Roll Number: 190070049

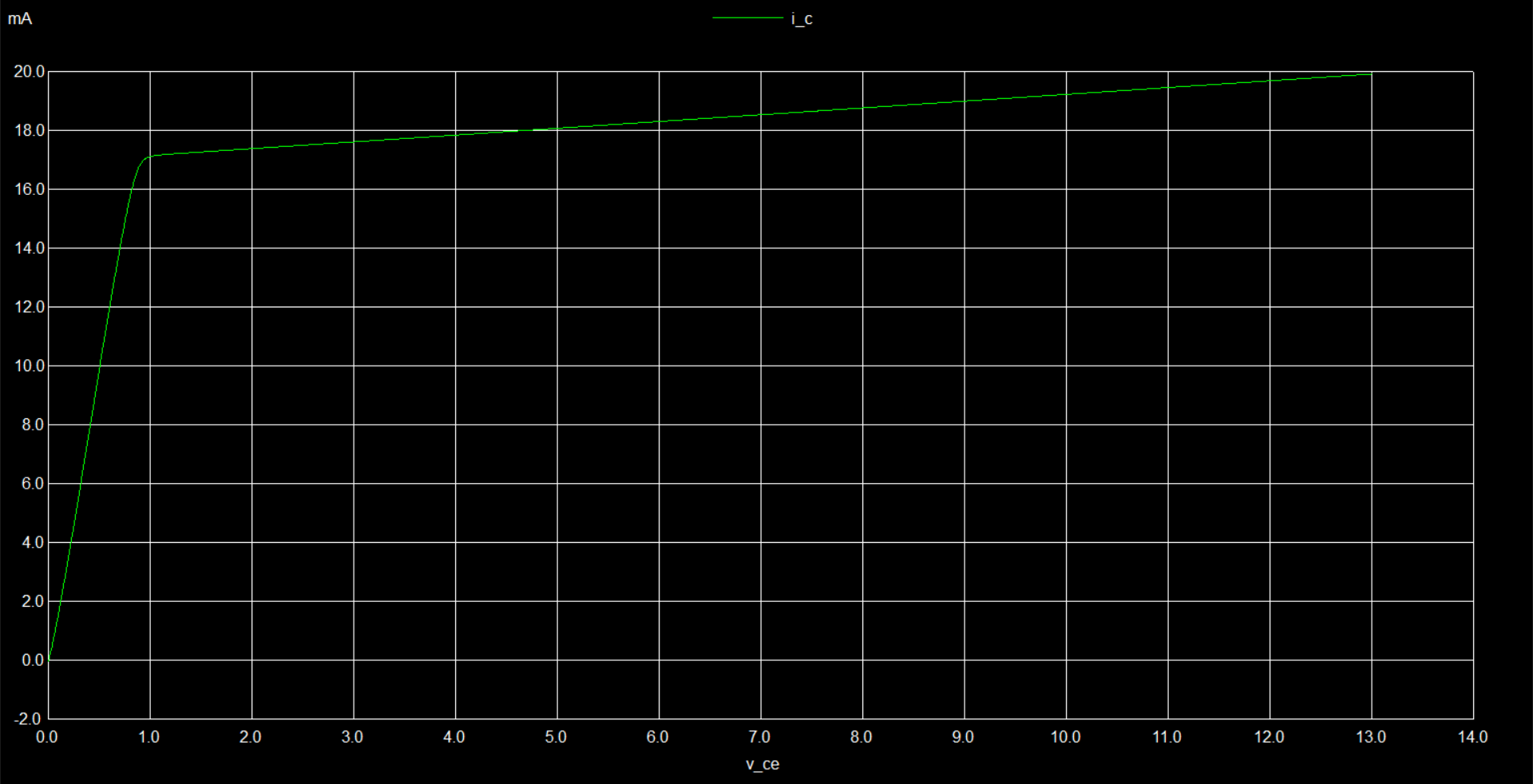
Name: Rathour Param Jitendrakumar

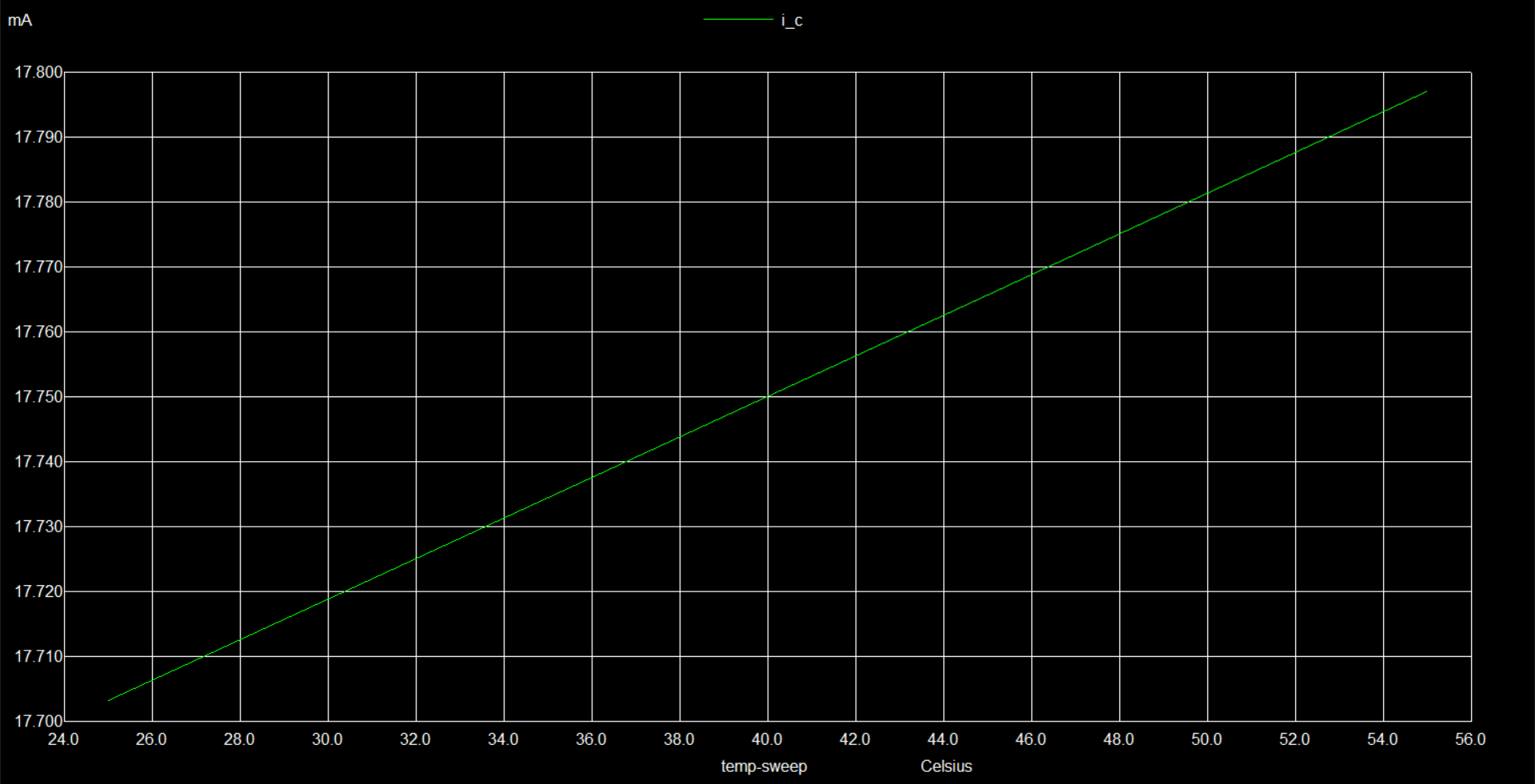
Course: Electronic Devices Lab

Course Code: EE236

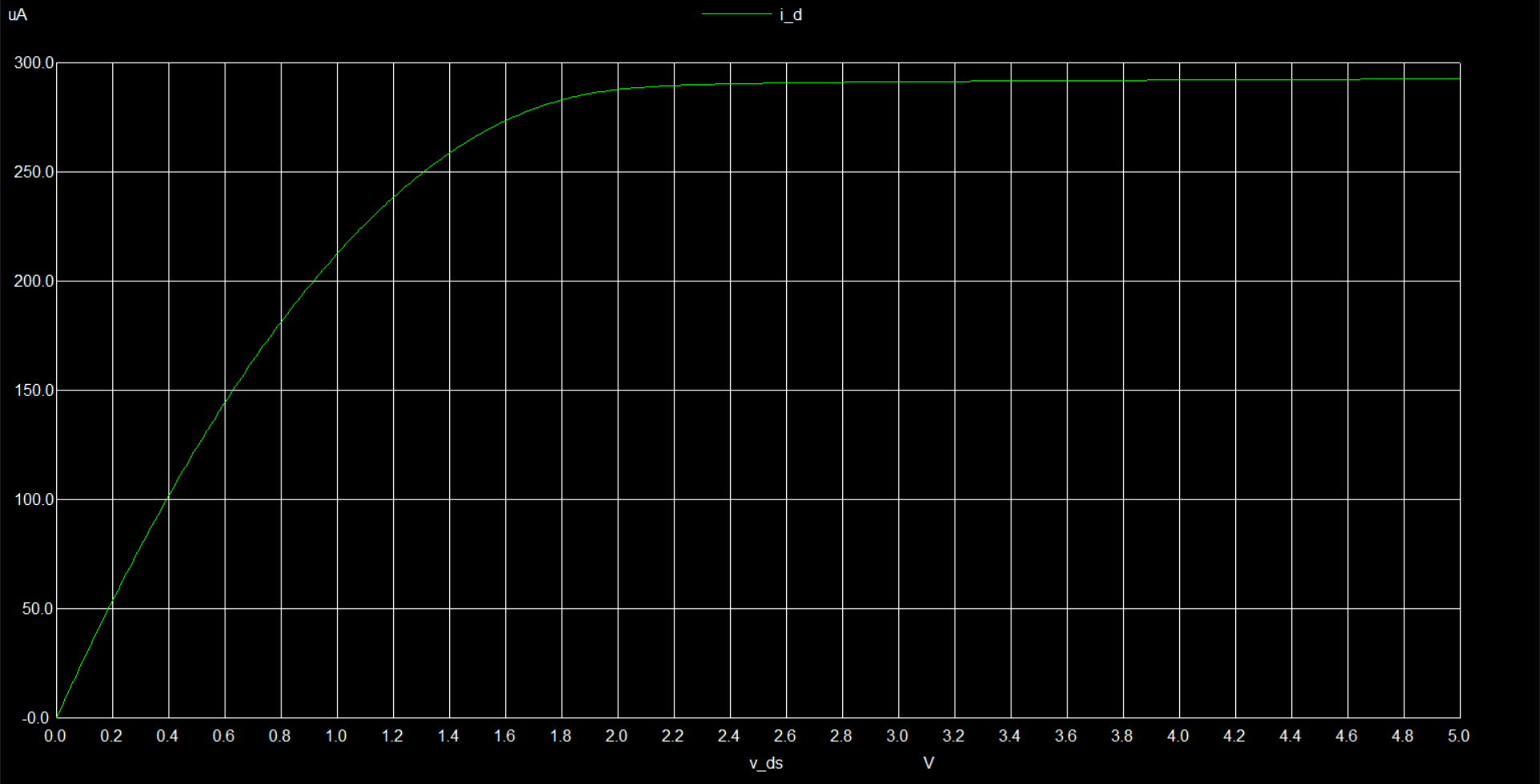
Q1) a)

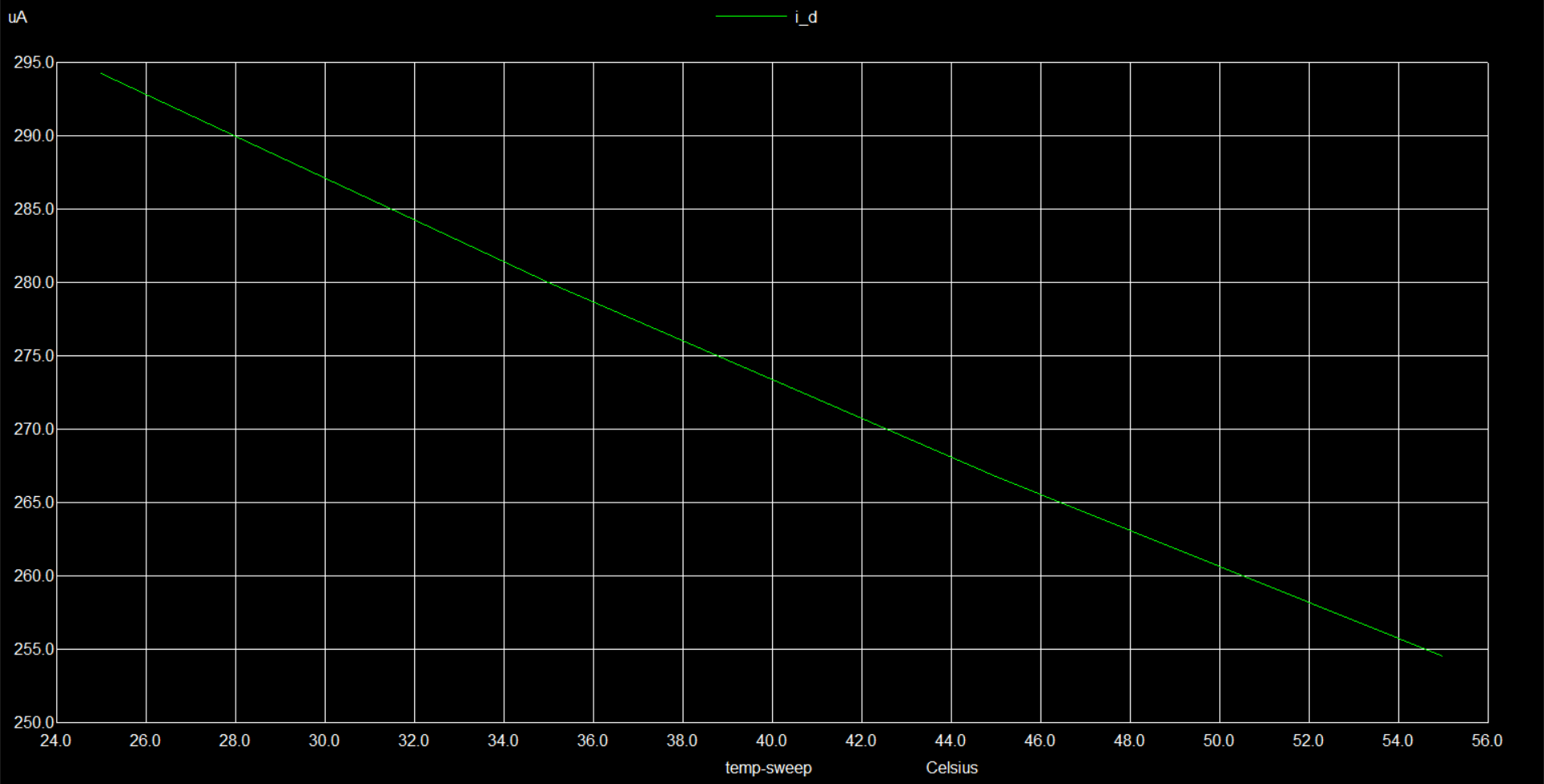
I\_C vs V\_CE

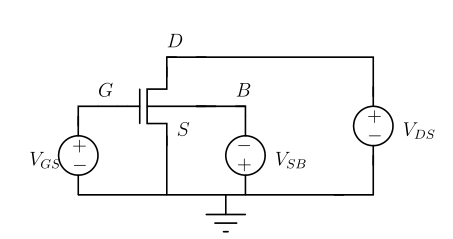


I\_C vs temp

Q1) b)

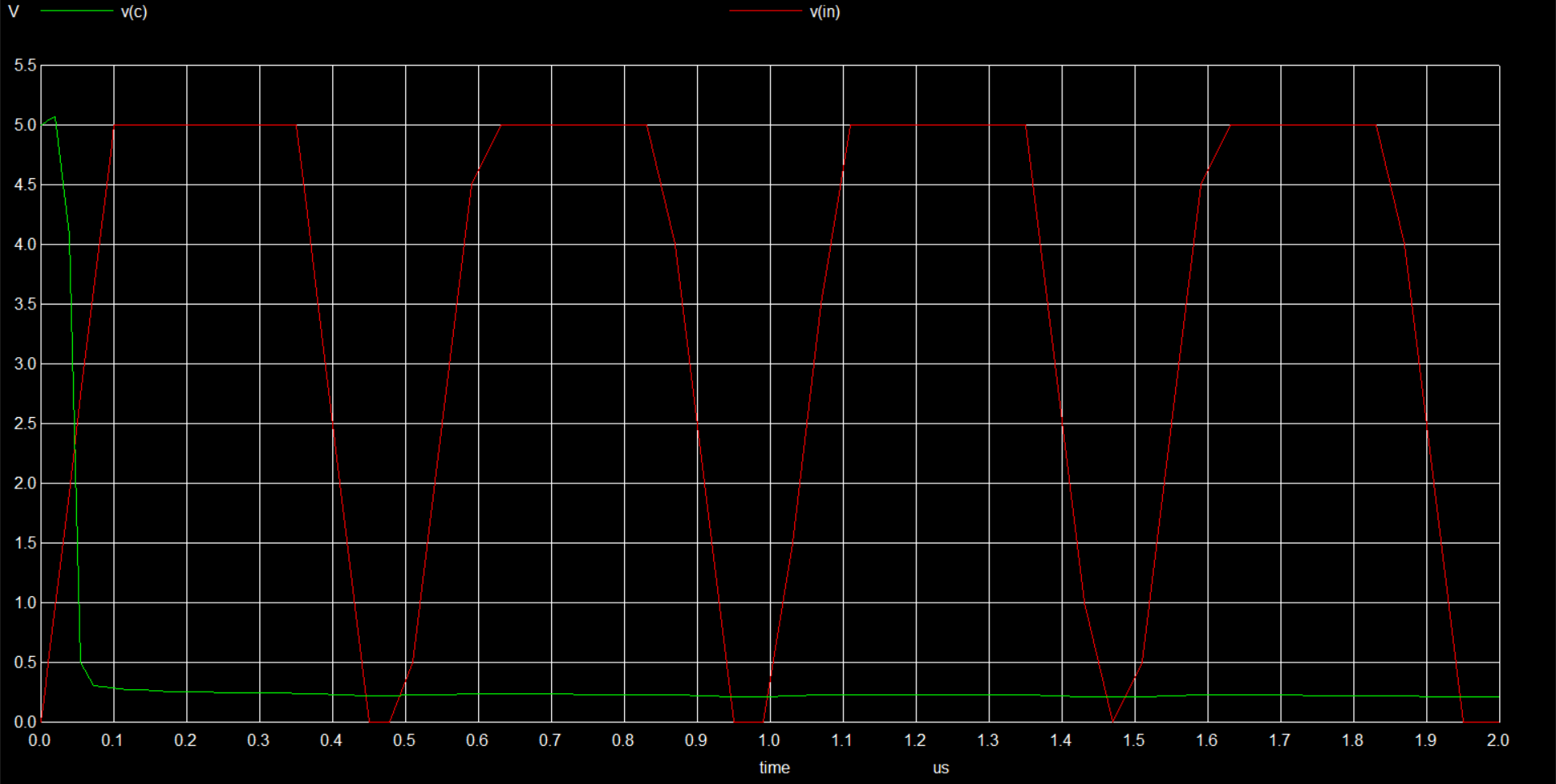
I\_D vs V\_DS

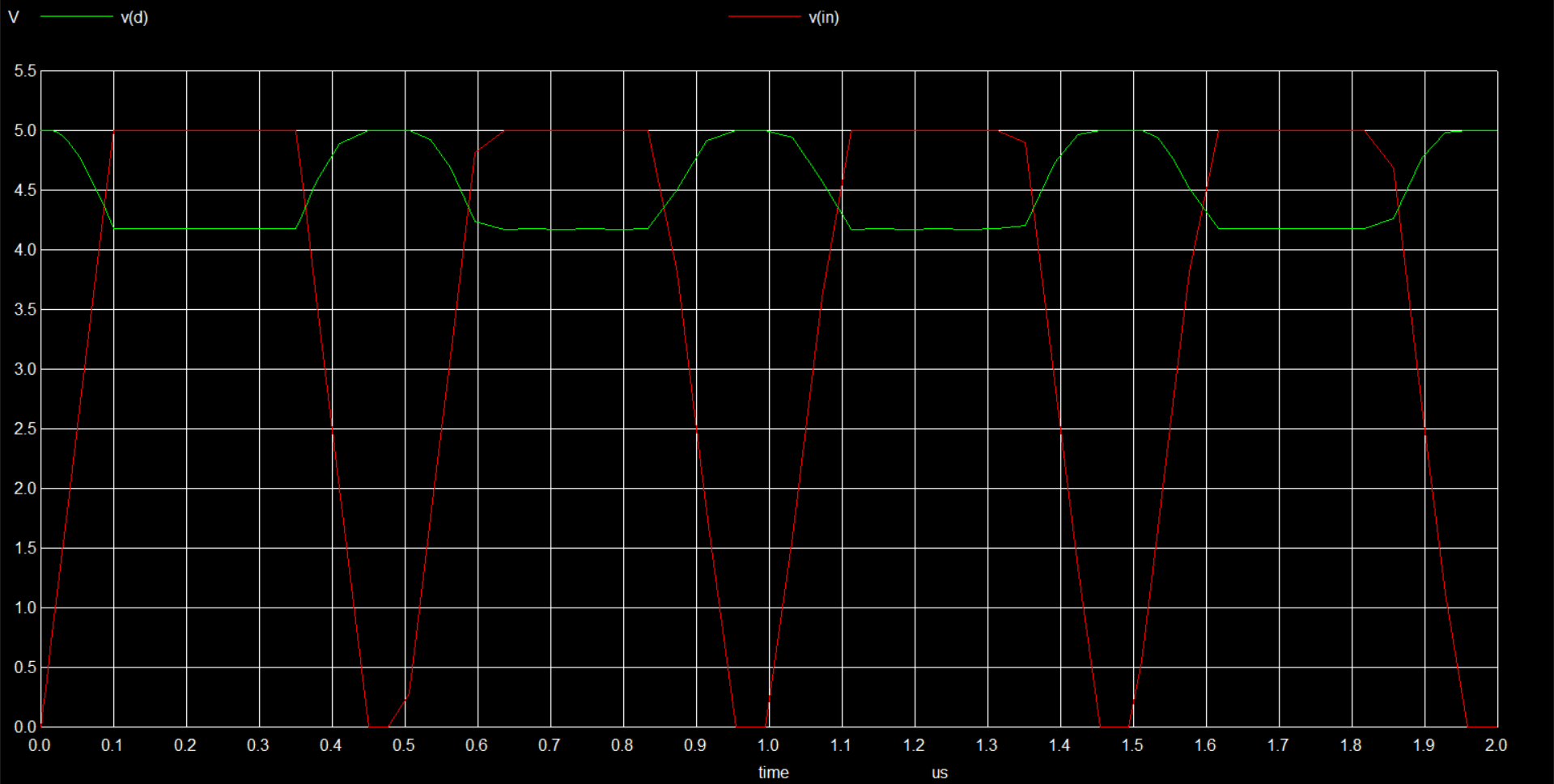
I\_D vs temp



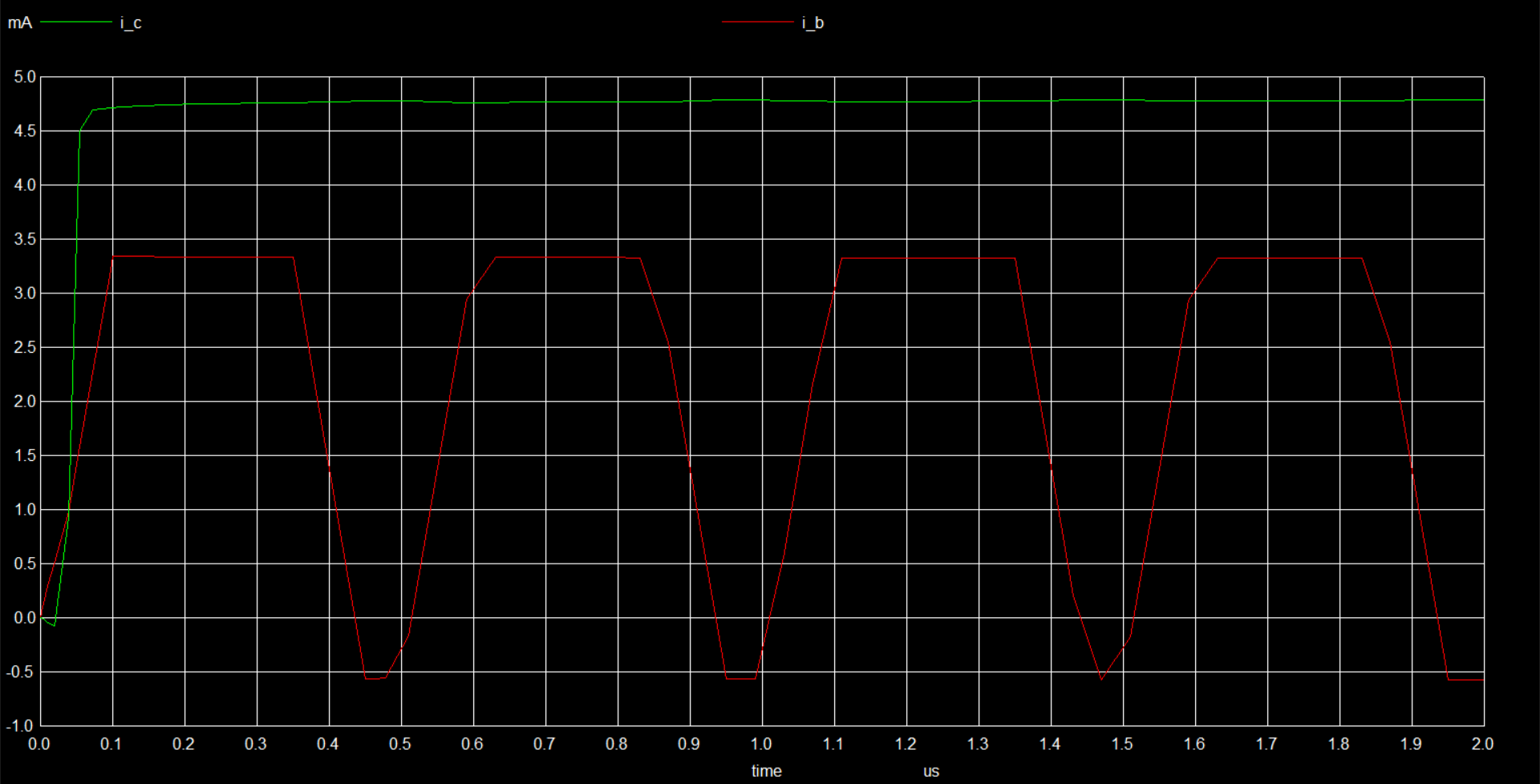
Q1) c)

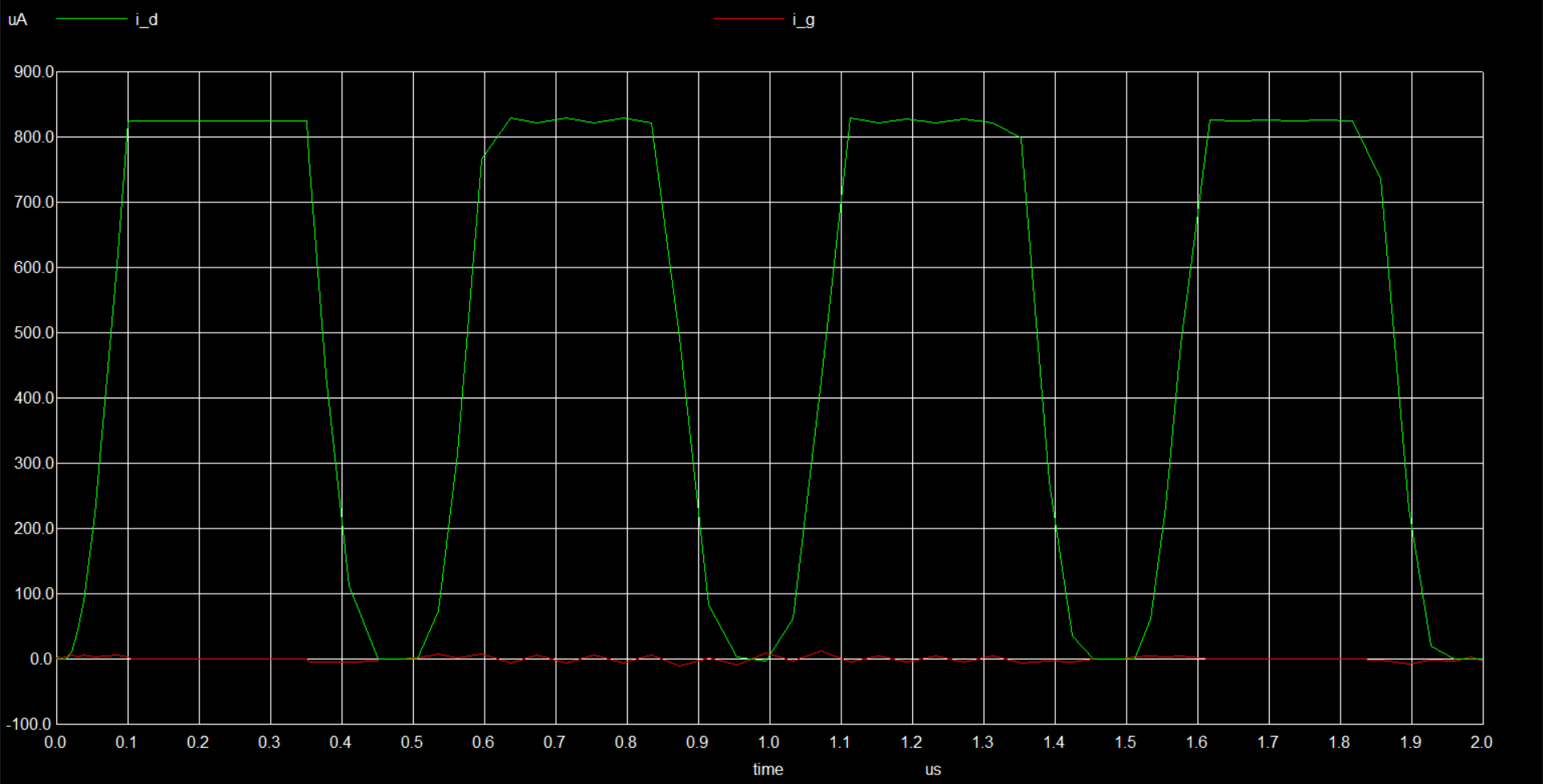
V\_out vs V\_in

BJT

NMOS

I\_C vs I\_B

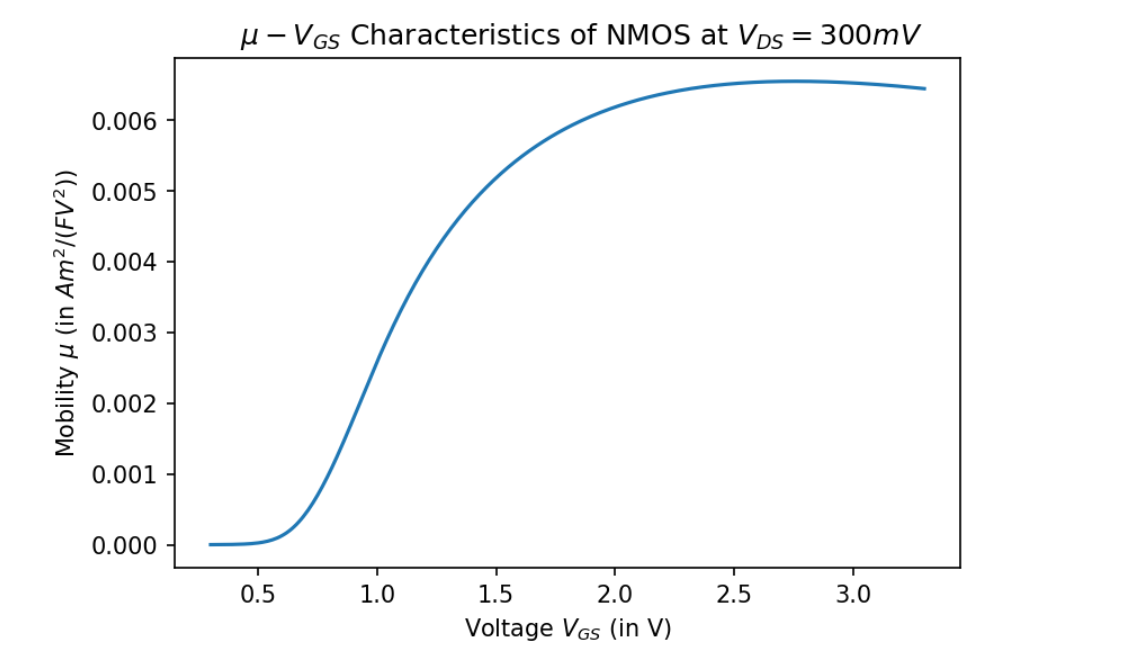
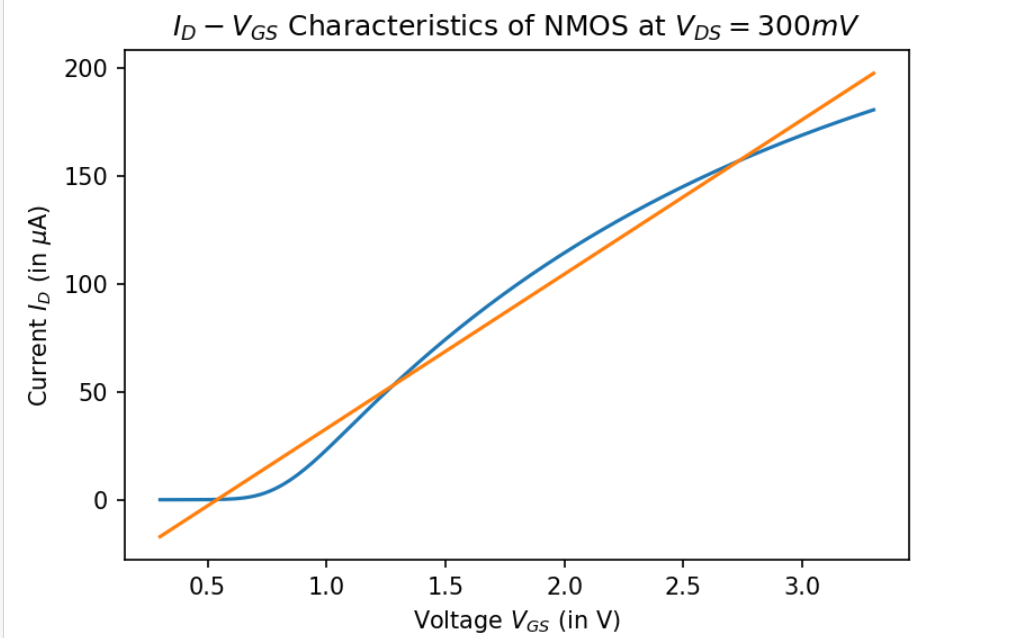
BJT

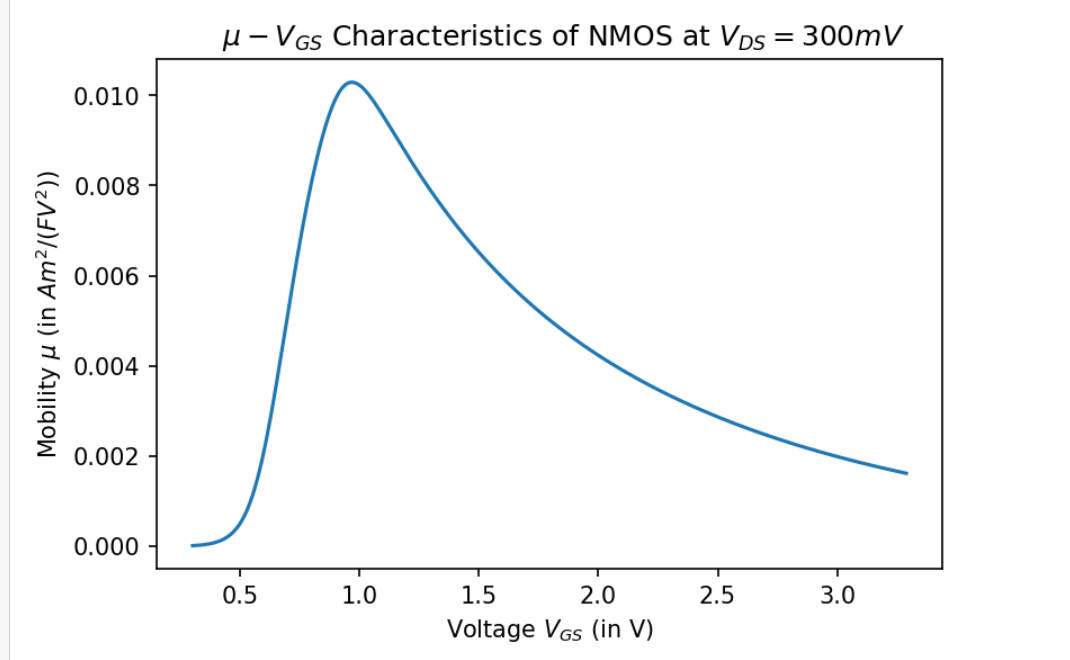
NMOS

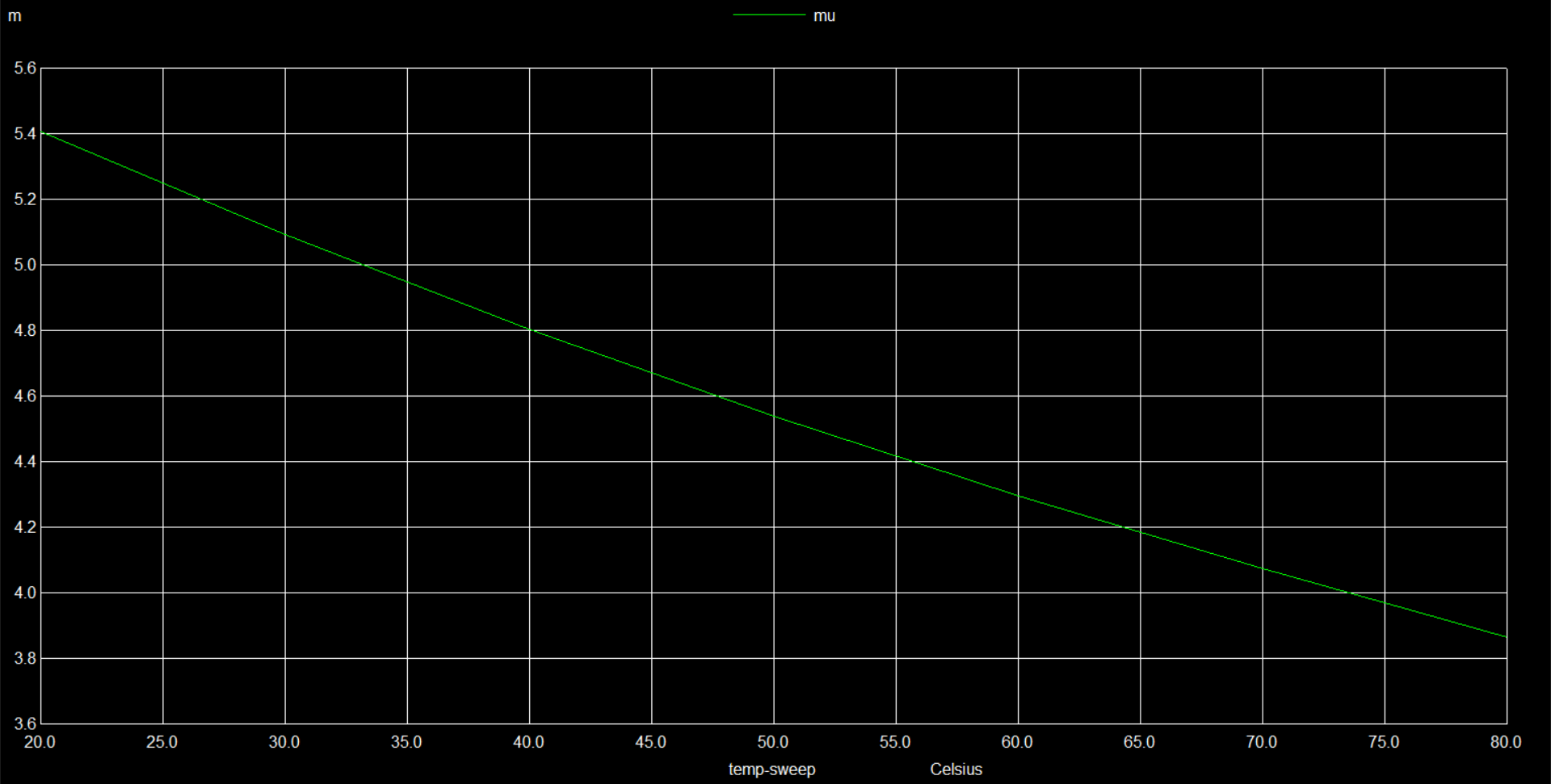
BJT doesn’t turn off

NMOS turn off time = 9.73821e-07 - 9.53659e-07 = 20.162ns

Q2) a)

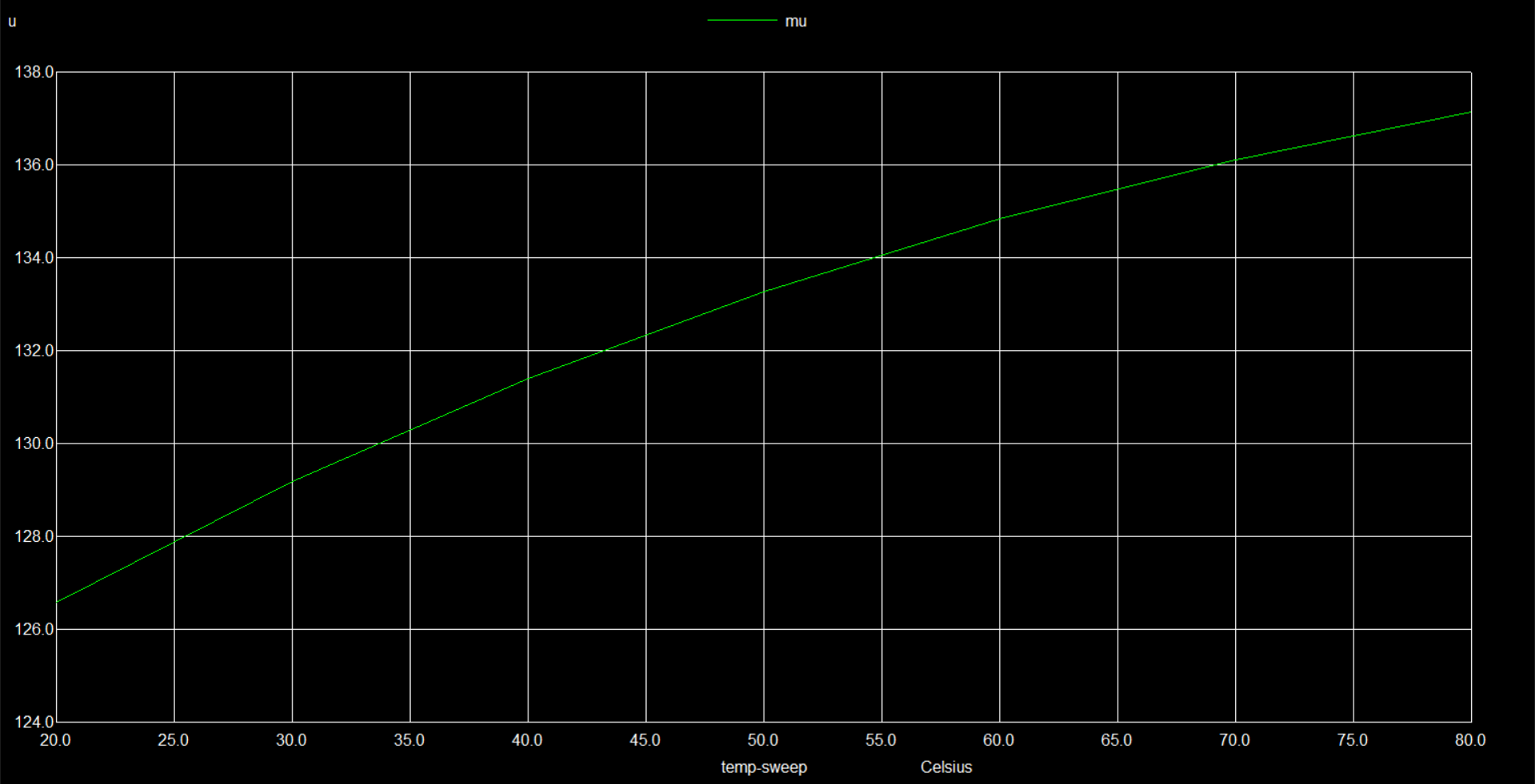
Blue – Original Value



Q2) b)

V\_GS = 1.5V

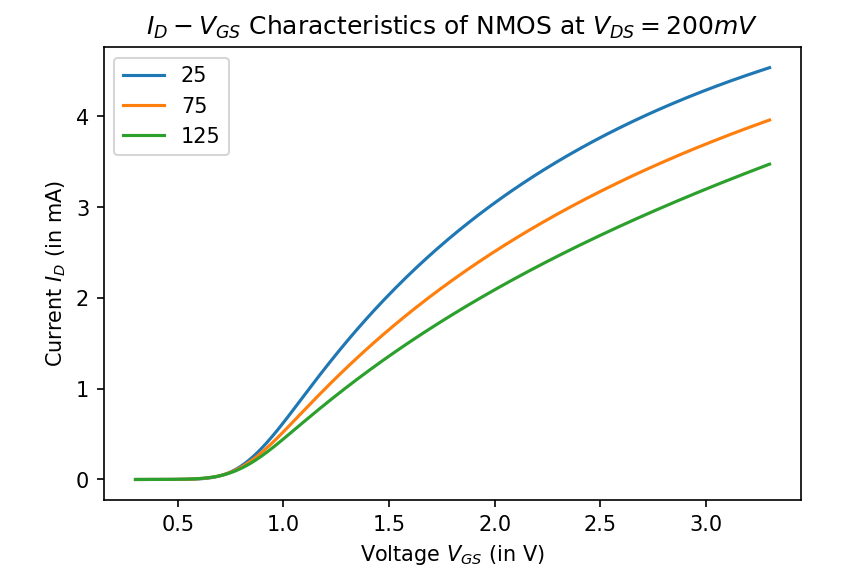
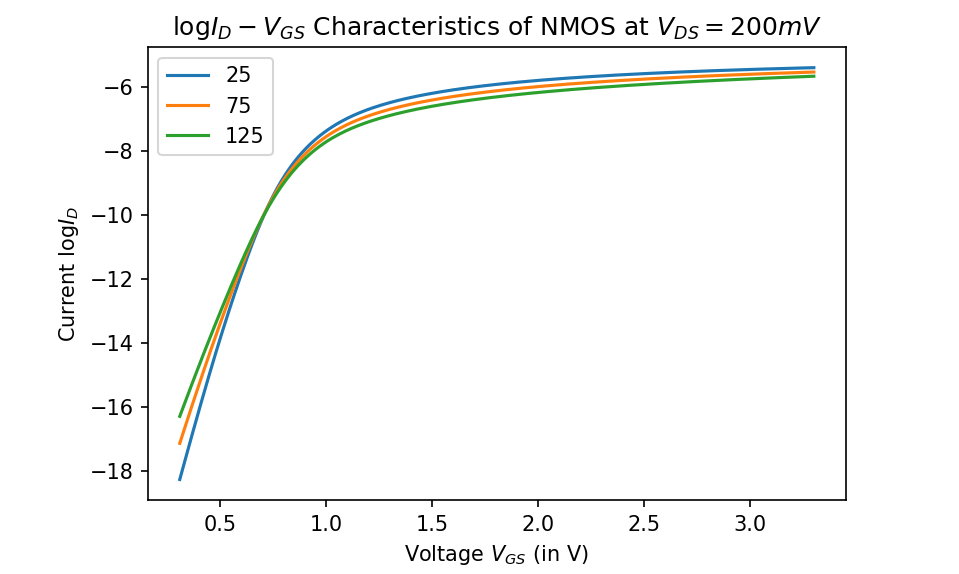
Mobility vs temp

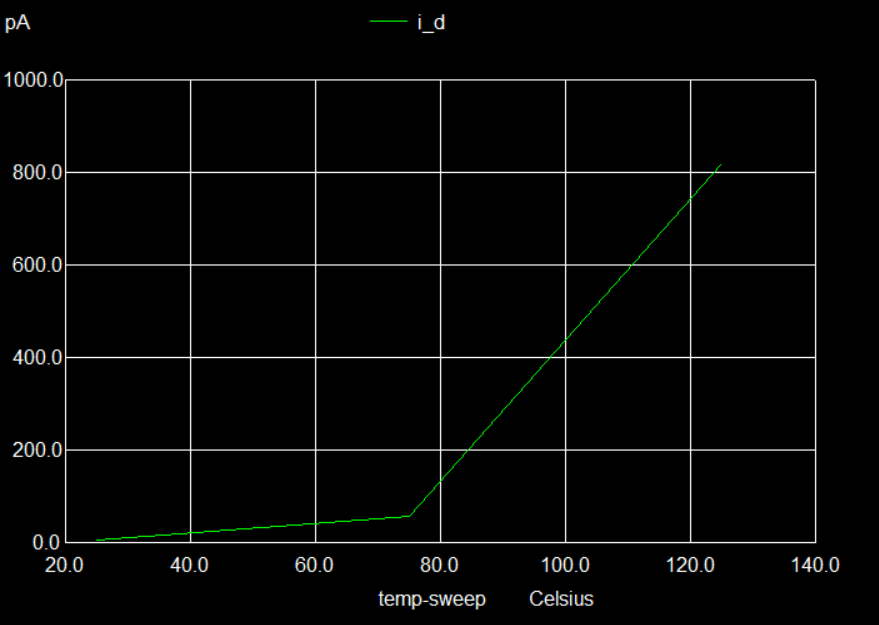
V\_GS = 0.6V

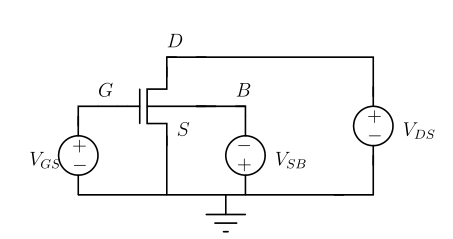
Q2) c) SS in mV/decade

41.326124249702865

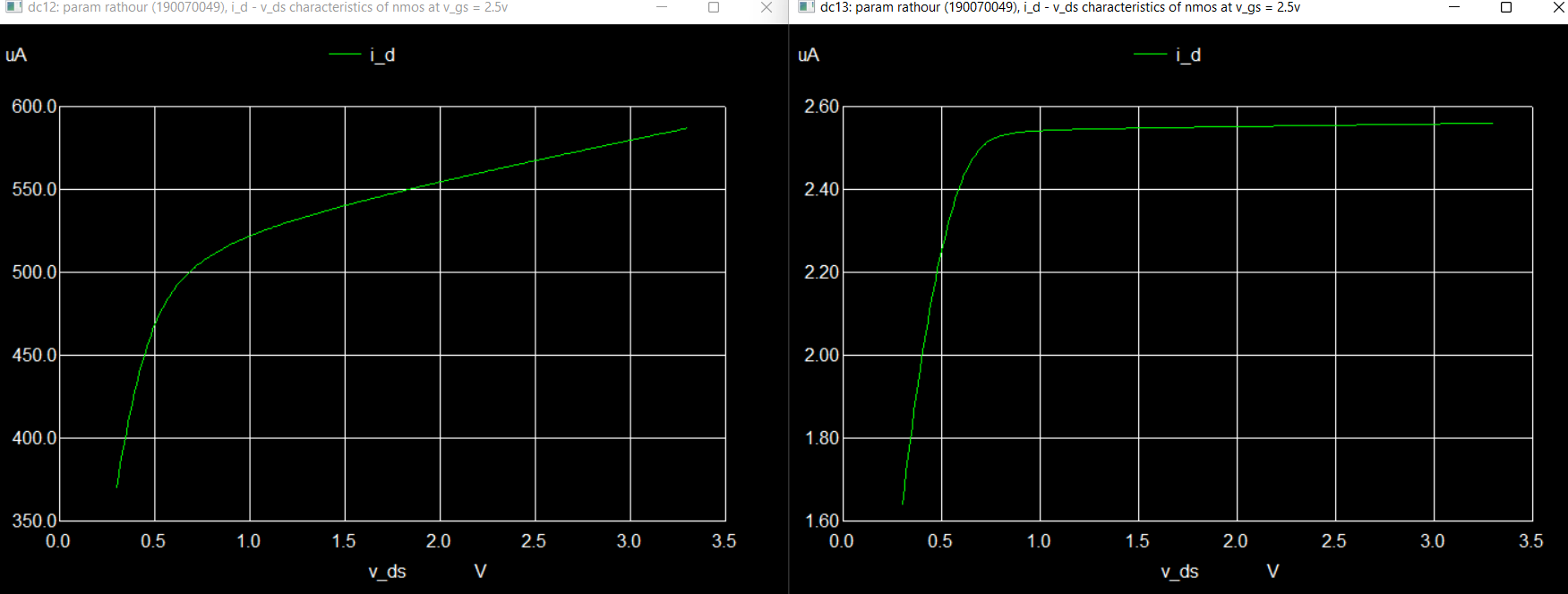
48.70882175407157

56.56533984425148

Off current



Q3) a)

R\_o = 7122.99ohm and 1.10646Mohm resp

b)

41.326124249702865

48.70882175407157

SS in mV/decade  
