DENEY PROTOKOL KAĞIDI

Deney No	Deney Tarihi	Deney Adı
3	01.03.24	Transistor Amplifier Circuits

Grup No	Öğrenci No	Adı Soyadı
C10	150200107	Erol Kocaoğlu
C10	150200097	Mustafa Can Gülsaçan
C10	150200015	Tolman Türkoğlu
C10	150200313	Fitnete Guwi

Araş Gör Ve imzası	Onur Aydınoğlu

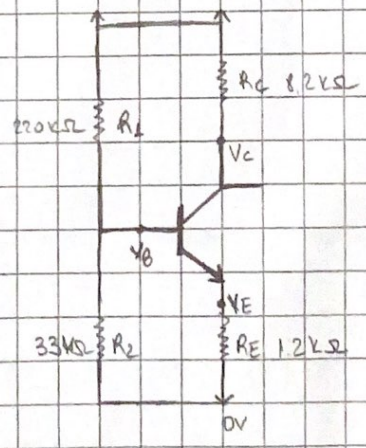
$\frac{15 - V_B}{270k} = \frac{V_B}{33k} \rightarrow V_B = 1,96V$

$V_E = V_B - 0,7 = 1,26V$

$I = \frac{1-26V}{1,2k\Omega} \cong 1mA$

$15 - R_C I = 15 - 8,2mA = 6,8V$

$V_C = 6,8V$



Measured Values:

V_C: 5.56V

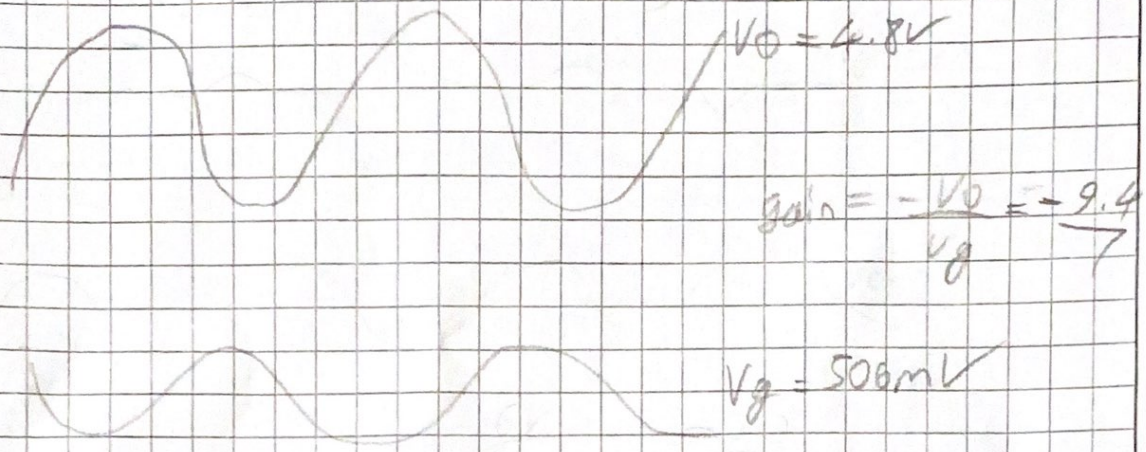
V_B: 2V

V_E: 1.45V

I_C: 1.14mA

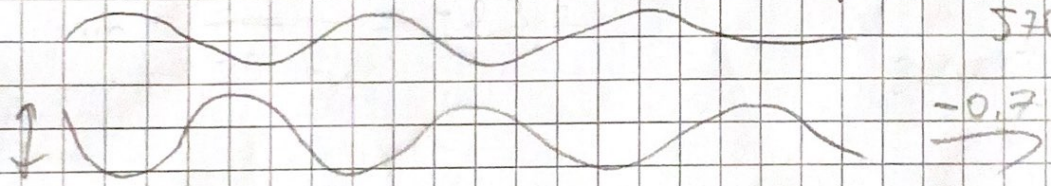
2) Clipping starts when V_g is 160 mV

3)



$$gain = \frac{-V_o}{V_g} = -9.4$$

4)



$$gain = \frac{-0.4\ V}{570\ mV} = -0.7$$

5) This is a circuit that consists common emitter amp.

In the experiment, we first set up the circuit and calculated the DC values. Afterwards we connected the AC source and calculated the gain values on the oscilloscope device. A clipper occurred in the oscilloscope device in the circuit with the C3 capacitor installed. To get rid of this, we changed the amplitude value. Afterwards, we removed the C3 capacitor and calculated the gain values again. As a result, we observed that the gain value decreased significantly in the circuit where we removed the capacitor.