

Experiment 7 : ADC/DAC

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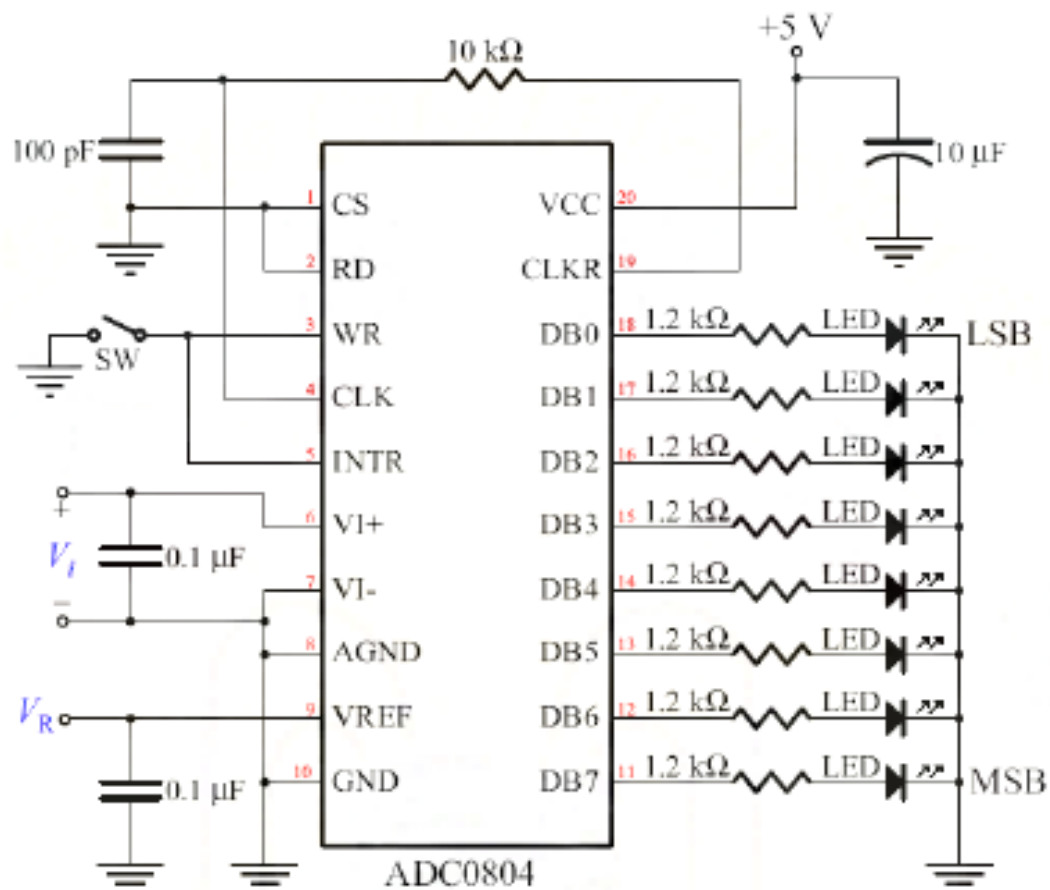
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1. Experiment Objectives

1.1. To study another group of analog IC circuits of great importance, data converters.

2. Experiment Setups



1. Rest ADC0804

- (1) 讓SW open.
- (2) Supply voltage $V_{CC} = +5V$. ※全部或部分的LED 會亮
- (3) 讓SW 短暫close (reset the ADC0804 chip 一下子).
- (4) 讓SW open. ※全部 LED 會變暗.

2. Measure the voltage as full load. (No need to perform)

- (1) Supply voltage signal $V_{in} = 0V$, and V_R .
- (2) 緩慢地將 V_R 從2.5V 增加到5V.
- (3) 觀察LED 是否可以各自發亮 (如果不行，換顆ADC0804)
- (4) 調整 V_R 讓數位輸出為1111-1111.
- (5) 記錄 $V_R = \underline{\hspace{2cm}}$ V.

3. Measure Analog voltage value to Digital output

- (1) Set $V_R = +2.5V$ and $V_{in} = 0 \sim 2.5V$.
- (2) 緩慢的增加 V_{in} 從0 到5V 並記錄 V_{in} (用三用電表)，填滿下表

Analog input V_{in} (V) (Use Multimeter)	Digital output (Binary)	Digital output (Decimal)
	0000 0001	1
	0000 0010	2
	0000 0100	4
	0000 1000	8
	0001 0000	16
	0010 0000	32
	0100 0000	64
	1000 0000	128