

P4.20 A common-source amplifier, pictured below, is to be built using an n-channel JFET with the characteristic curves shown below. Assume $V_{DD} = 12\text{V}$ and choose your quiescent point to lie on one of the curves. For each component of this amplifier, report a value and how that value was determined (graphically, by formula, or other considerations). Choose capacitors assuming $f > 30\text{Hz}$. Be specific and explain fully. Report your gate-source bias voltage, transconductance at that voltage, DC limit of voltage gain, input impedance, and output impedance.

