EXPERIMENT-01

AIM: - DC analysis of common source amplifier with resistive load, to find Vout and Gain.

Schematic

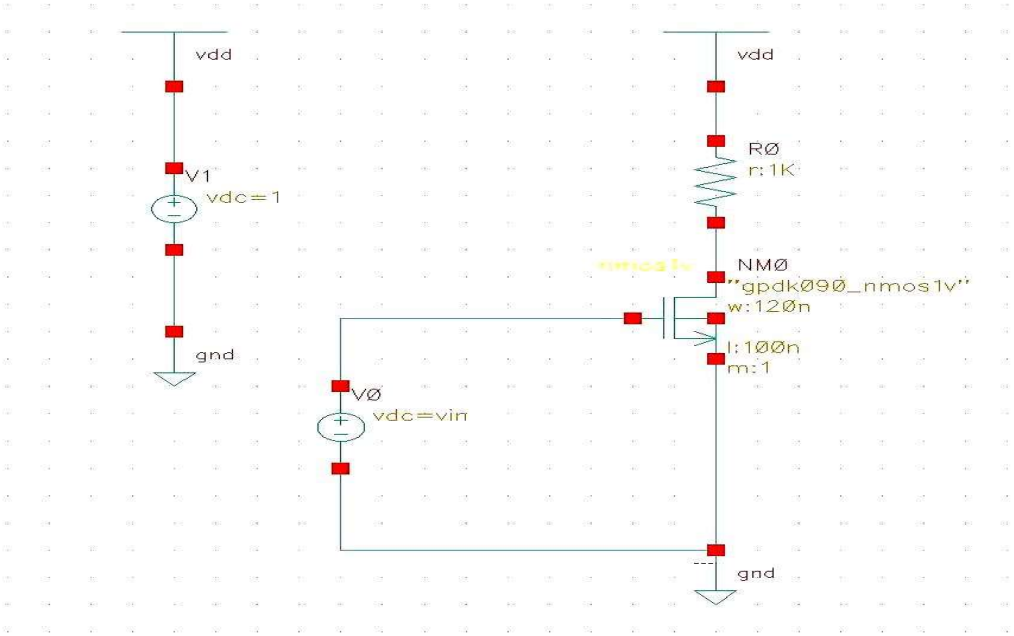

Fig-1.1 Schematic of CS amplifier

Waveform

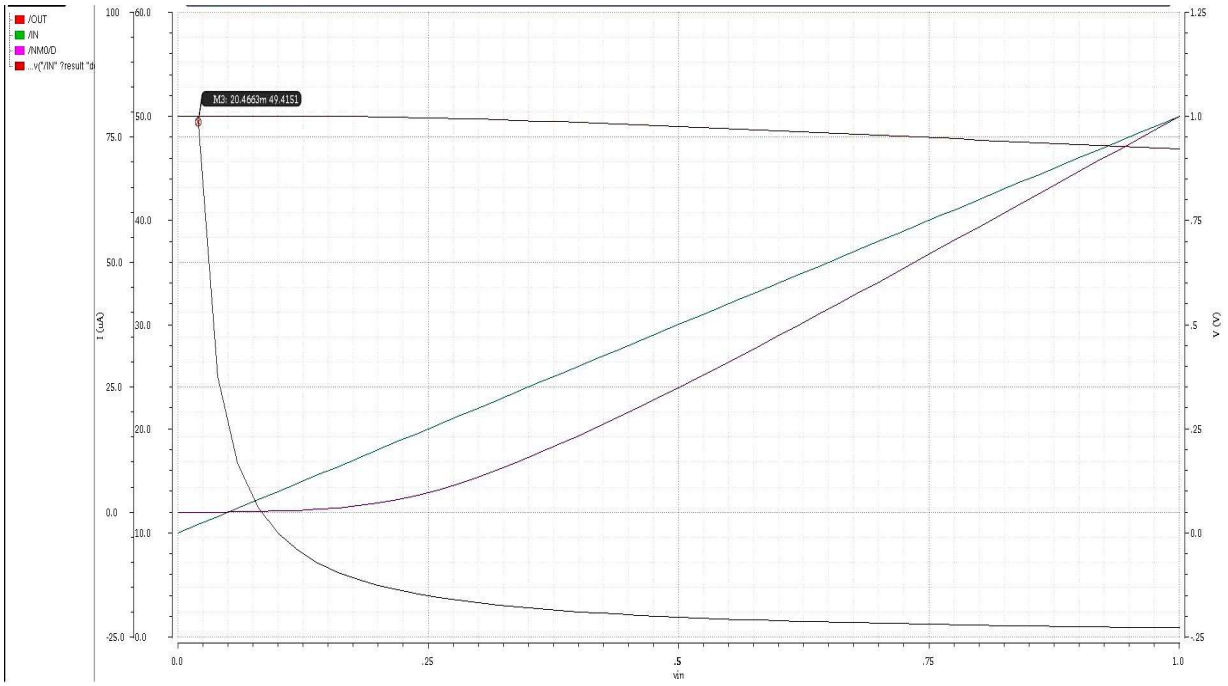

Fig-1.2 output waveform for Gain of the CS stage

Schematic

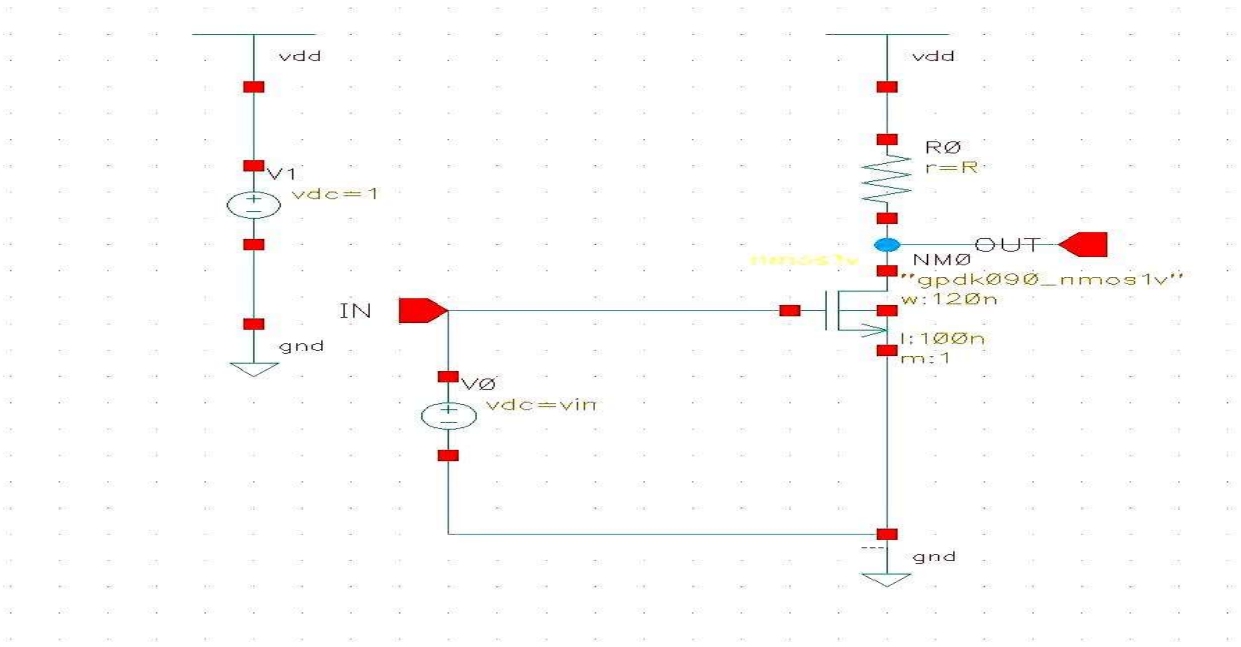

Fig-1.3 Schematic of CS amplifier with variable load resistor

Waveform

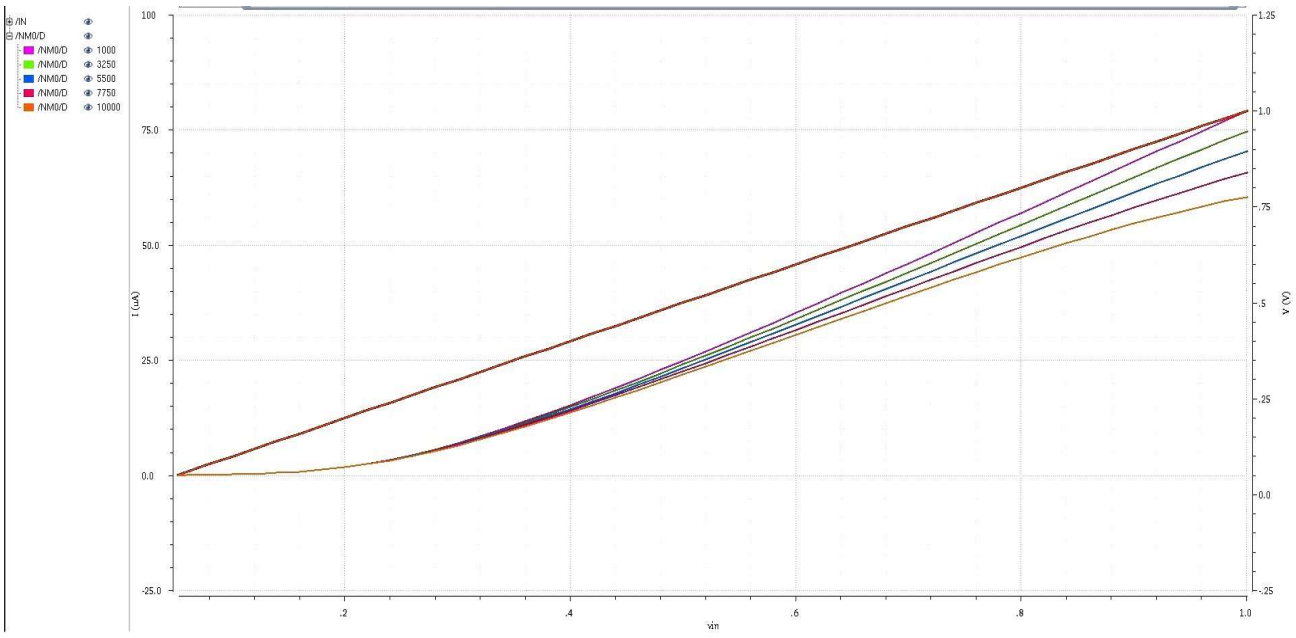

Fig-1.4 output current for variable resistor of the CS stage

EXPERIMENT-02

AIM: - DC & Transient analysis of common source amplifier with diode connected load and Active load. To find Vout Gain and Gm.

DC Analysis

Schematic

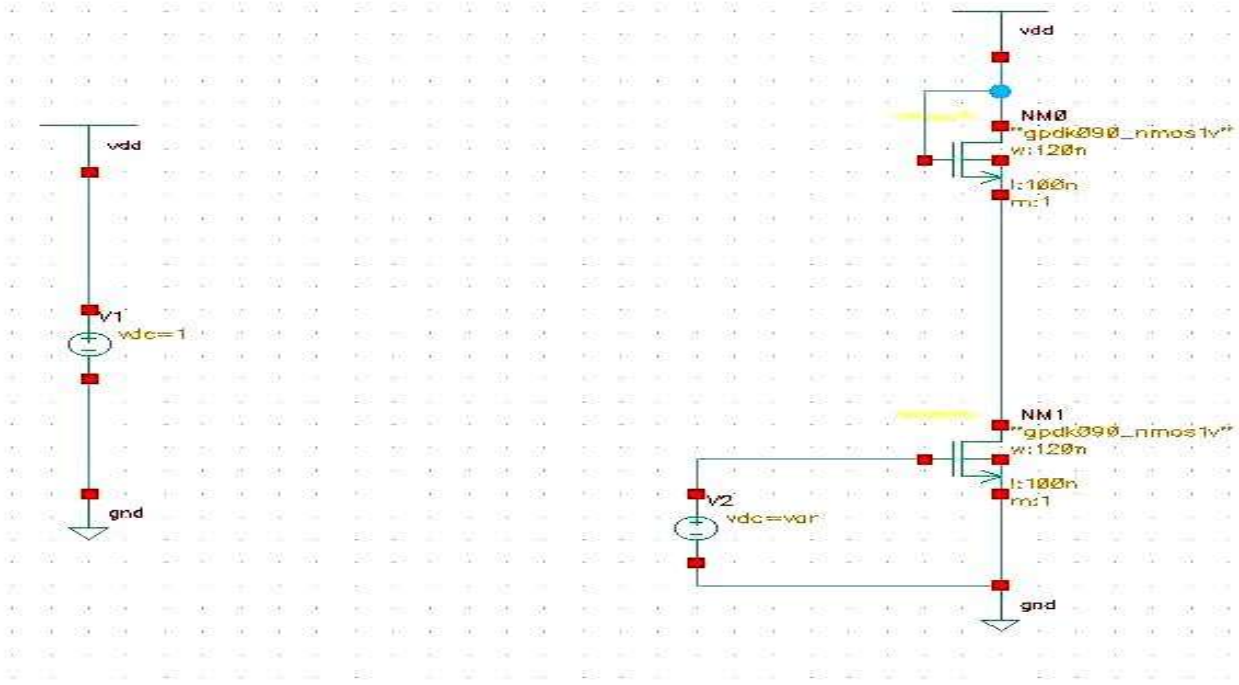

Fig-2.1 schematic of CS stage with active load

Waveform

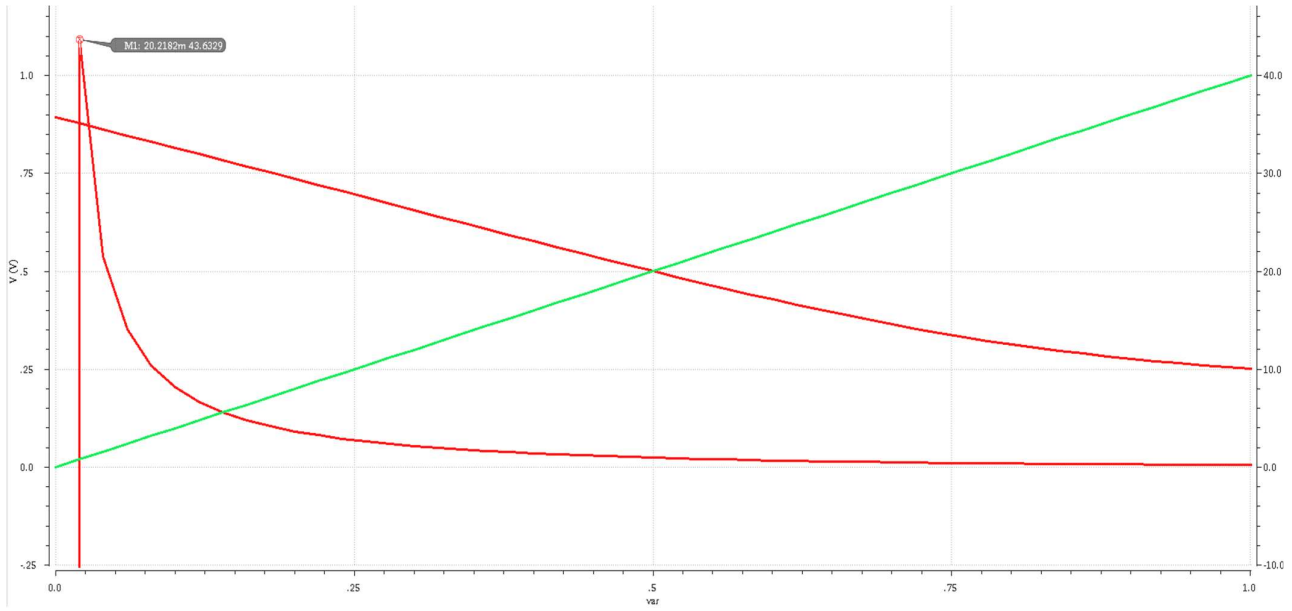

Fig-2.2 Gain waveform of CS stage with diode connected load

Waveform

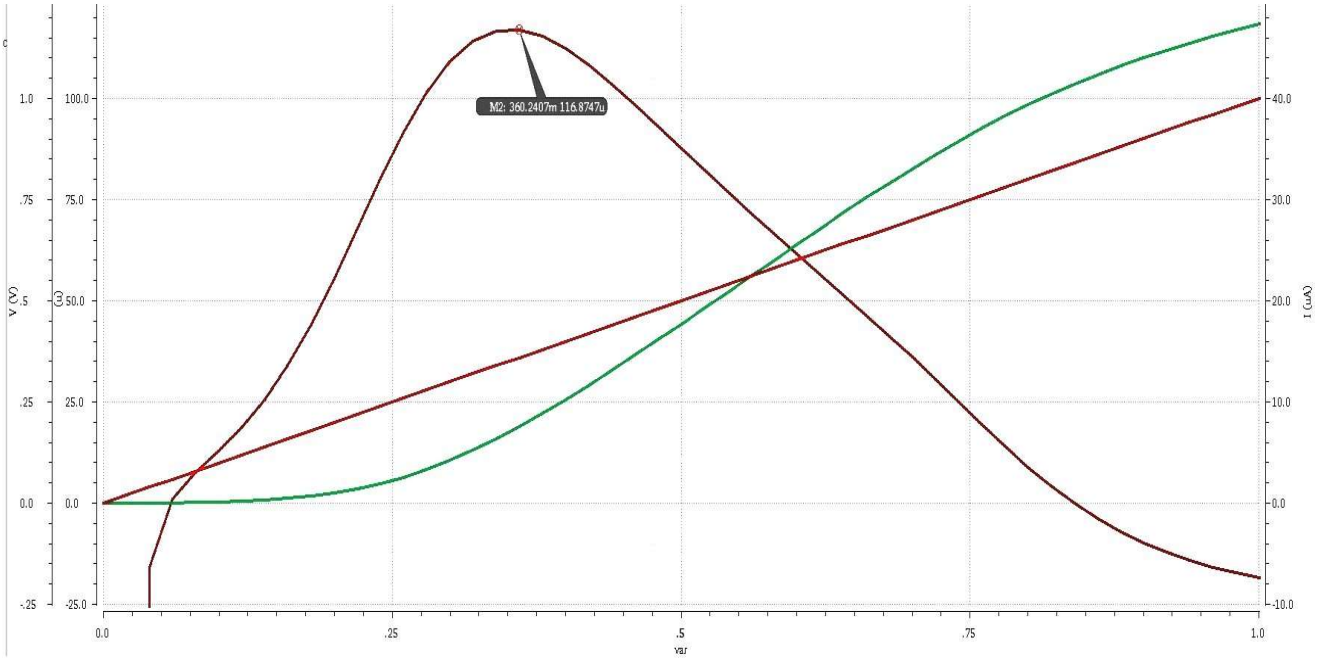

Fig-2.3 Gm waveform of CS stage with diode connected load

Transient Analysis

Schematic

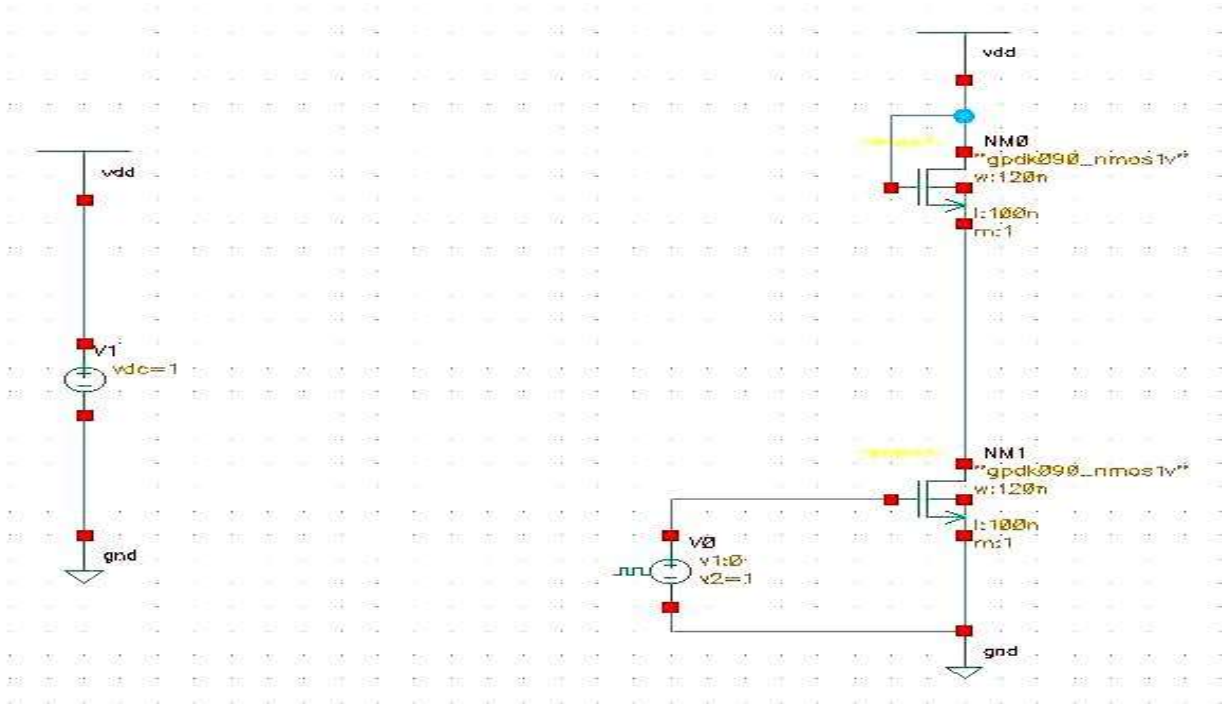

Fig-2.4 schematic of CS stage with diode connected load

Waveform

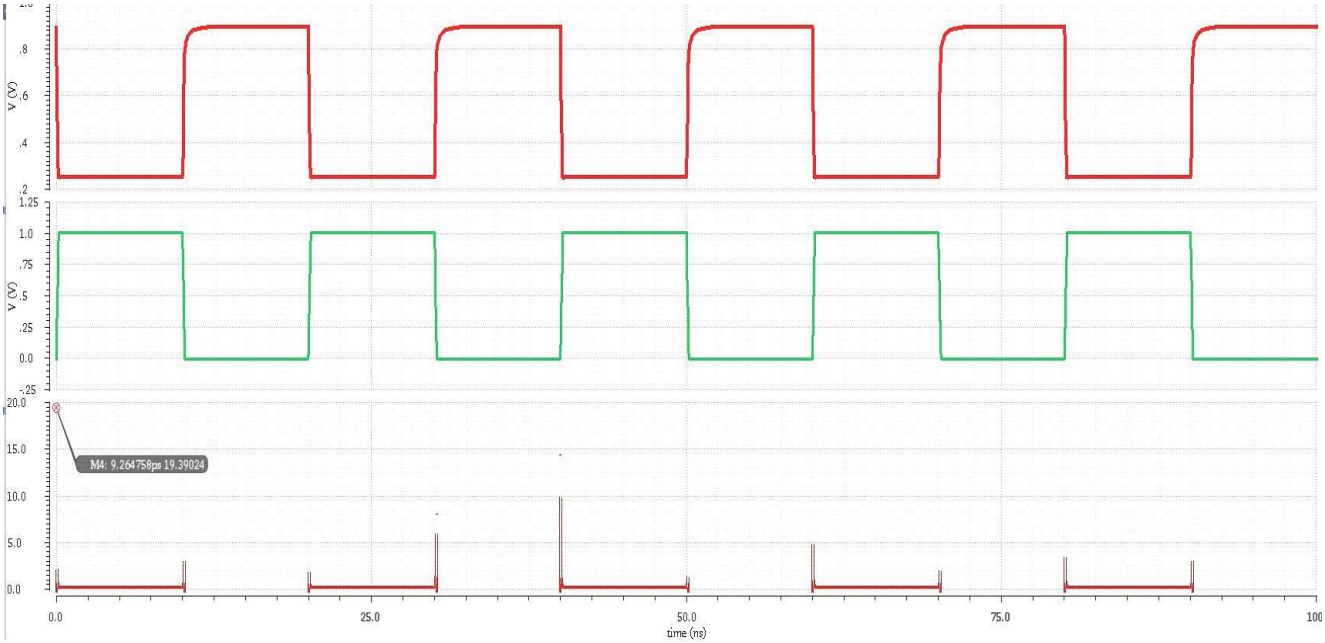

Fig-2.5 Gain waveform of CS stage with diode connected load

Waveform

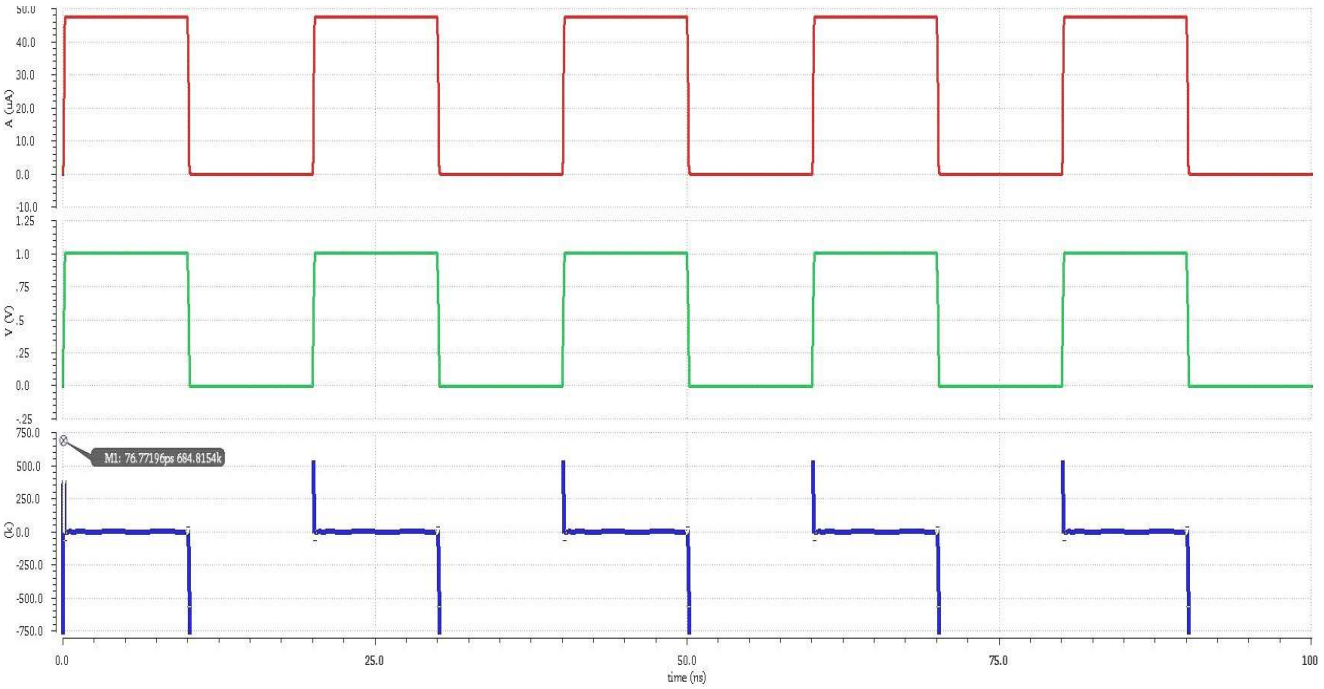

Fig-2.6 Gm waveform of CS stage with diode connected load

Schematic

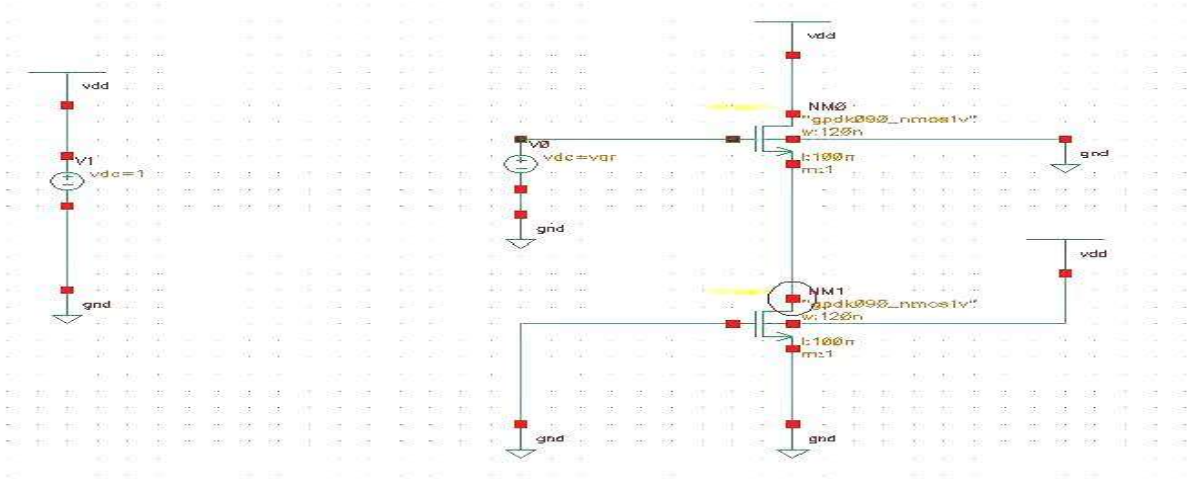

Fig-2.7 schematic of CS stage with active load

Waveform

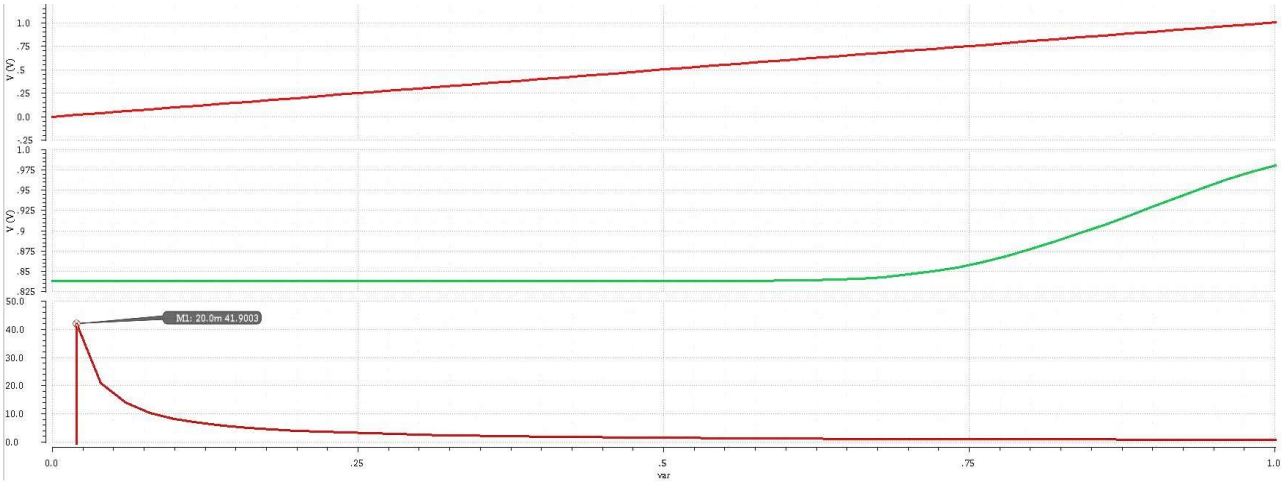

Fig-2.8 Gain waveform of CS stage with active load

Waveform

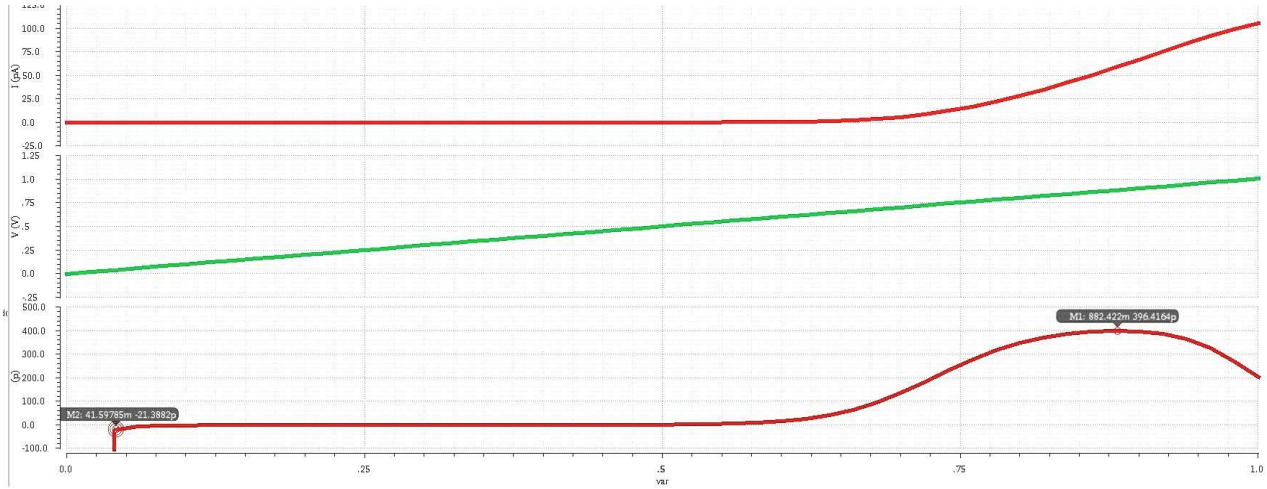

Fig-2.9 Gm waveform of CS stage with active load

EXPERIMENT-03

AIM: - DC Analysis of Common source amplifier with source degeneration.

Schematic

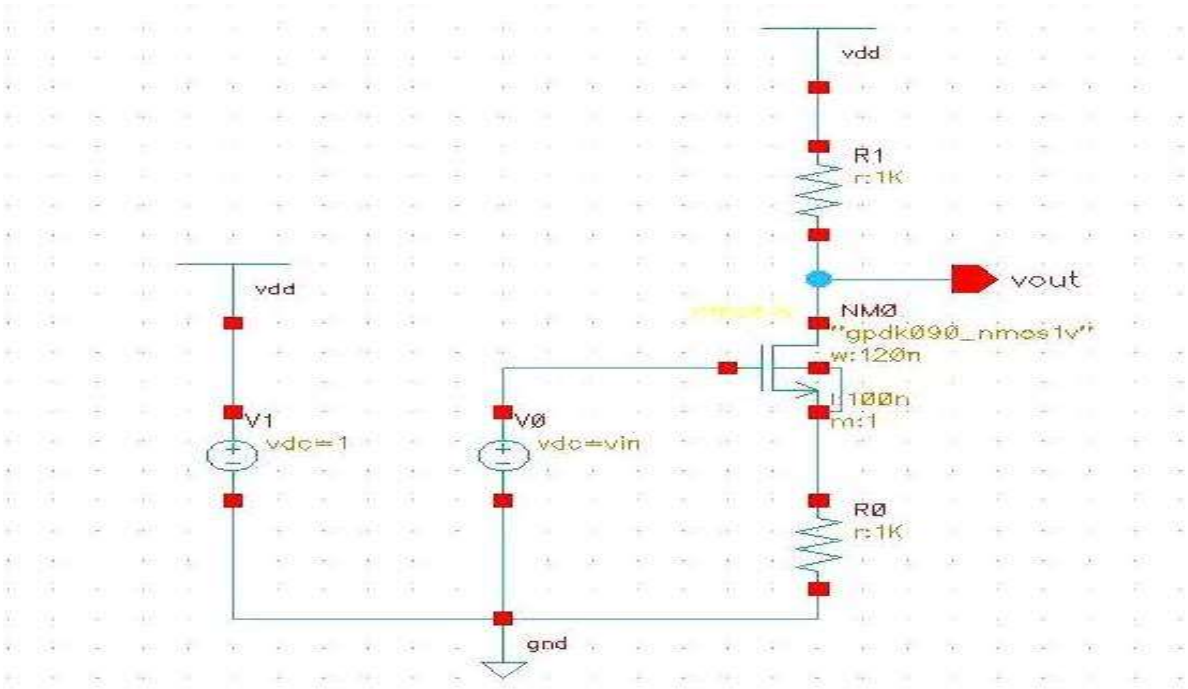

Fig-3.1 schematic of CS stage with source degeneration

Waveform

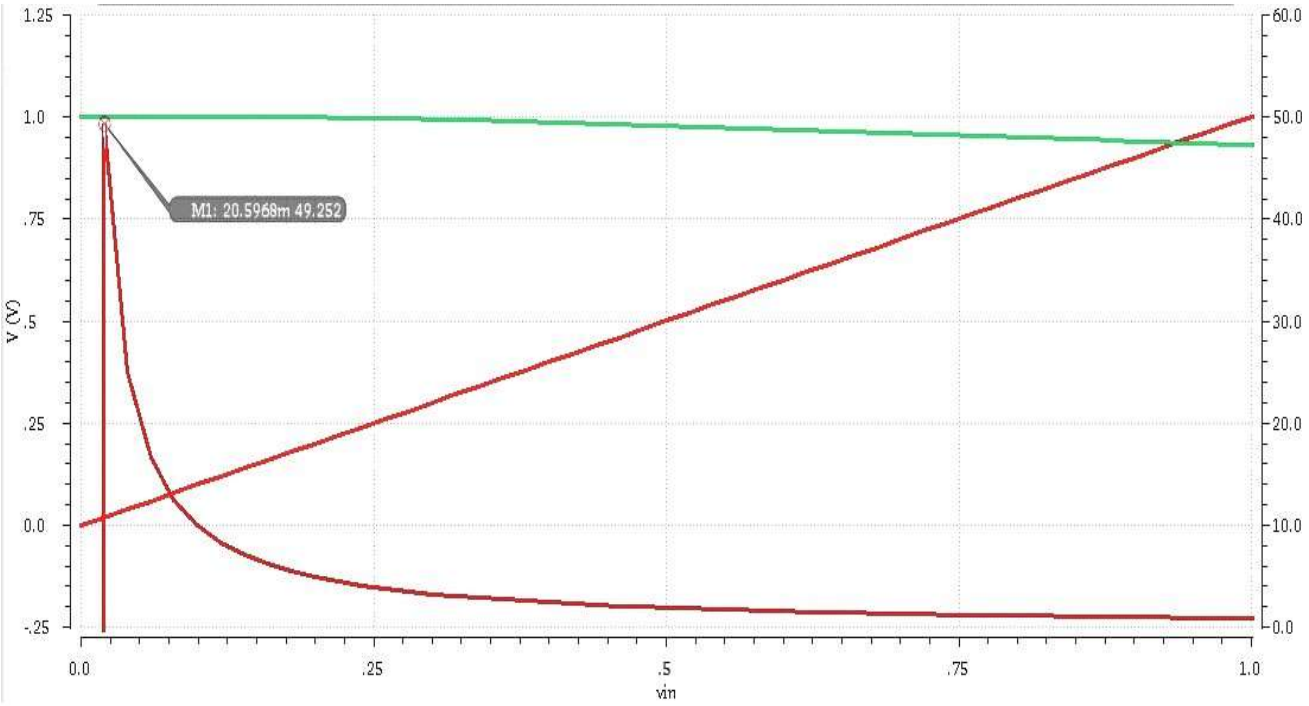

Fig-3.2 Gain waveform of CS stage with source degeneration

Waveform

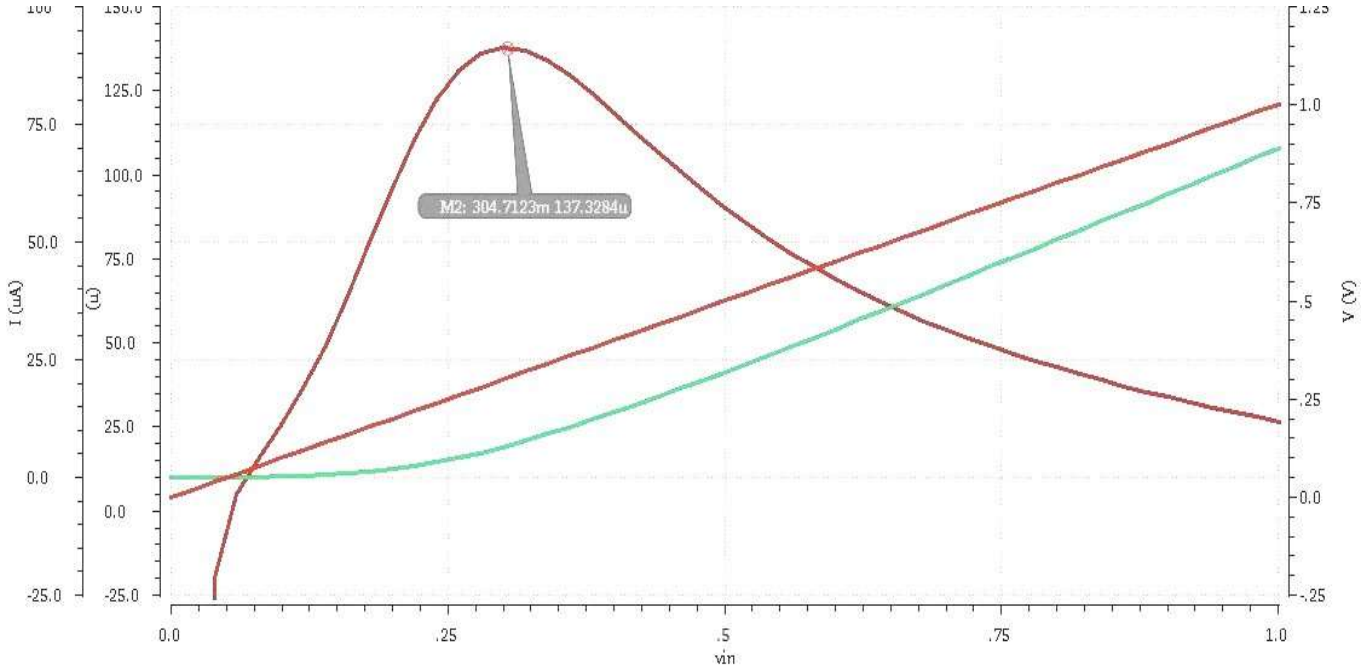

Fig-3.3 Gm waveform of CS stage with source degeneration

EXPERIMENT-04

AIM: - DC & Transient Analysis of source follower amplifier.

DC Analysis

Schematic

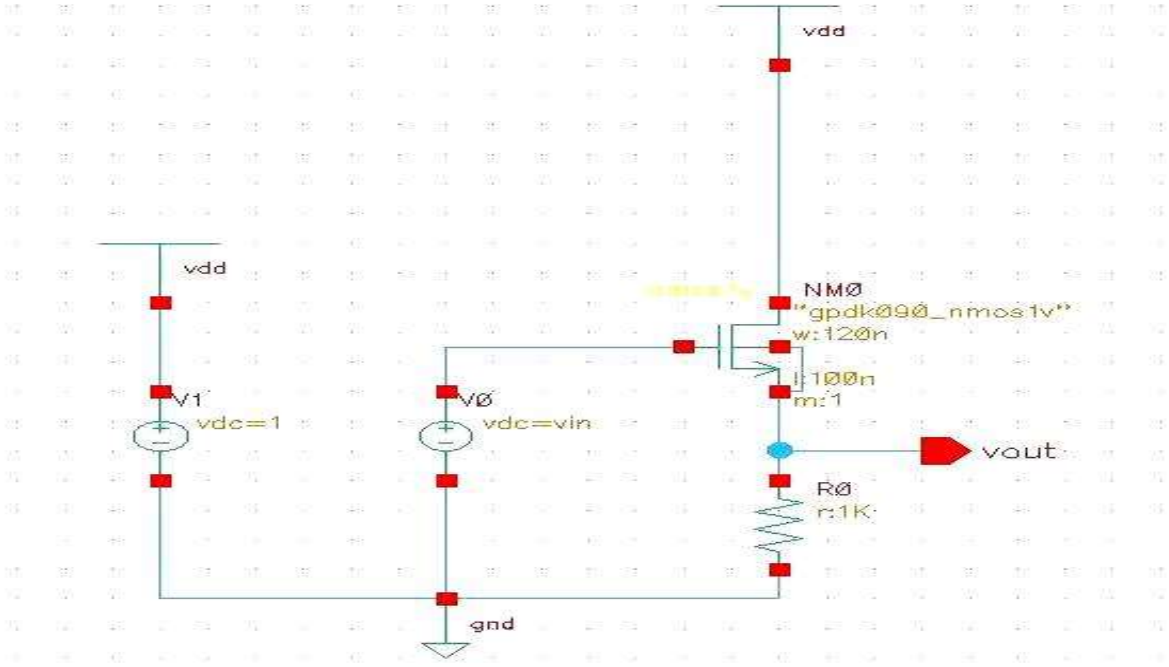

Fig-4.1 schematic of Source follower amplifier

Waveform

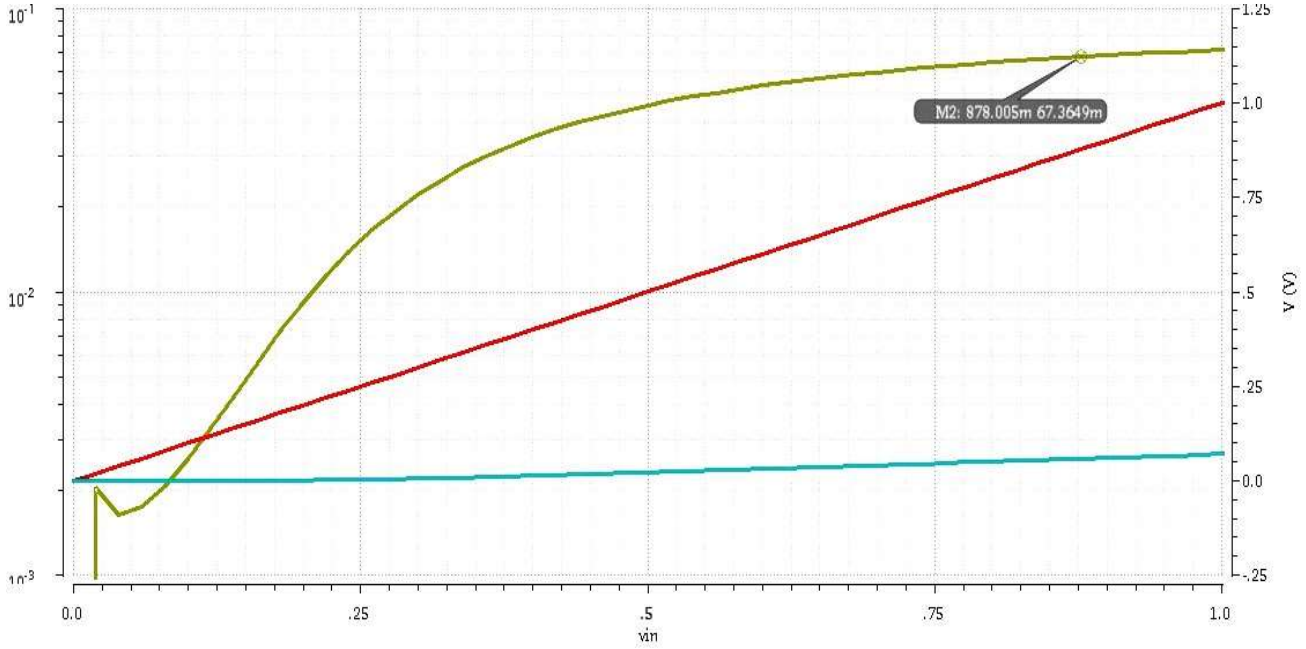

Fig-4.2 Gain waveform of Source follower amplifier

Waveform

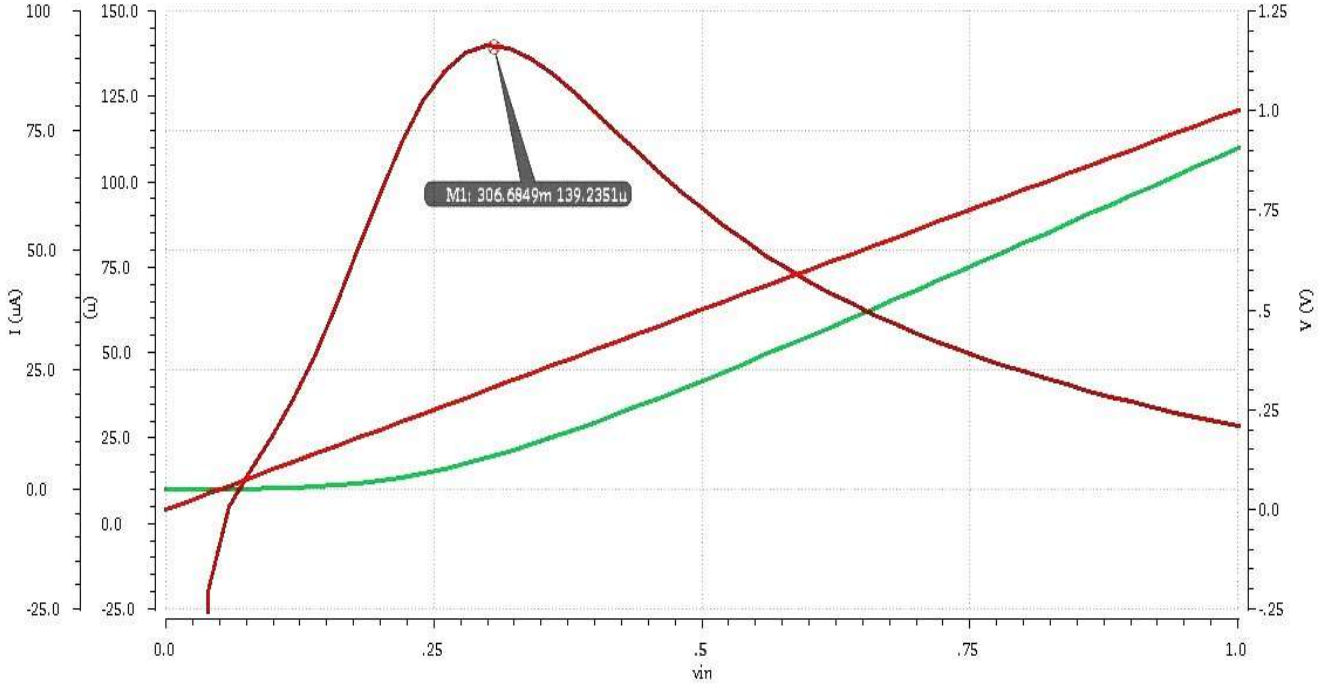

Fig-4.3 Gm waveform of Source follower amplifier

Transient Analysis

Schematic

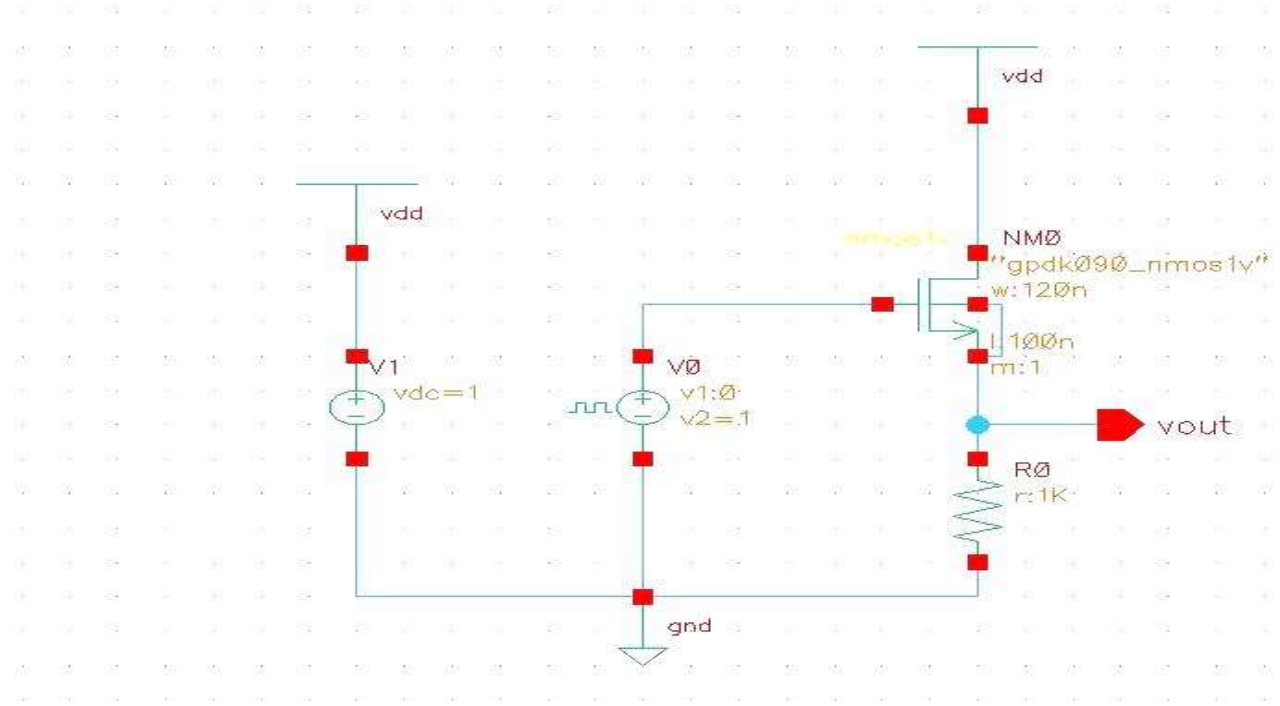

Fig-4.4 schematic of Source follower amplifier

Waveform

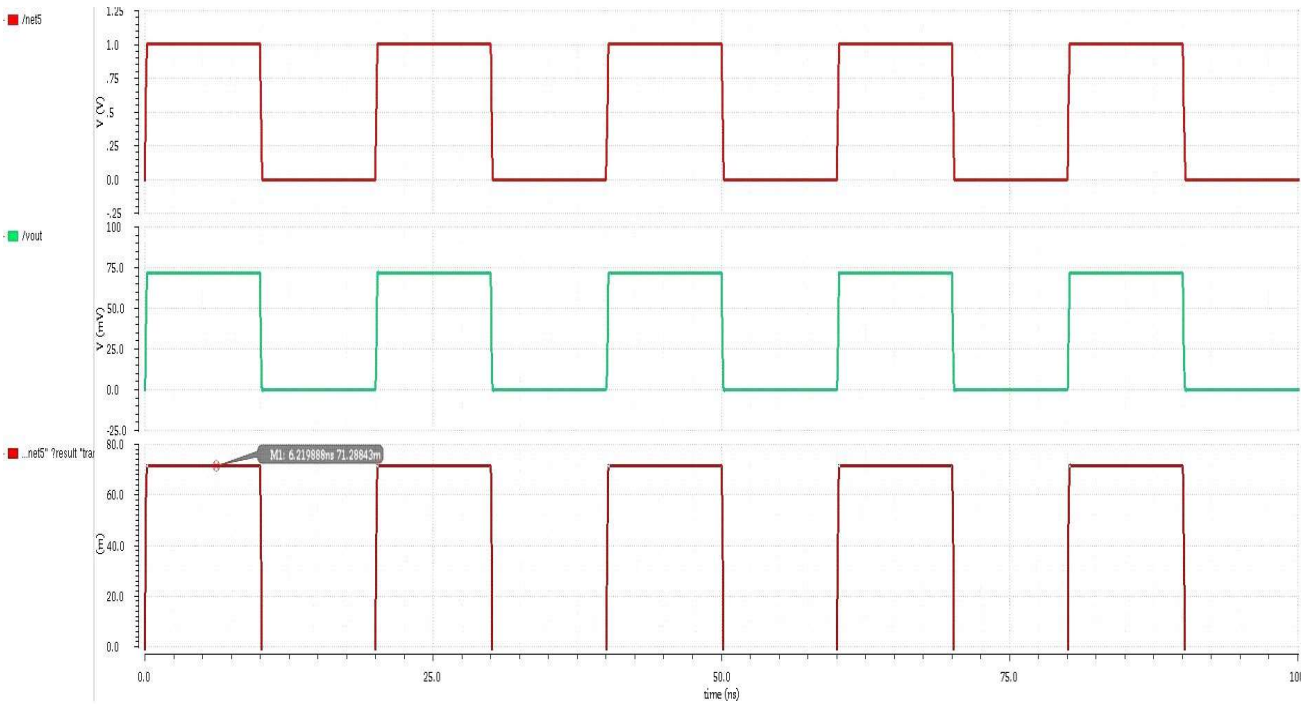

Fig-4.5 Gain waveform of Source follower amplifier

Waveform

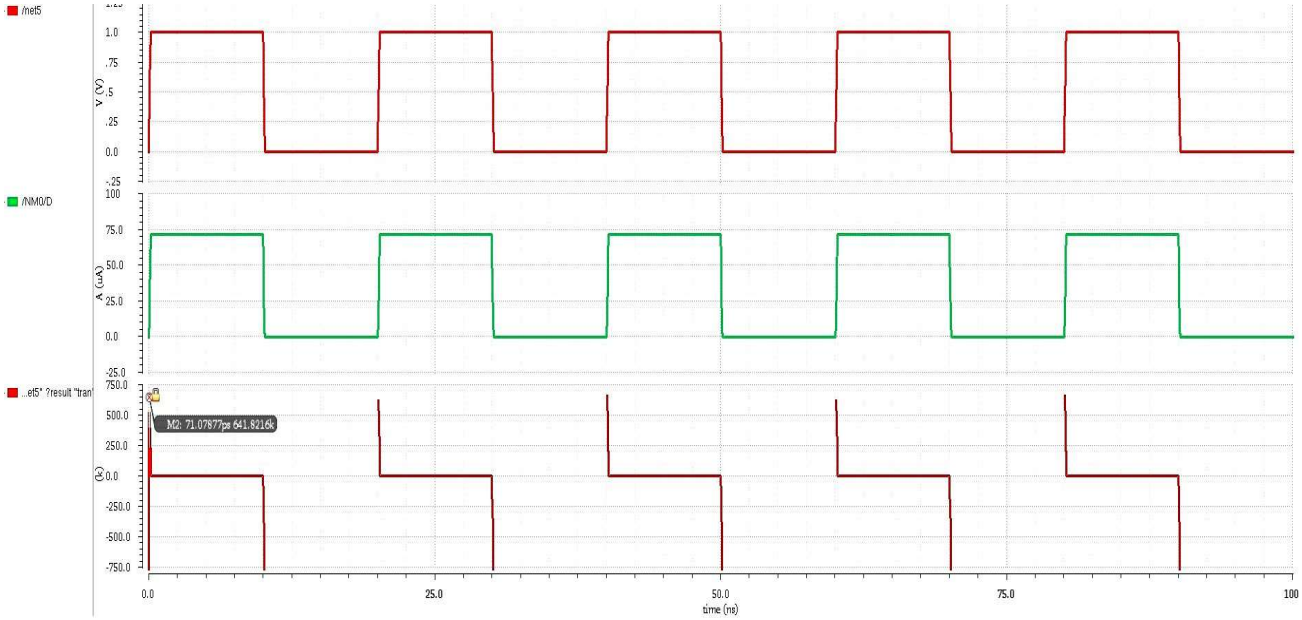

Fig-4.6 Gm waveform of Source follower amplifier

EXPERIMENT-05

AIM: - DC, Transient and AC analysis of cascode amplifier.

DC Analysis

Schematic

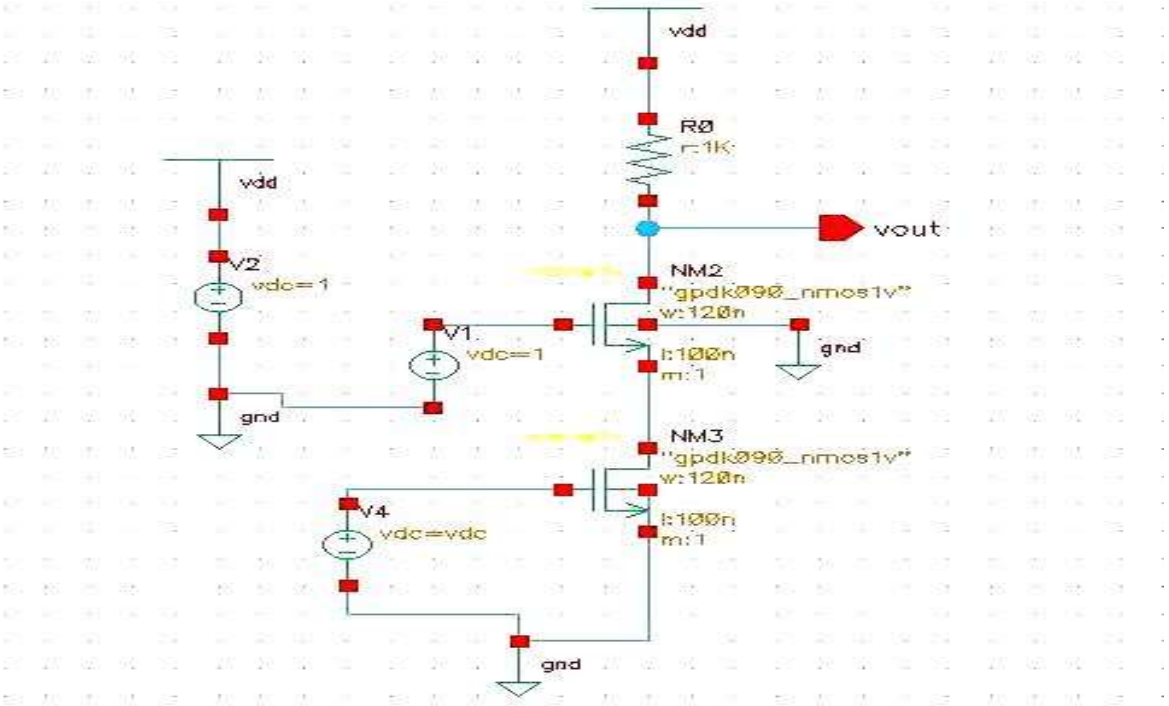

Fig-5.1 schematic of cascode amplifier

Waveform

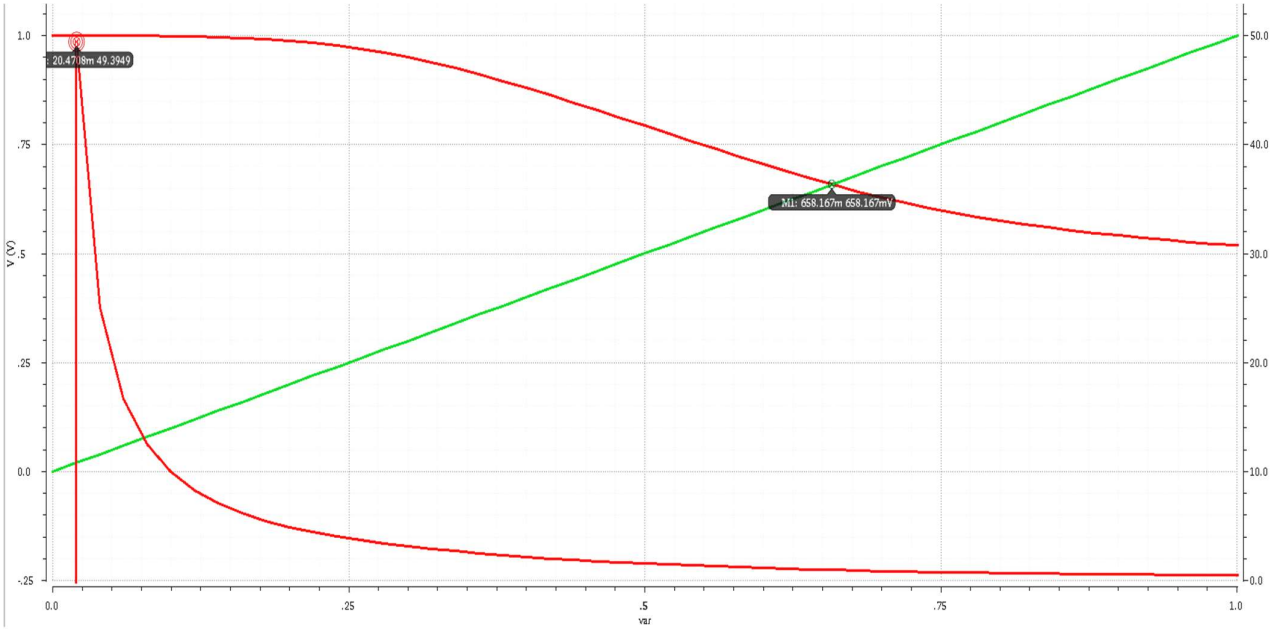

Fig-5.2 Gain waveform of cascode amplifier

Waveform

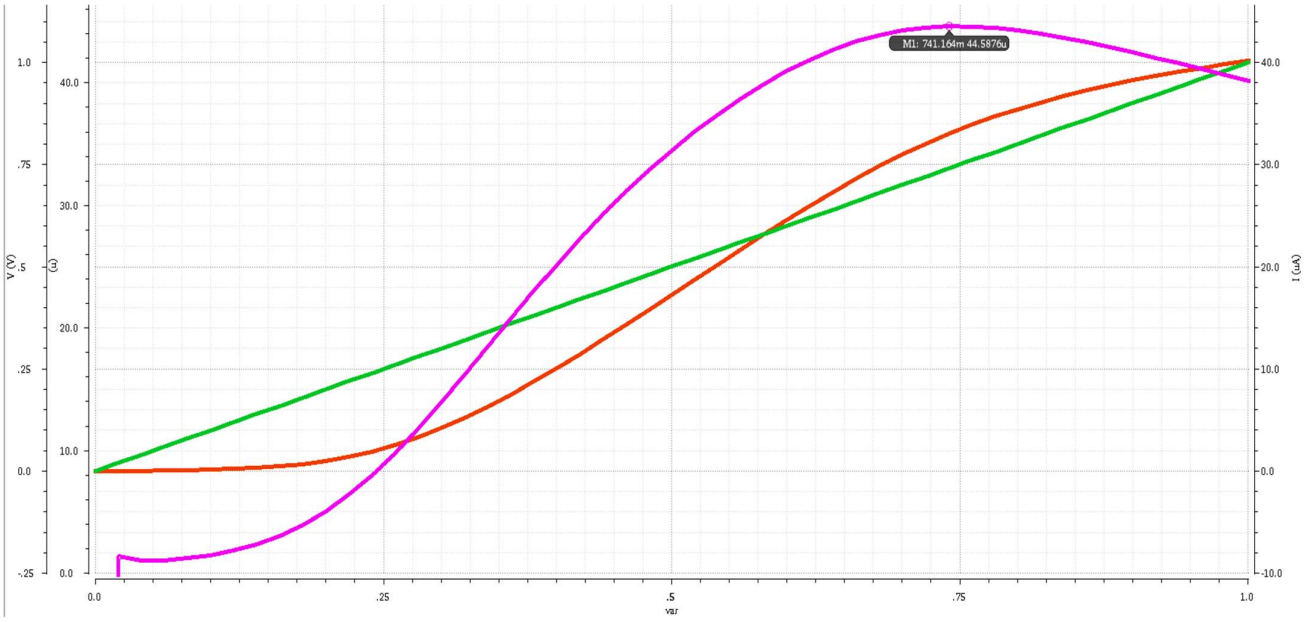

Fig-5.3 Gm waveform of cascode amplifier

DC Analysis

Schematic

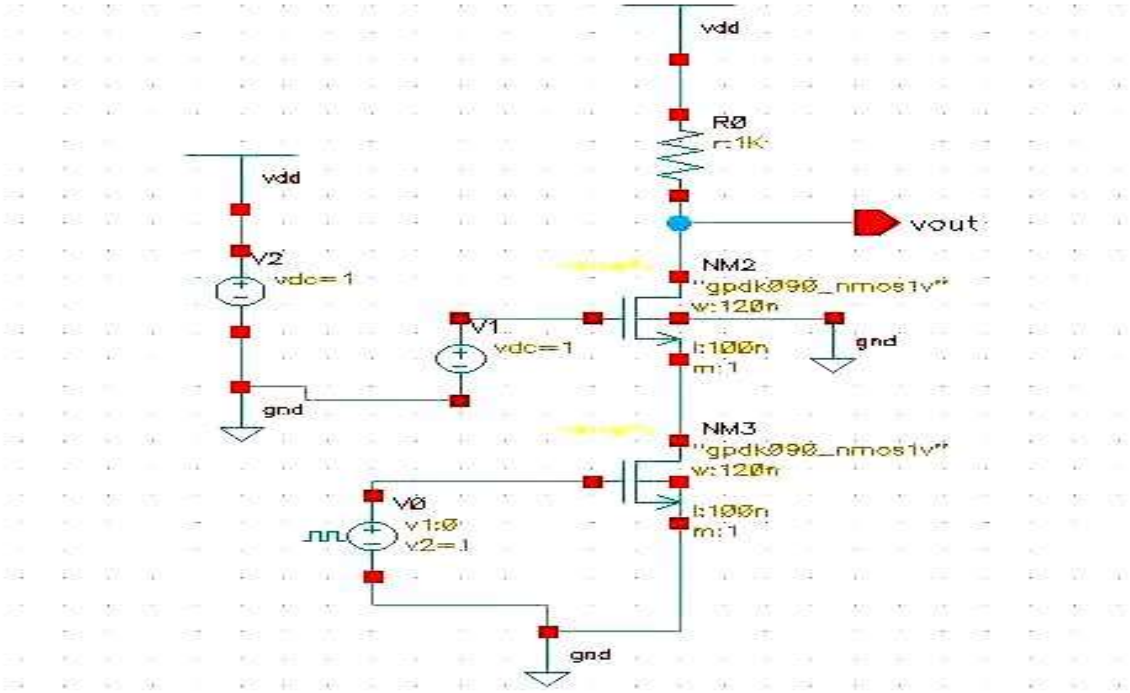

Fig-5.4 schematic of cascode amplifier

Waveform

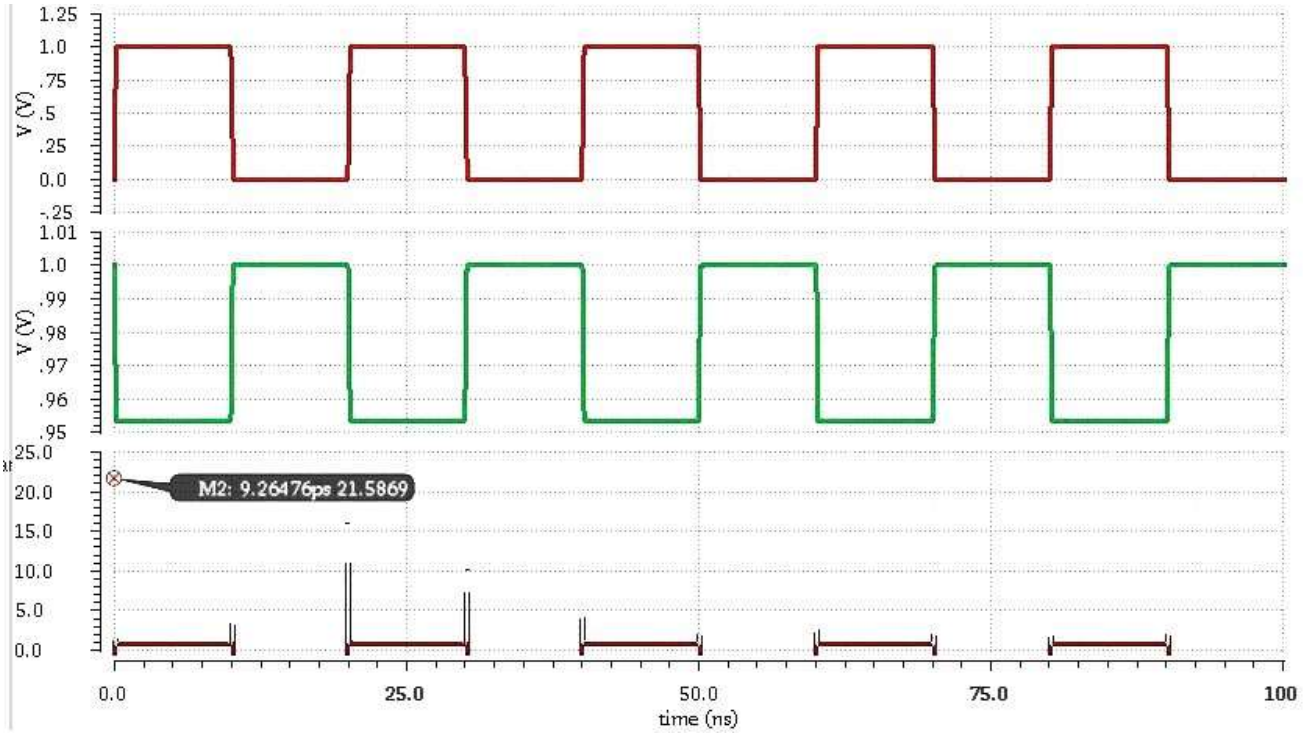

Fig-5.5 Gain waveform of cascode amplifier

Waveform

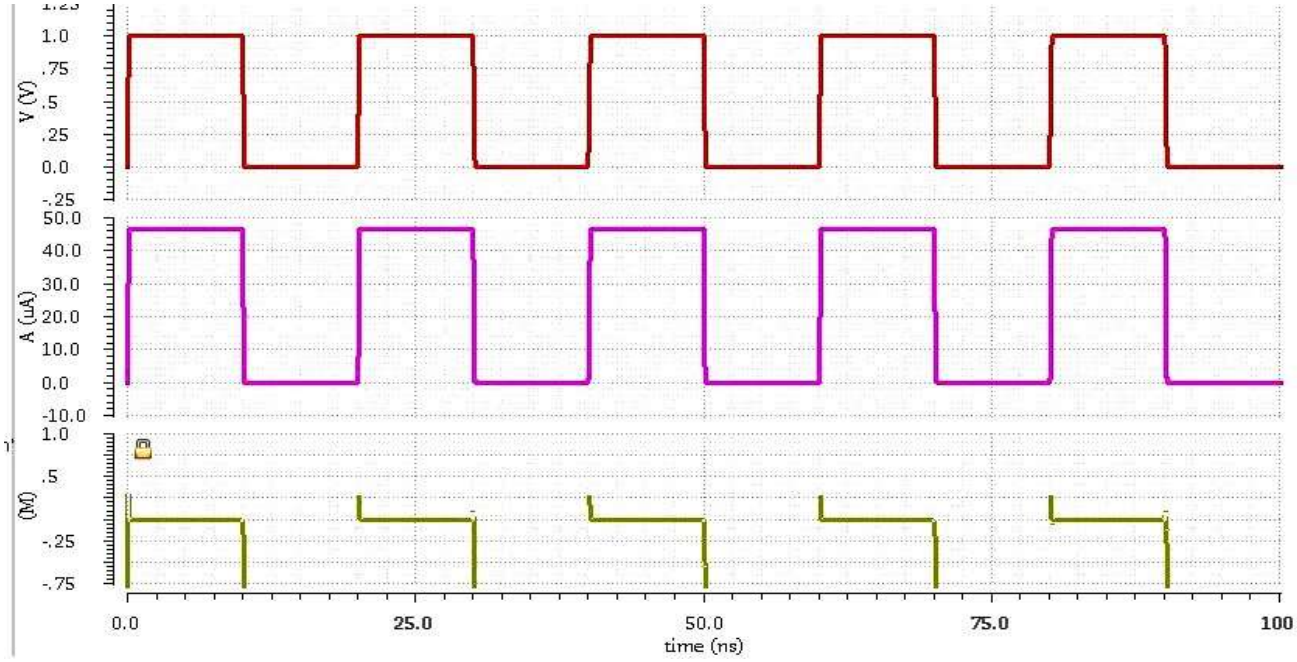

Fig-5.6 Gm waveform of cascode amplifier

AC Analysis

Schematic

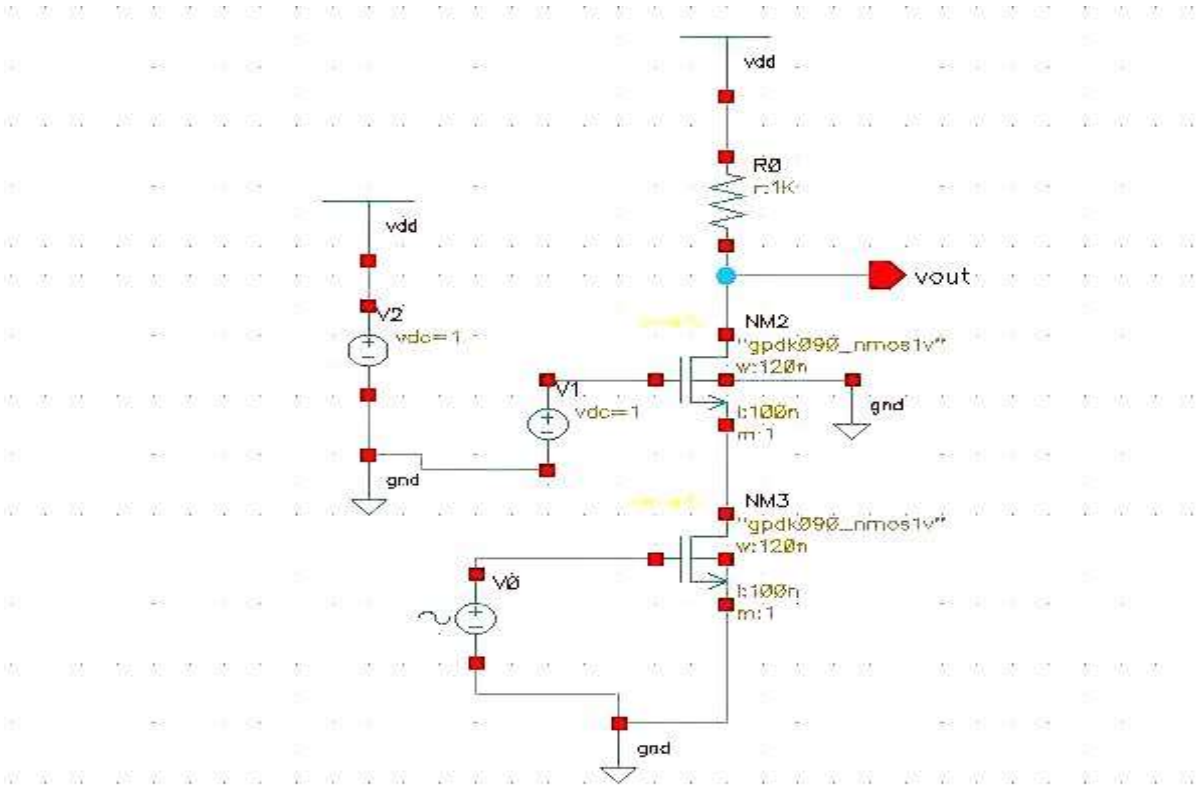

Fig-5.7 schematic of cascode amplifier

Waveform

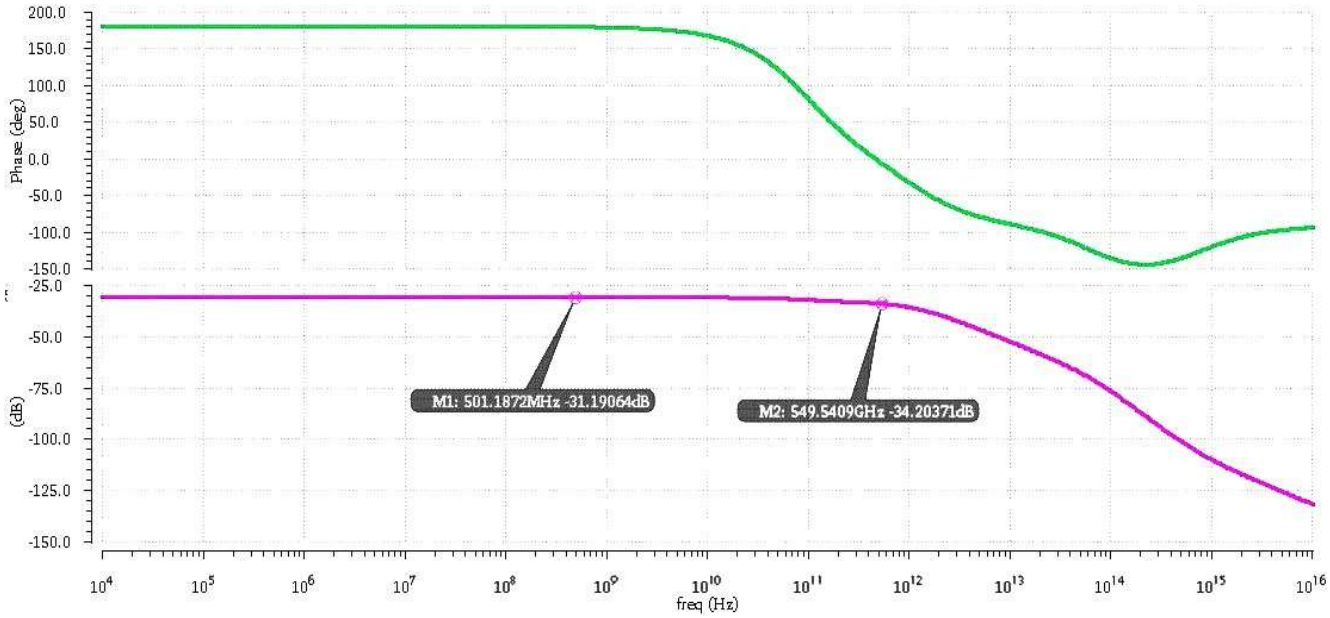

Fig-5.8 AC Gain and Phase waveform of cascode amplifier

EXPERIMENT-06

AIM: - DC Analysis of differential pair amplifier with resistive load.

Schematic

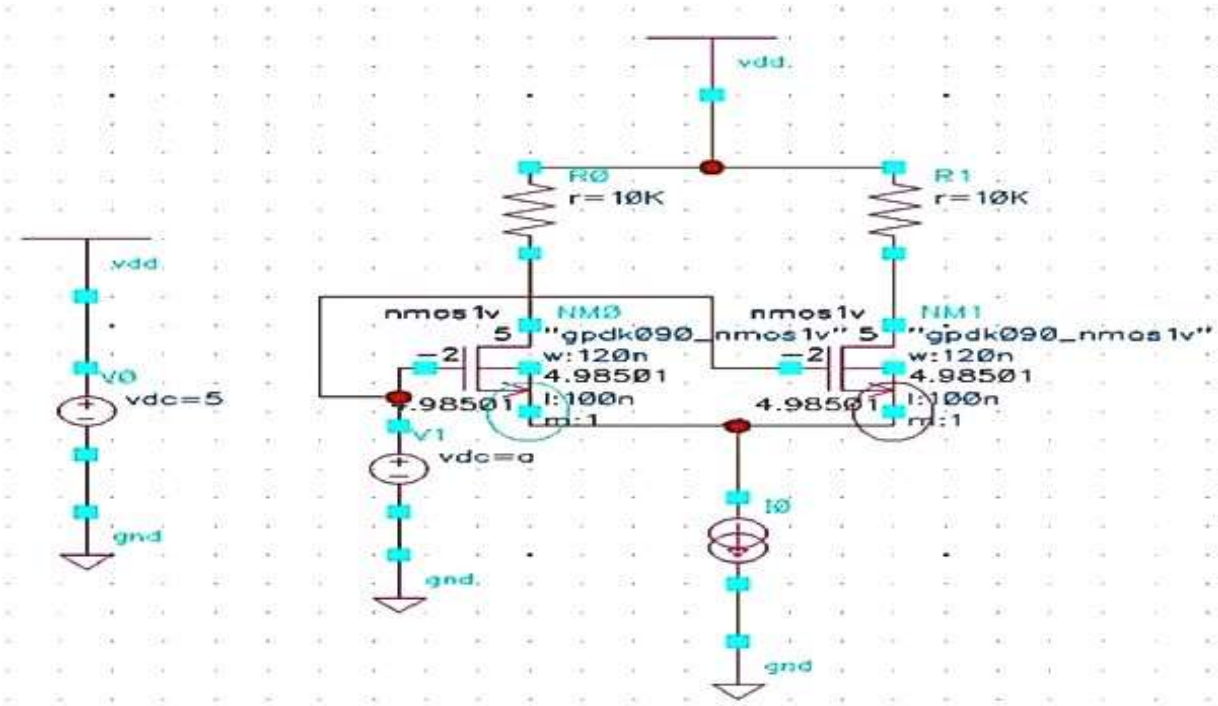

Fig-6.1 schematic of common mode differential amplifier

Waveform

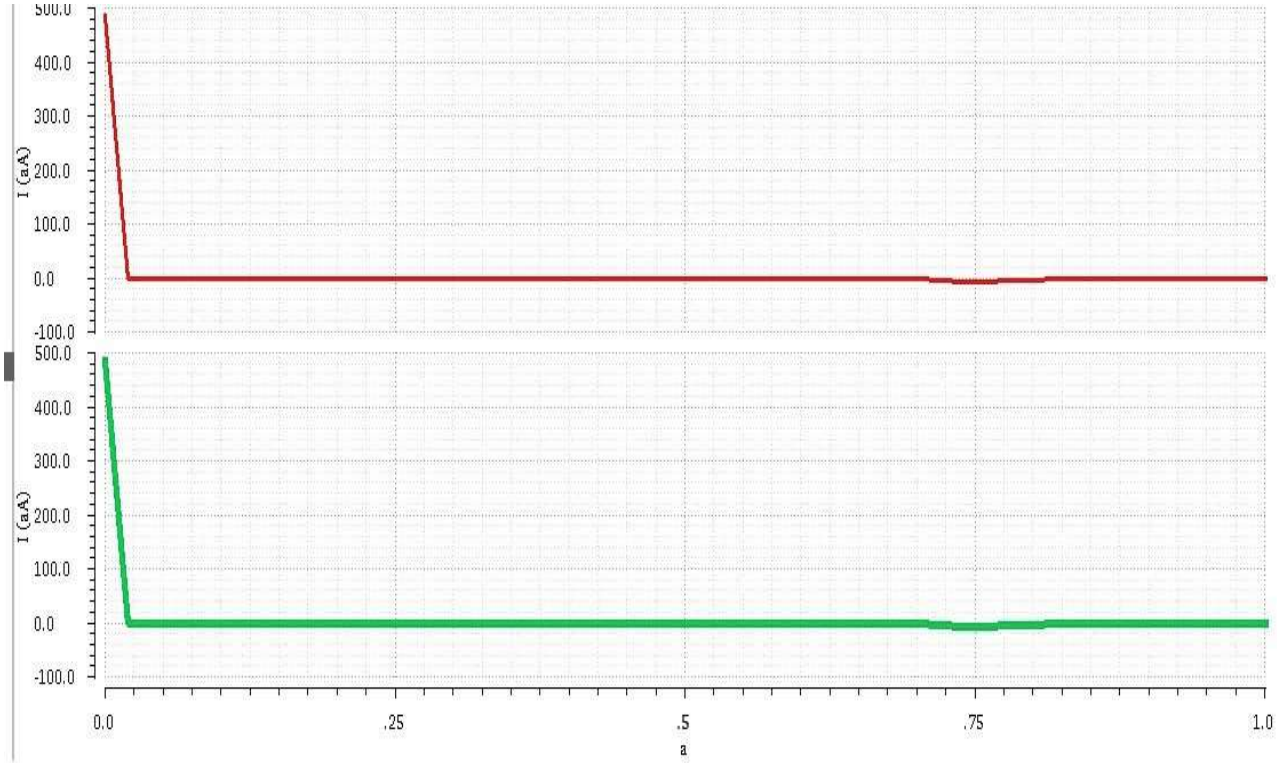

Fig-6.2 tail current waveform of differential amplifier

Schematic

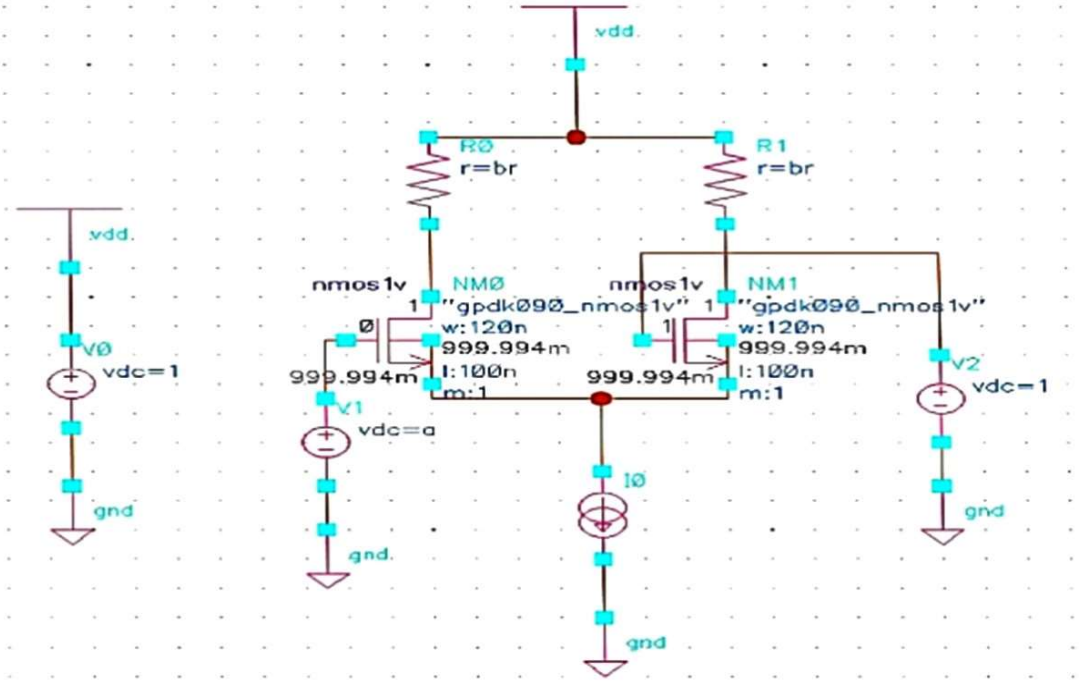

Fig-6.3 Schematic of difference mode differential amplifier

Waveform

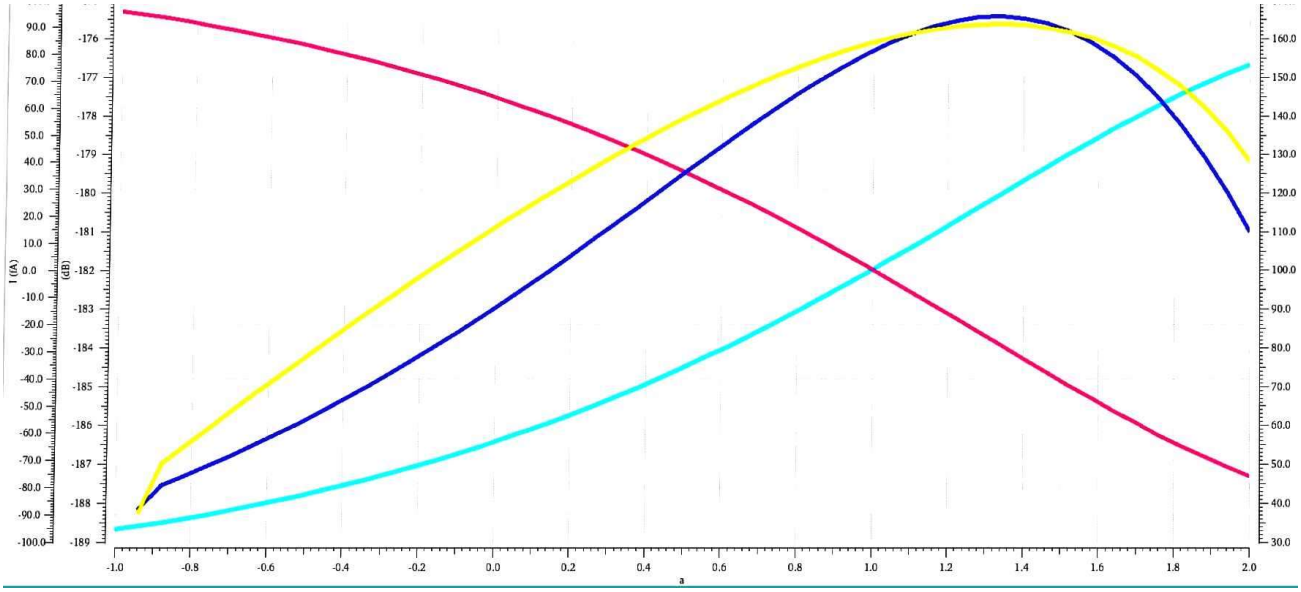

Fig-6.4 output waveform of difference mode differential amplifier

EXPERIMENT-07

AIM: - DC analysis of differential pair with MOS load. To find Gain.

Schematic

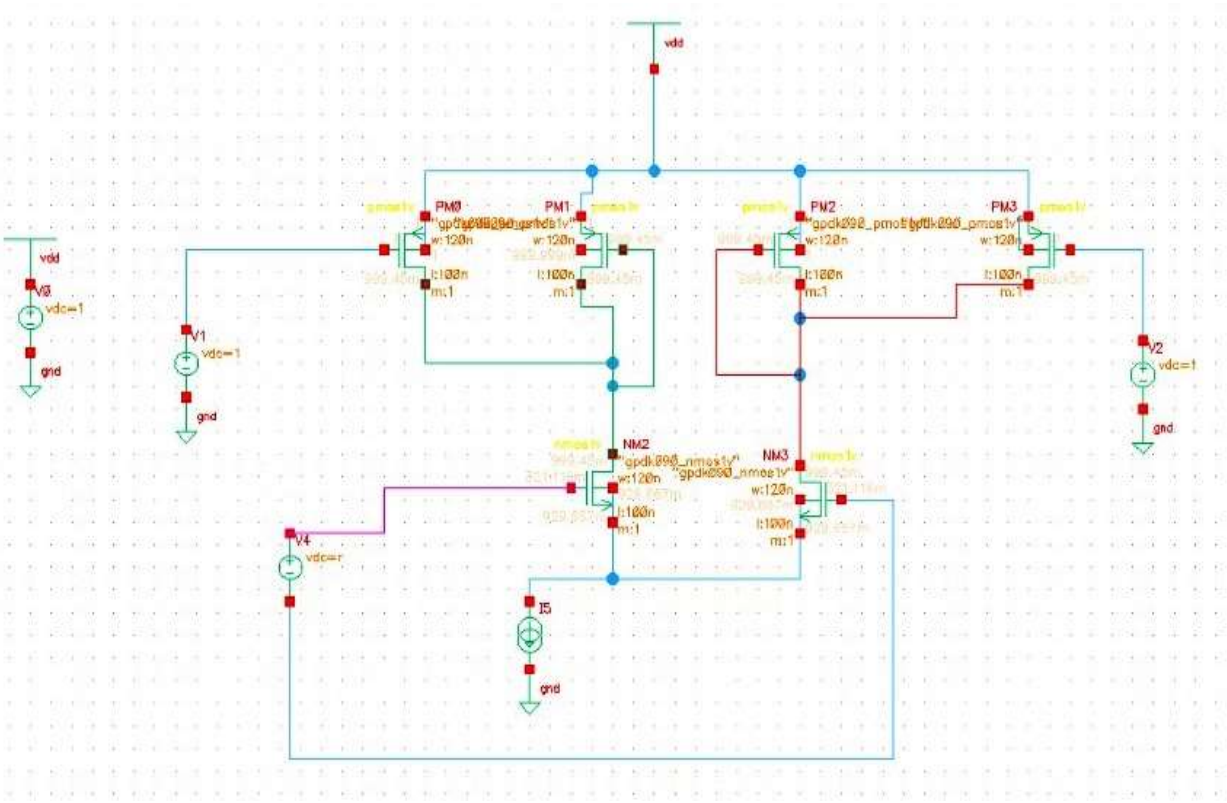

Fig-7.1 schematic of differential pair with MOS load

Waveform

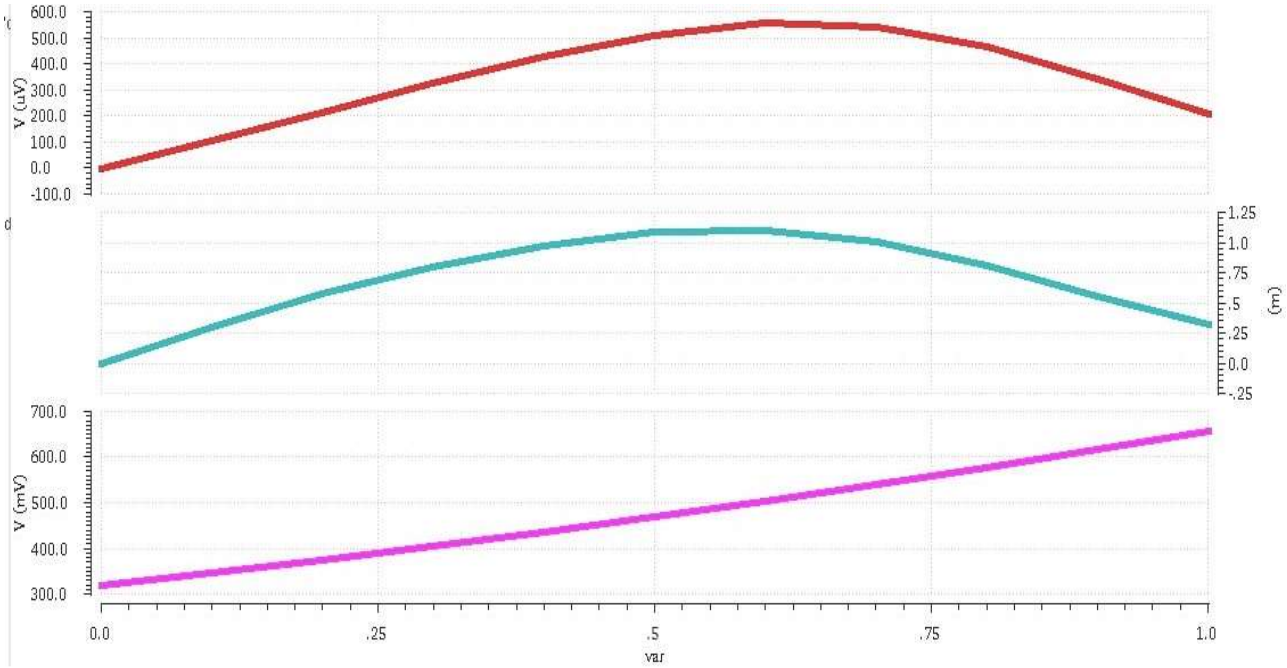

Fig-7.2 DC Gain waveform of differential pair with MOS load

Waveform

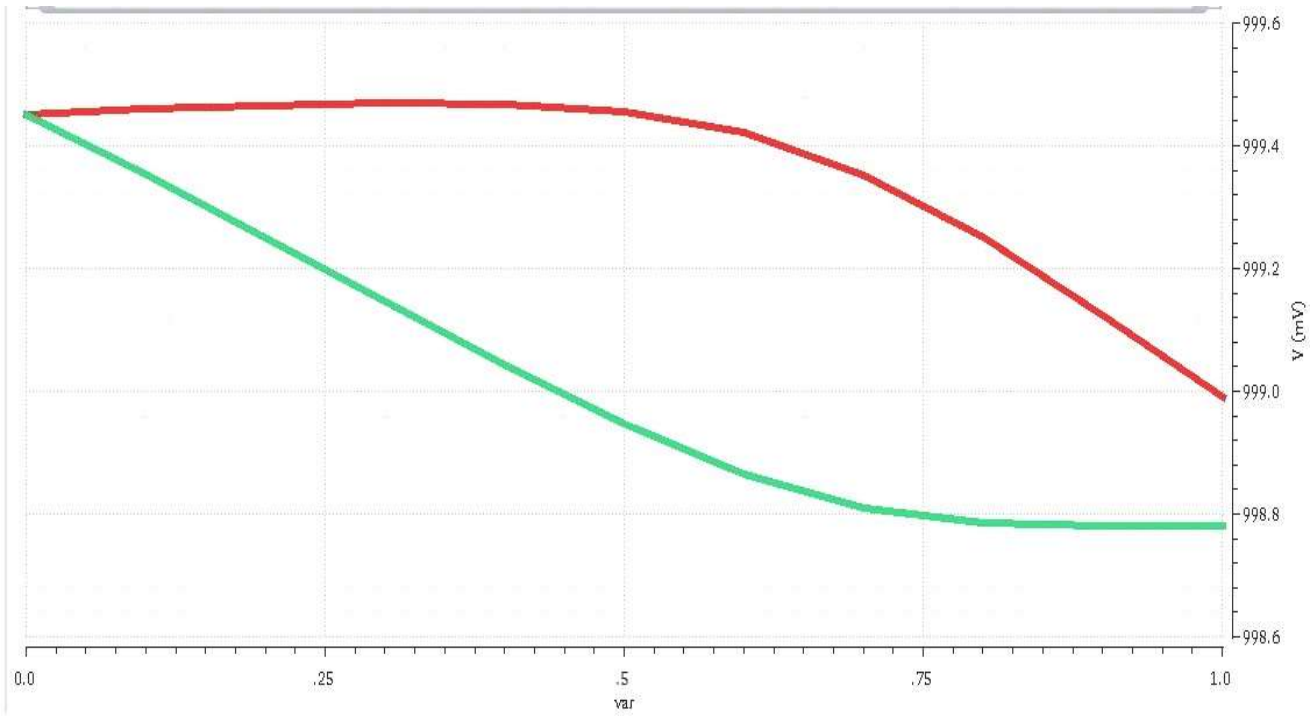

Fig-7.3 Gain waveform of differential pair with MOS load

EXPERIMENT-08

AIM: - DC Analysis of Current Mirror circuit.

Schematic

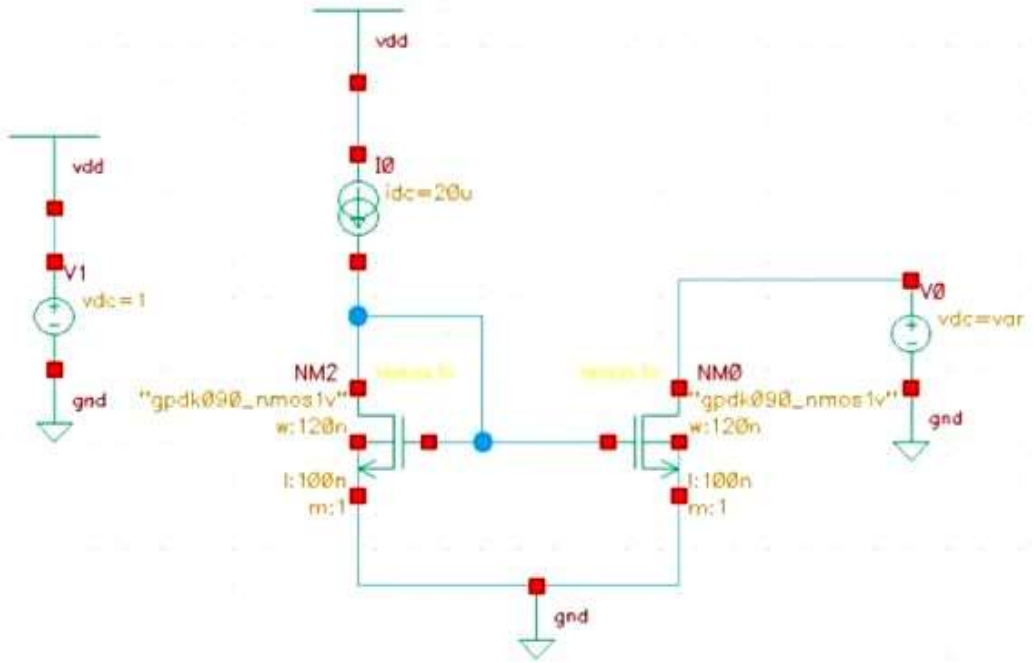

Fig-8.1 schematic of current mirror circuit

Waveform

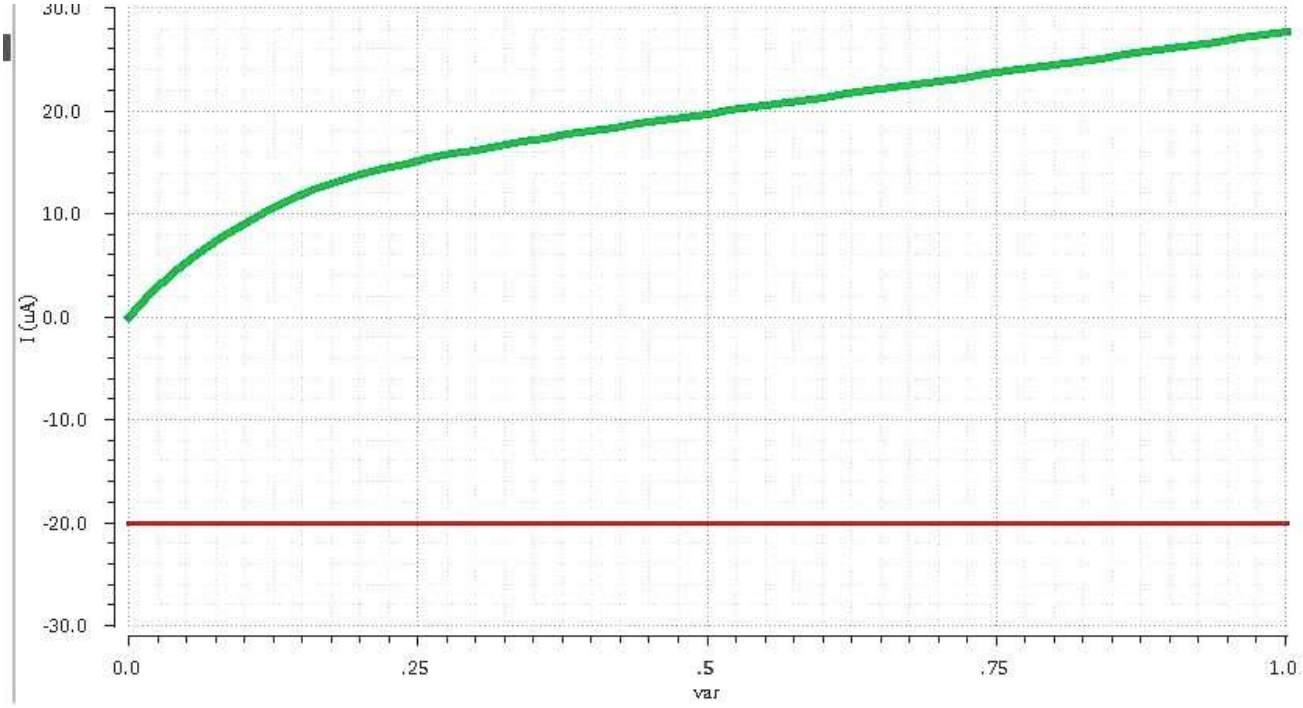

Fig-8.1 output current of current mirror circuit