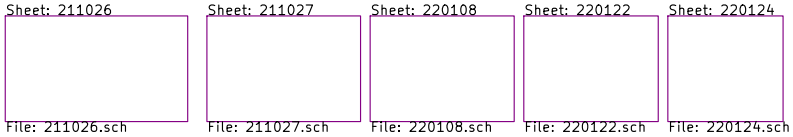
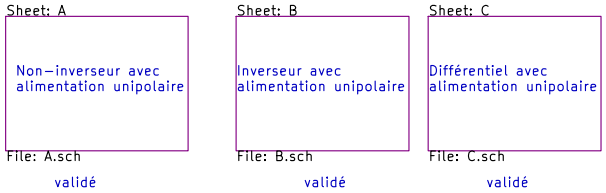
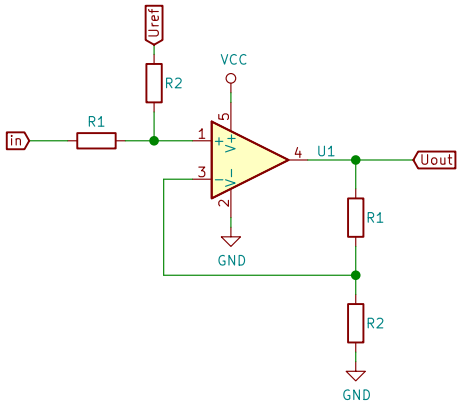
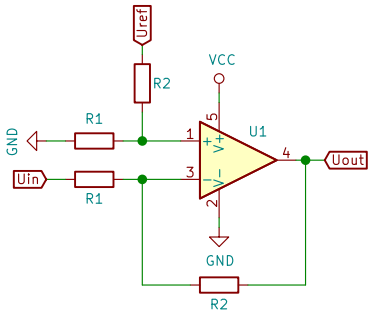
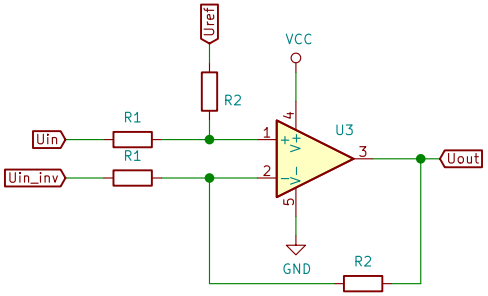

Sheet: 211026
File: 211026.sch
Sheet: 211027
File: 211027.sch
Sheet: 220108
File: 220108.sch
Sheet: 220122
File: 220122.sch
Sheet: 220124
File: 220124.sch

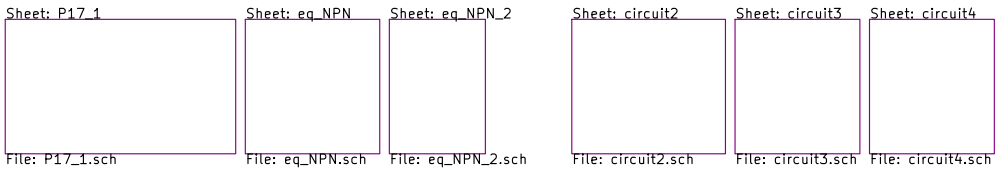

Sheet: A
Non-inverseur avec alimentation unipolaire
File: A.sch
validé
Sheet: B
Inverseur avec alimentation unipolaire
File: B.sch
validé
Sheet: C
Différentiel avec alimentation unipolaire
File: C.sch
validé

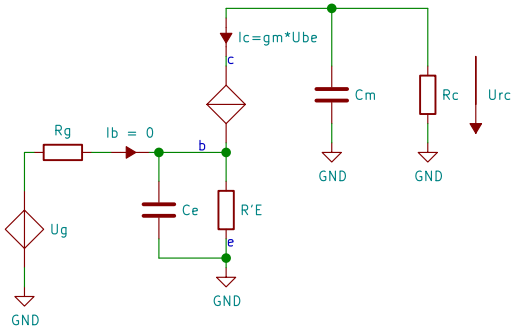

Uref
R2
VCC
R1
in
1
3
2
5
V+
V-
4
U1
Uout
R1
GND
R2
GND

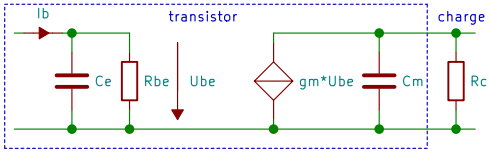

Uref
R2
VCC
R1
GND
1
U1
5
V+
4
Uout
Uin
3
V-
2
R1
GND
R2

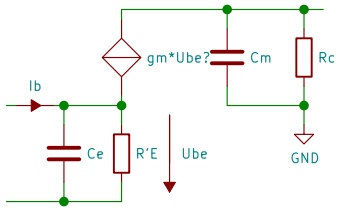

Uref
VCC
R2
R1
Uin
R1
Uin_inv
U3
1
2
3
4
5
Uout
GND
R2

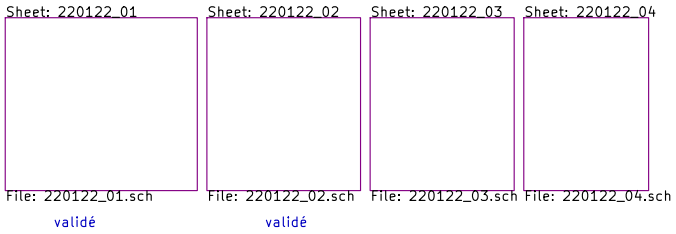
R1
R

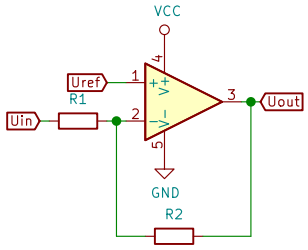

Sheet: P17_1
File: P17_1.sch
Sheet: eq_NPN
File: eq_NPN.sch
Sheet: eq_NPN_2
File: eq_NPN_2.sch
Sheet: circuit2
File: circuit2.sch
Sheet: circuit3
File: circuit3.sch
Sheet: circuit4
File: circuit4.sch

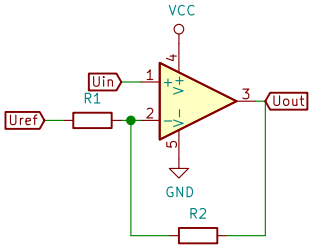

Ic=gm*Ube
c
Cm
Rc
Urc
Rg
Ib = 0
b
GND
GND
Ce
R'E
Ug
e
GND
GND

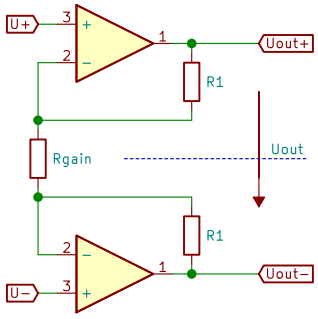

Ib
transistor
charge
Ce
Rbe
Ube
gm*Ube
Cm
Rc

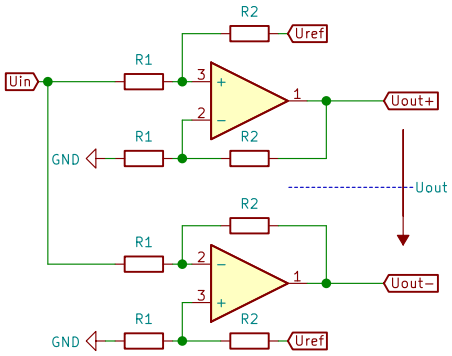

gm*Ube?
Cm
Rc
Ib
Ce
R'E
Ube
GND

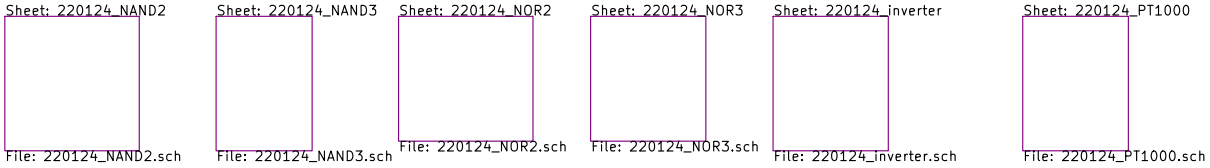

Sheet: 220122_01
File: 220122_01.sch
validé
Sheet: 220122_02
File: 220122_02.sch
validé
Sheet: 220122_03
File: 220122_03.sch
Sheet: 220122_04
File: 220122_04.sch

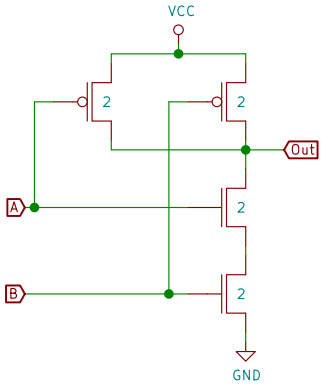

VCC
Uref
1
R1
Uin
2
4
V+
3
Uout
V-
5
GND
R2

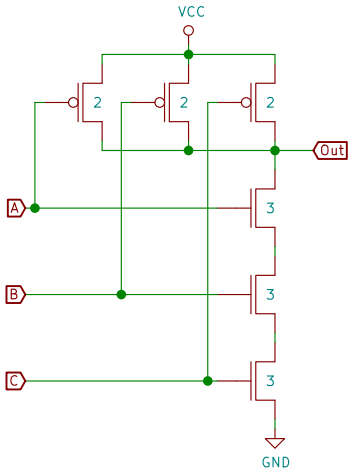

VCC
Uin
1
R1
Uref
2
4
3
Uout
5
GND
R2

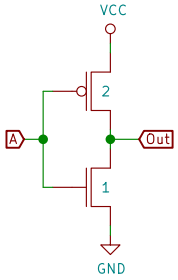

U+
3
+
2
−
1
Uout+
R1
Rgain
Uout
R1
2
−
3
+
1
U−
Uout−

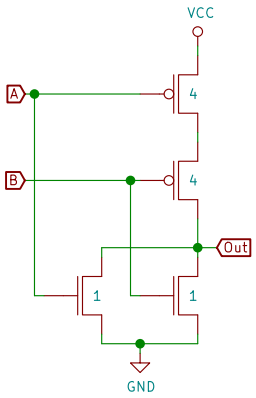

R2
Uref
R1
Uin
3
+
1
Uout+
2
−
R1
R2
GND
Uout
R2
R1
2
−
1
Uout−
3
+
R1
R2
GND
Uref

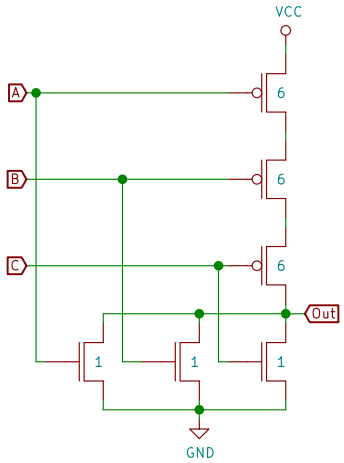

Sheet: 220124_NAND2
File: 220124_NAND2.sch
Sheet: 220124_NAND3
File: 220124_NAND3.sch
Sheet: 220124_NOR2
File: 220124_NOR2.sch
Sheet: 220124_NOR3
File: 220124_NOR3.sch
Sheet: 220124_inverter
File: 220124_inverter.sch
Sheet: 220124_PT1000
File: 220124_PT1000.sch

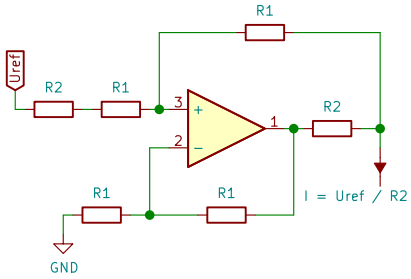

VCC
2
2
Out
A
2
B
2
GND


VCC
2
2
2
Out
A
3
B
3
C
3
GND


VCC
2
A
Out
1
GND


VCC
A
4
B
4
Out
1
1
GND


VCC
A
B
C
6
6
6
Out
1
1
1
GND


R1
Uref
R2
R1
3
+
2
−
1
R2
R1
R1
I = Uref / R2
GND