Circuits Project Proposal

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Proposal

For this project, we would like to design and implement a MOSFET-Only Current-Output D/A Converter. We will begin with the MOS transistor R-2R ladder network that we explored briefly in Postlab 6.We would like to look into what the reasonable limit is for adding more bits of precision with just the ladder. We would then like to further investigate the effect of edge-case voltage inputs.

Relevant References

Suggested References

1. A floating-gate MOSFET D/A converter
2. Compact low-power calibration mini-DACs for neural arrays with programmable weights

Additional

1. 8-Channel, 16-Bit, 200-mA Current Output, Digital-toAnalog Converter Reference Design
2. All-MOSFET M-2M Digital-to-Analog Converter for Operation with Very Low Supply Voltage
3. DACs Used in ADC Architectures and Read-in ICs, Chapter 3
4. Lecture notes in EECS247, University of California Berkeley.