

*Lecture 08 -- Voltage Swing, Amplifier Design, maybe Emitter Degeneration*

Draw a graph of the large signal voltage transfer characteristic of a common emitter amplifier and a load line analysis of a resistively loaded common emitter amplifier.

What are voltage gain, input resistance and output resistance?

What is input leakage/bias current?

What is the input bias current of a capacitively coupled common emitter amplifier?

What is the low frequency -3dB corner?

How do you calculate small signal current gain, and what is the small signal current gain of a common emitter amplifier?

What limits output voltage swing in a common emitter amplifier on the high side? The low side?

Record the design process for a simple common emitter amplifier

In a standard common emitter amplifier, where would you usually find “easy” constraints for the design process? What are common easy constraints?

What are the voltage gain, input resistance and output resistance of an emitter degenerated common emitter amplifier?