

ENEE 417 - Fall 2001
Weeks #5 - #6
Design #2: Vth Extractor

In this experiment an MOS circuit will be designed, constructed, and tested, that has as its output the threshold voltage of an MOS transistor.

1. Read the article: M. G. Johnson, "An Input-Free VT Extractor Circuit Using a Two-Transistor Differential Amplifier," IEEE Journal of Solid-State Circuits, Vol. 28, No. 6, June 1993, pp. 704-705.
2. Based on that paper design a threshold voltage extractor using the 4007 MOS transistors available in the Laboratory. Do a Spice run to check your design and construct and test your extractor.
3. Write a one to two page report summarizing your study.
4. Choose an oscillator, current mirror, or differential pair from a textbook or journal paper for Your third design.