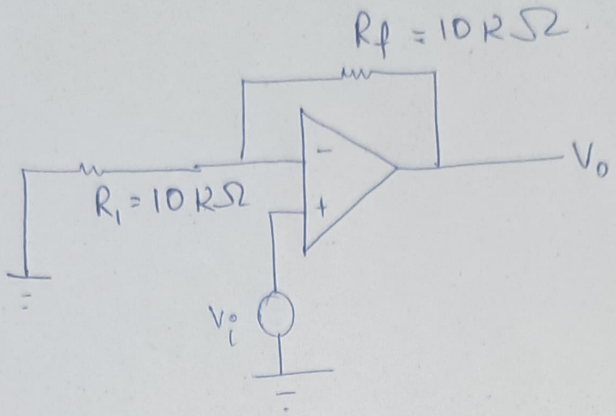
→ for non inverting amplifier of gain-2.



So gain $= \left(1 + \frac{R_f}{R_1}\right) = \frac{V_o}{V_i} = \left(1 + \frac{10K}{10K}\right) = 2$.

So we are using same same
R_f & R_1 $R_f = R_1 = 10K$.

→ input channel

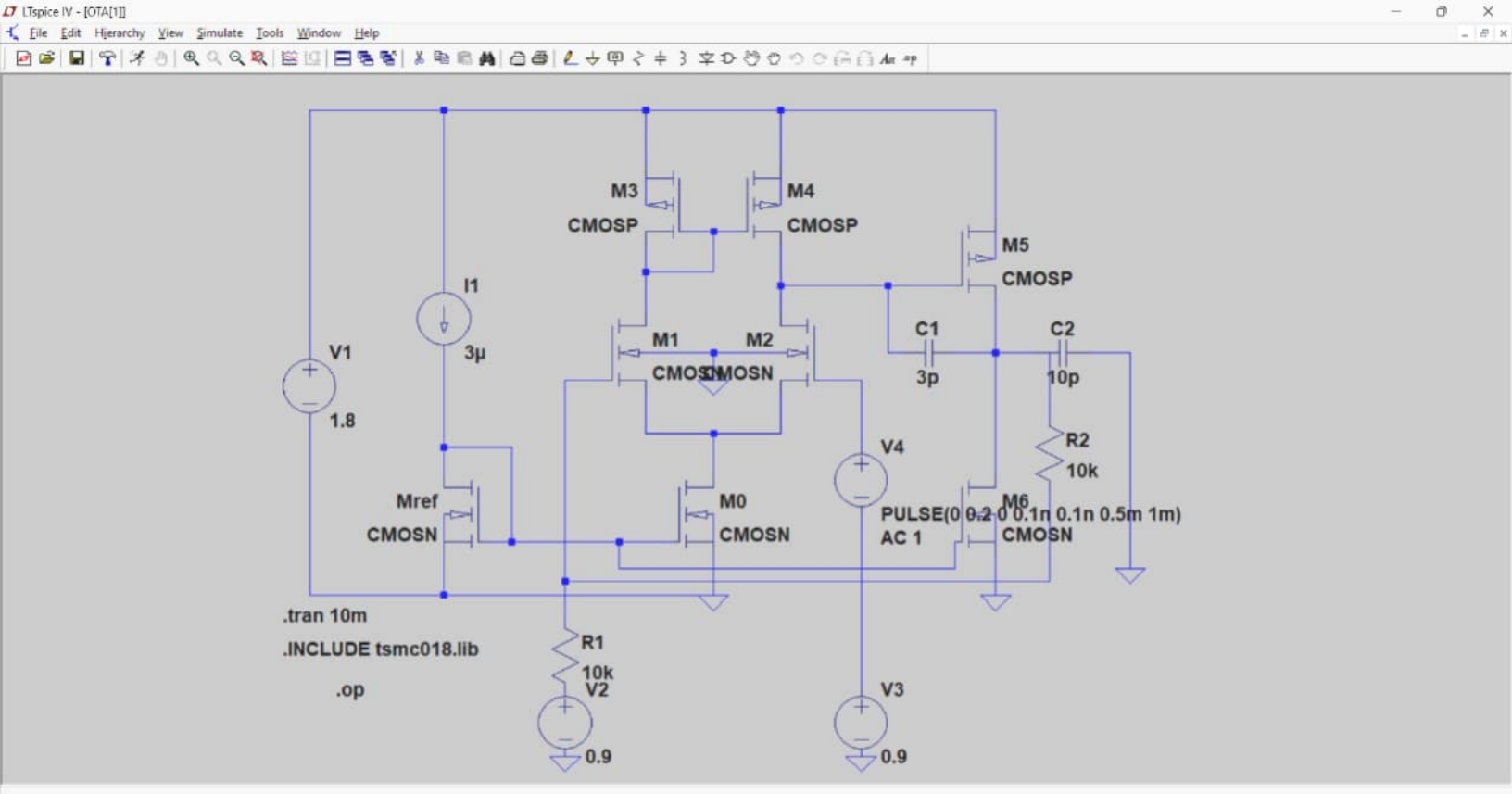
as in the channels (from channel V[n009]
The input square wave is
Swinging from 899.99 mV ~ 900 mV.
= 0.9 V

to
1.1 V.

input amplitude. 1.1 − 0.9 = 0.2 V.

from channel V[n007] output channel
the square wave is
Swinging from.
1.296 V to 900.625 mV.
1.296 − 0.900625.
= 0.395375.
= 0.395.

$\frac{V_o}{V_{in}} = \frac{0.395}{0.2} = 1.975 \sim 2$.

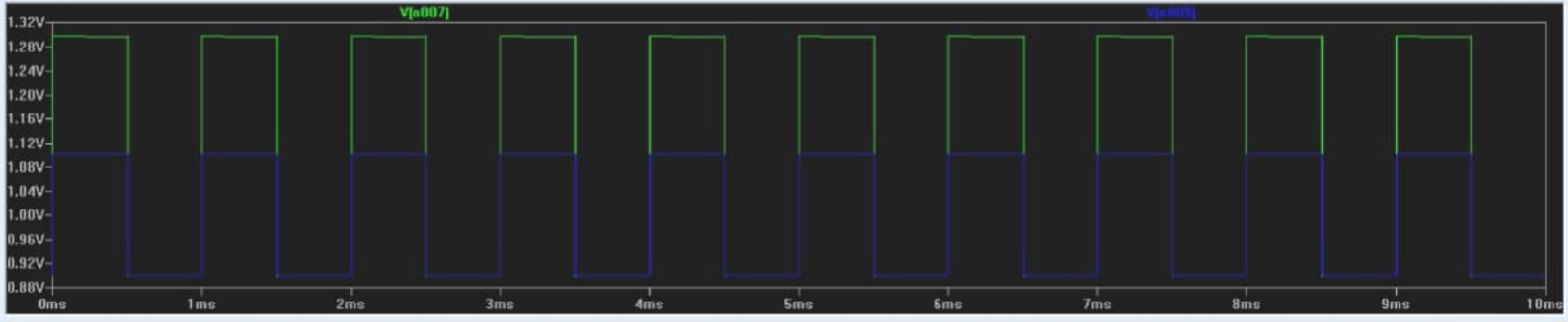

LTspice IV - [OTA[1]]
File Edit Hierarchy View Simulate Tools Window Help
M3
CMOSP
M4
CMOSP
M5
CMOSP
I1
3µ
V1
1.8
M1
CMOSN
M2
CMOSN
C1
3p
C2
10p
R2
10k
V4
PULSE(0 0.2 0 0.1n 0.1n 0.5m 1m)
AC 1
Mref
CMOSN
M0
CMOSN
M6
CMOSN
.tran 10m
.INCLUDE tsmc018.lib
.op
R1
10k
V2
0.9
V3
0.9

LTspice IV - OTA[1]

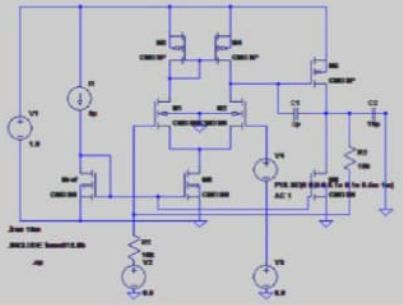
File Edit Hierarchy View Simulate Tools Window Help

OTA[1] OTA[1]

OTA[1]



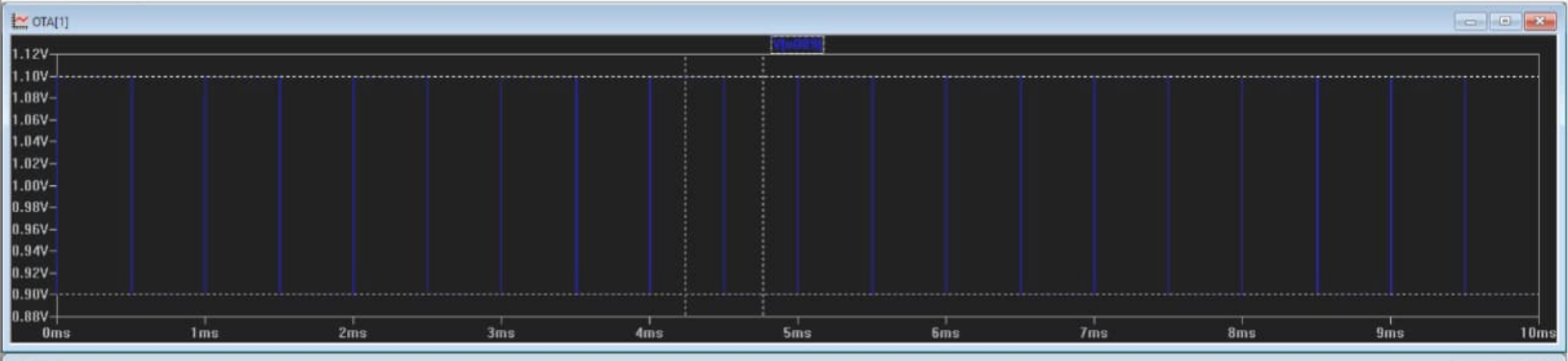
OTA[1]

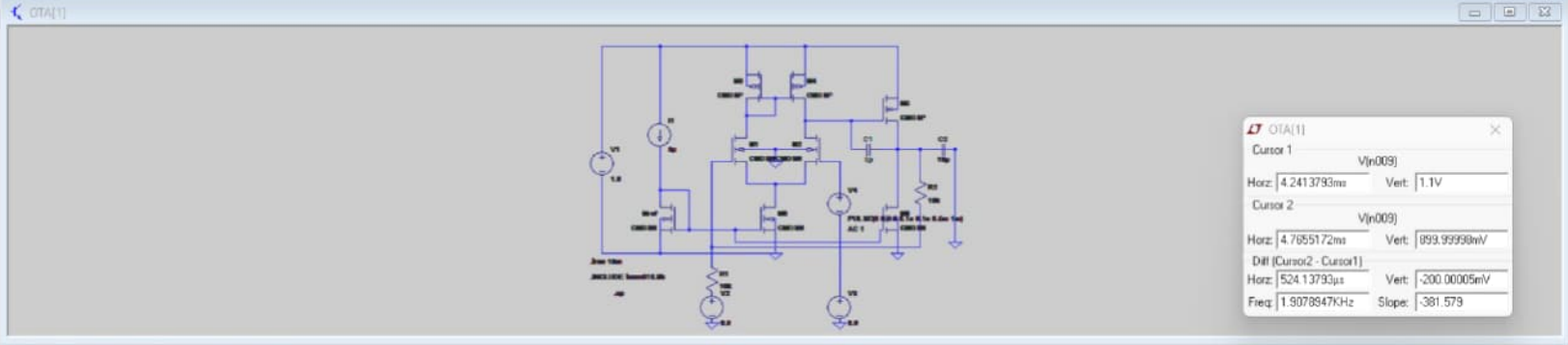


LTspice IV - OTA[1]

File View Plot Settings Simulation Tools Window Help

OTA[1] OTA[1]





LTspice IV - OTA[1]

File Edit Hierarchy View Simulate Tools Window Help

OTA[1] OTA[1]

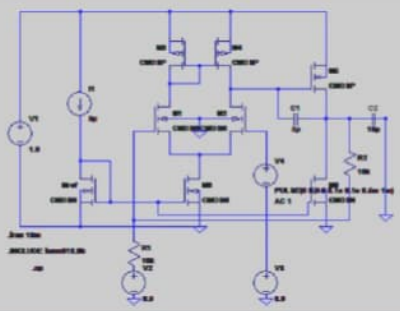
OTA[1]

V(n007)

1.32V
1.28V
1.24V
1.20V
1.16V
1.12V
1.08V
1.04V
1.00V
0.96V
0.92V
0.88V

0ms 1ms 2ms 3ms 4ms 5ms 6ms 7ms 8ms 9ms 10ms

OTA[1]



OTA[1]

Cursor 1
V(n007)
Horz: 4.2413793ms Vert: 1.2968185V

Cursor 2
V(n007)
Horz: 4.7655172ms Vert: 900.62571mV

Diff (Cursor2 - Cursor1)
Horz: 524.13793µs Vert: -396.19279mV
Freq: 1.9078947KHz Slope: -755.894