

Lecture 19 -- Current Mirrors and Active Loads

Why is DC output voltage related to voltage gain in resistively loaded amplifiers?

What is the advantage of a current source load over a resistive load?

How do we make current source loads?

Draw a simple current mirror.

What are the four design parameters we study for current mirrors? What are they for a simple mirror (include a derivation of epsilon)?

Draw a small signal model for a current source loaded common emitter

Draw a load line for a current source load on a common emitter amplifier. What determines the DC value of V_{out} ?

Draw a cascoded current mirror and record its design parameters

What is the dynamic model of a simple mirror? Is it fast or slow?