

Studentsgroup:
 Date:
 Professor:

Responsible:
 Group Members:

Task 6:

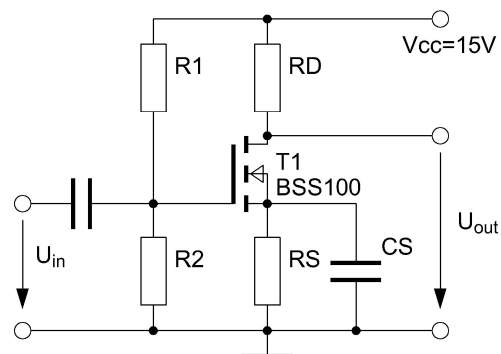
MOS-FET Applications

1. Amplifier

Devise a MOS-FET-amplifier according to the shown circuit having an amplification factor of $v = 30$.

Check the operating point you have calculated with.

Measure the amplification factor using a frequency of $f = 1\text{kHz}$.

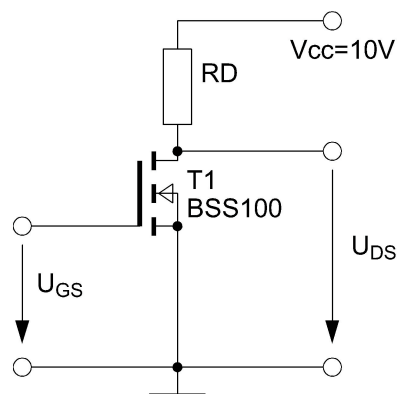


2. Ohmic region versus pinch-off-region

Devise the shown circuit in three different ways to get

- operation in linear region
- operation in ohmic region
- operation in pinch-off-region

The current I_D must not exceed 5mA.



3. CMOS-Inverter

Set up a CMOS-inverter according to the shown circuit.

Draw the characteristics $U_{out} = f(U_{in})$ and $I = f(U_{in})$ with U_{in} ranging from zero to 5V by means of an XY-recorder.

