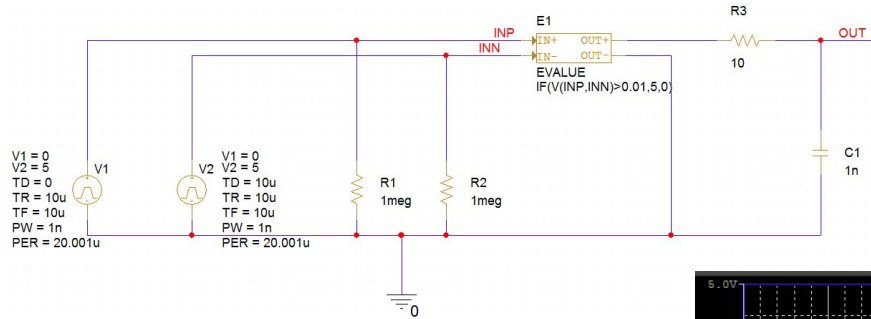
module import



Simulation

module 만들기

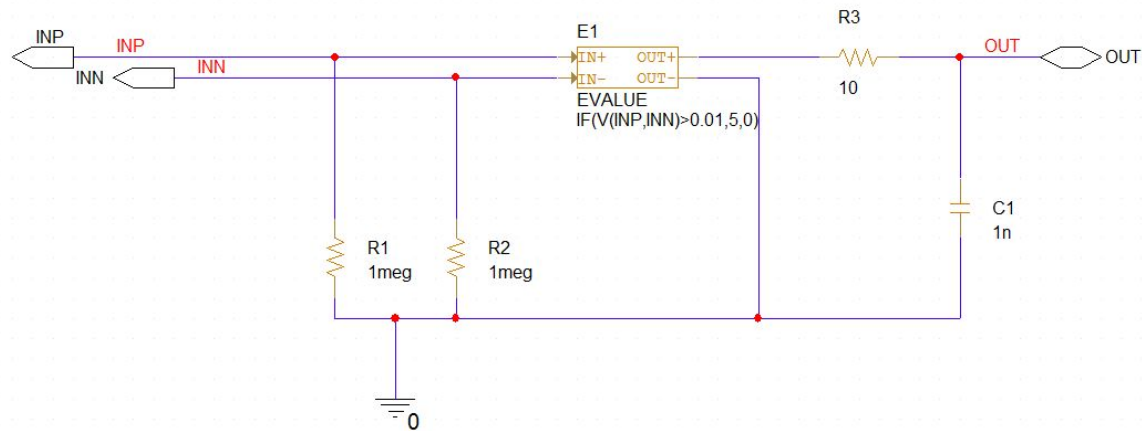
1. module simulation



Simulation

module 만들기

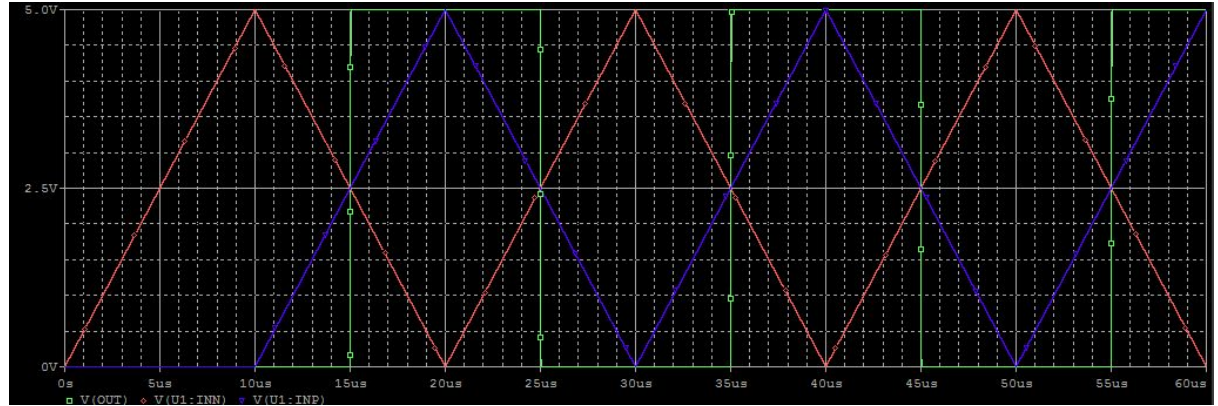
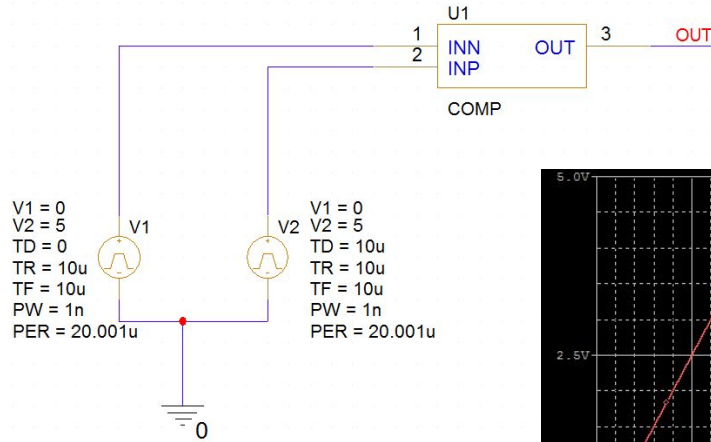
2. module port 설정



Simulation

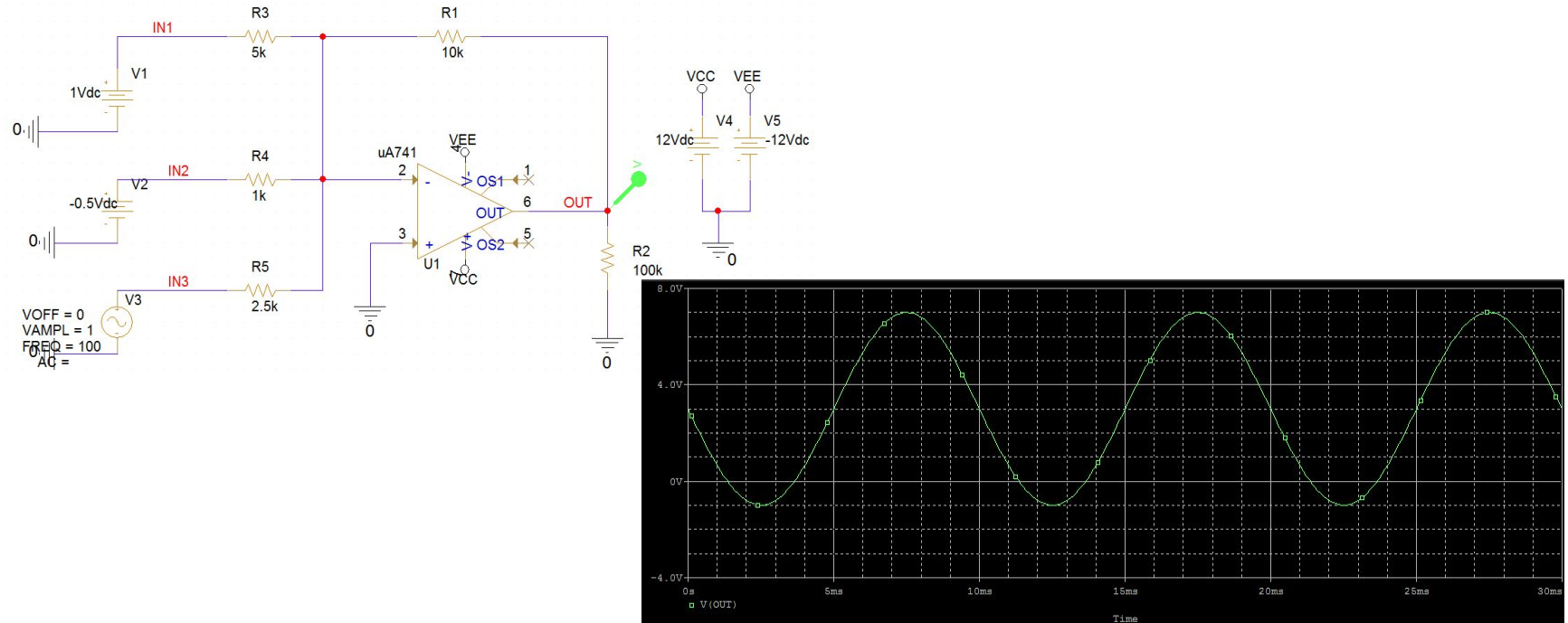
module 만들기

3. 만든 module simulation



Simulation

1번 과제



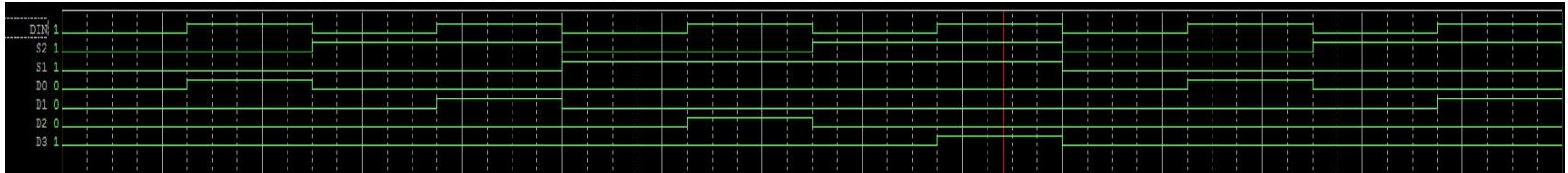
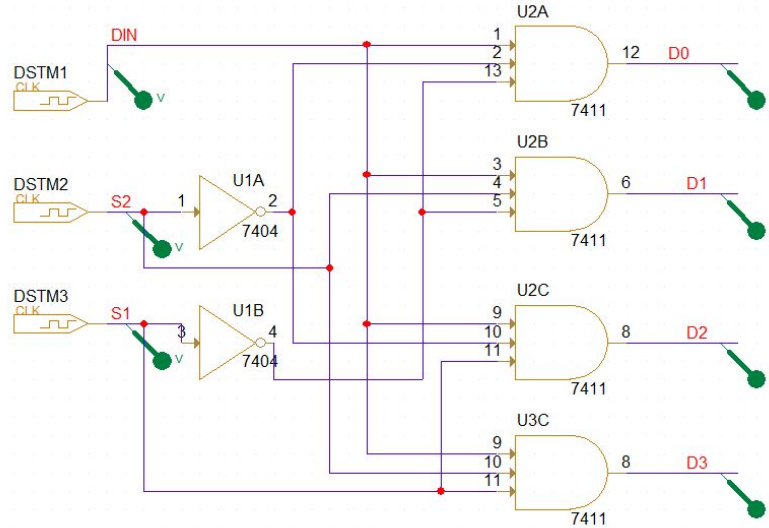
Simulation

2번 과제

STARTVAL = 0
OPPVAL = 1
ONTIME = 2.5m
OFFTIME = 2.5m

STARTVAL = 0
OPPVAL = 1
ONTIME = 5m
OFFTIME = 5m

STARTVAL = 0
OPPVAL = 1
ONTIME = 10m
OFFTIME = 10m



Simulation

3번 과제

