Planning

DAC

DAC Output

use → RA2 } DAC1
RB7 }

↑ don't use because we don't want to use the programming/debugging lines

- outputs unbuffered and its simply the series combination of the resistor ladder
- R = 20k each

256 × 20k > 5 MOhm

$i = 0$; any load [+ V_0 −] will impact significantly DAC output.

⇓

pull out LED that is connected to RA2 and plug a scope probe in to RA2 to monitor the output signal

⇓

Do not use a speaker connected onto breadboard (BME 343 handson)

Characteristics

DAC enabled, RA2 output, Vdd positive reference, Vss as negative reference

↓ ~~REFERENCE~~ PIN 20 VDD

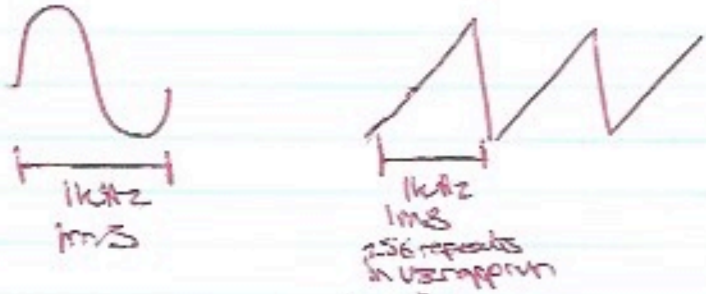
↓ PIN 19 VSS

DAC_1CON = 0b1 0 1 0 00 0 0

- 1 – DAC enabled
- 0 – Don't care
- 1 0 – DACxOUT1 is enabled on pin RA2 only
- 00 – VDD
- 0 – Don't care
- 0 – VSS

DAC_1CON = 0xA0 ;

System Tick Time



$\frac{1 \times 10^{-3} s}{256} = 3.90625 \mu s \approx 4 \mu s$

actual frequency = 976.5628 Hz