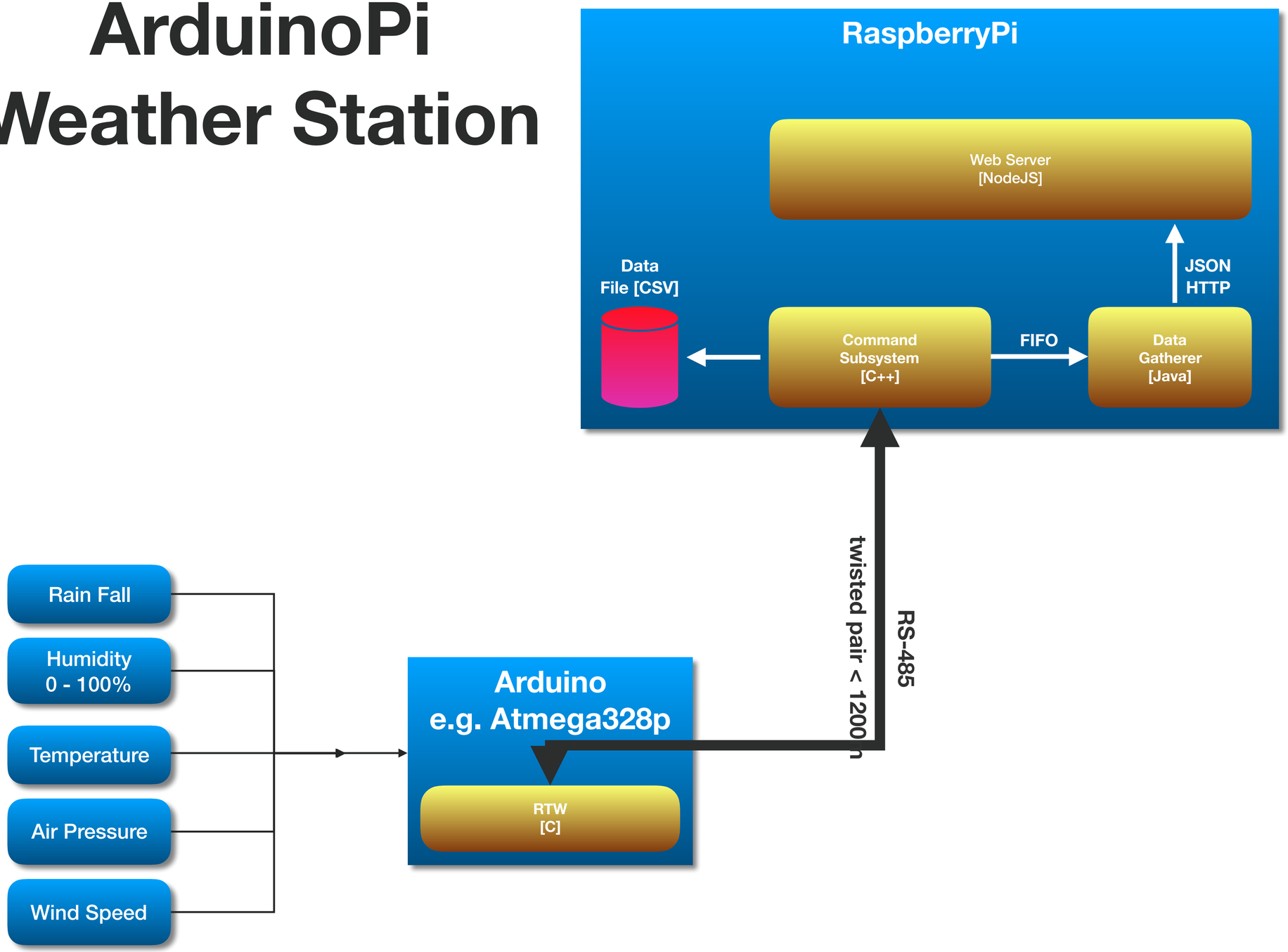
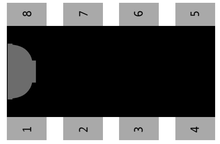
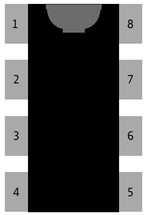
ArduinoPi Weather Station




8
7
6
5
1
2
3
4


1
2
3
4
8
7
6
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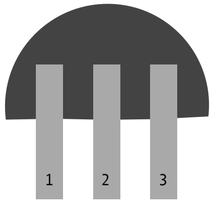
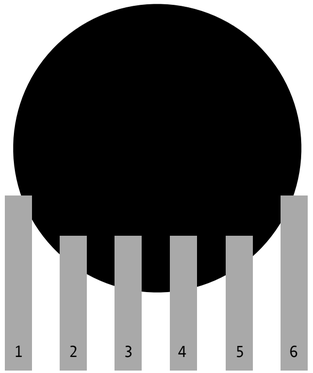
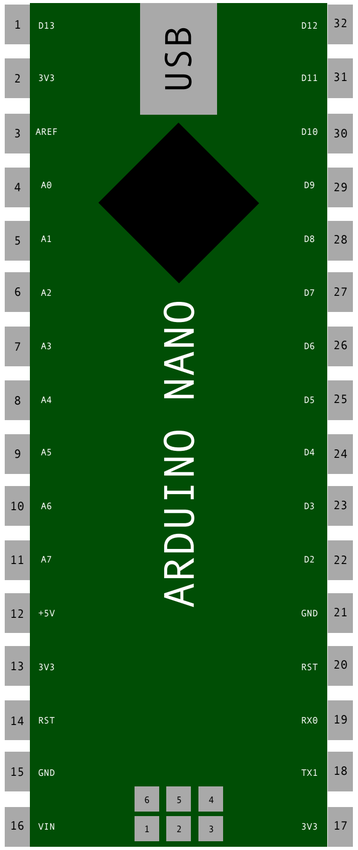
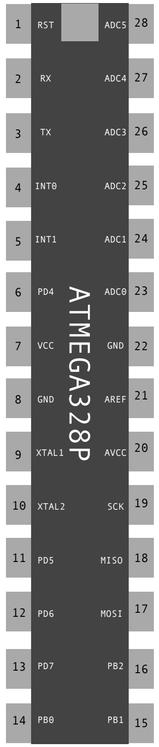
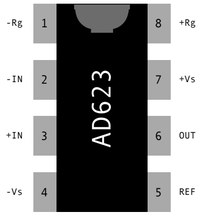
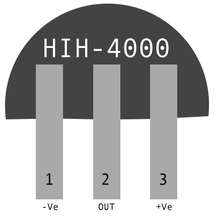

1
2
3

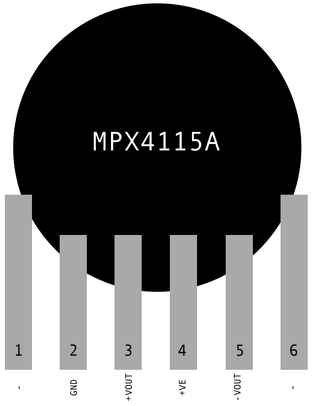

1
2
3
4
5
6

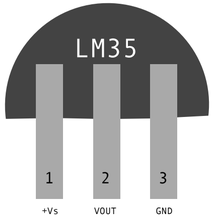

USB
ARDUINO NANO
1 D13
2 3V3
3 AREF
4 A0
5 A1
6 A2
7 A3
8 A4
9 A5
10 A6
11 A7
12 +5V
13 3V3
14 RST
15 GND
16 VIN
32 D12
31 D11
30 D10
29 D9
28 D8
27 D7
26 D6
25 D5
24 D4
23 D3
22 D2
21 GND
20 RST
19 RX0
18 TX1
17 3V3
6 5 4
1 2 3

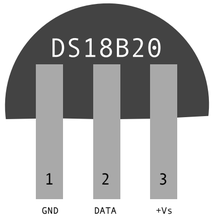

ATMEGA328P
1 RST
2 RX
3 TX
4 INT0
5 INT1
6 PD4
7 VCC
8 GND
9 XTAL1
10 XTAL2
11 PD5
12 PD6
13 PD7
14 PB0
28 ADC5
27 ADC4
26 ADC3
25 ADC2
24 ADC1
23 ADC0
22 GND
21 AREF
20 AVCC
19 SCK
18 MISO
17 MOSI
16 PB2
15 PB1

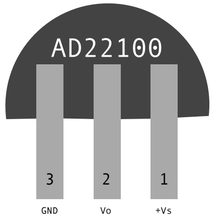

AD623
-Rg
-IN
+IN
-Vs
1
2
3
4
8
7
6
5
+Rg
+Vs
OUT
REF

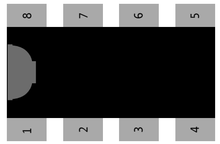

HIH-4000
1
2
3
-Ve
OUT
+Ve


MPX4115A
1
2
3
4
5
6
-
GND
+VOUT
+V
-VOUT
-


LM35
1
2
3
+Vs
VOUT
GND


DS18B20
1
2
3
GND
DATA
+Vs


AD22100
3
2
1
GND
Vo
+Vs


8
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1
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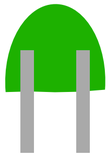
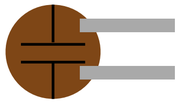
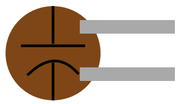
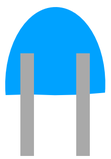
3
4

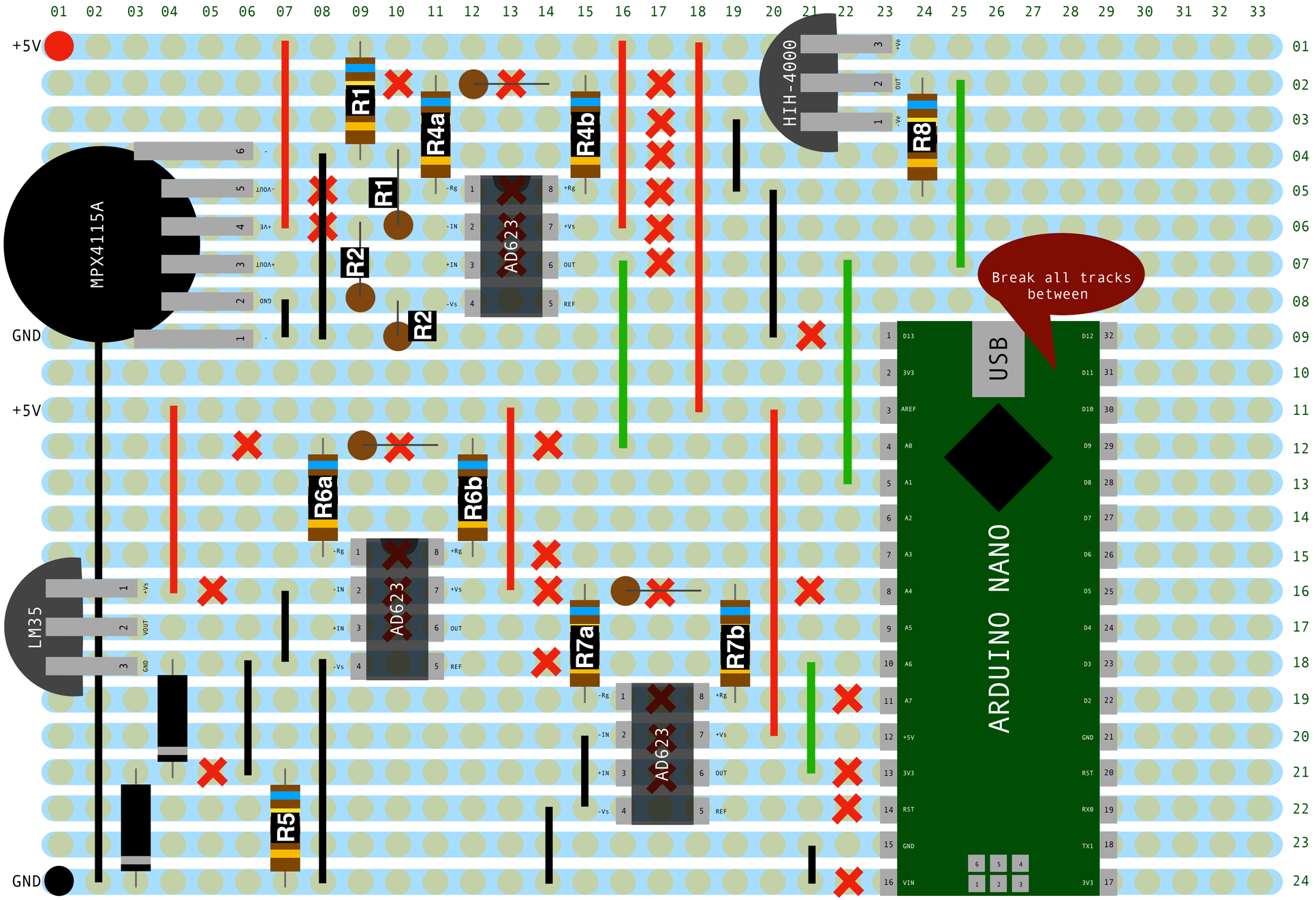

16MHZ

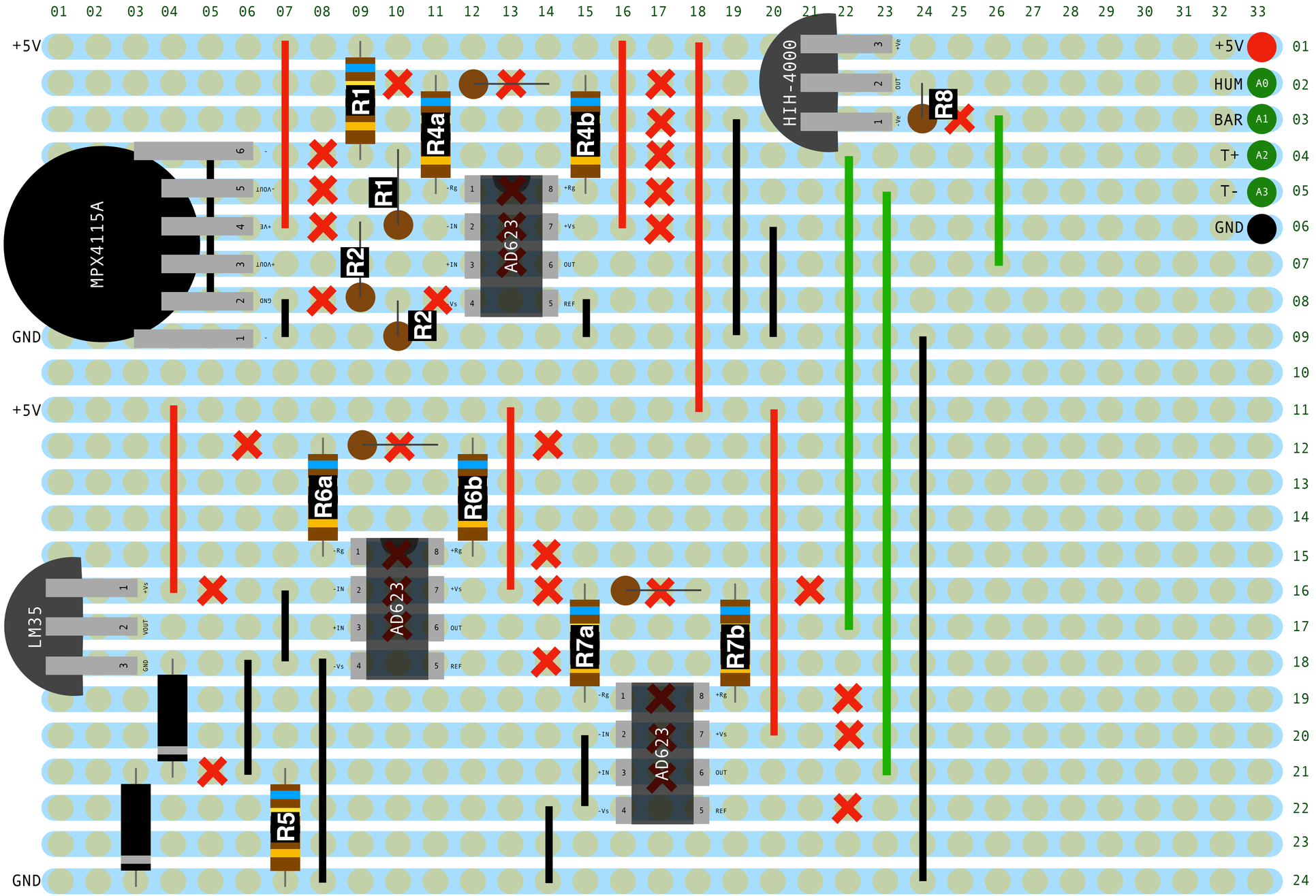


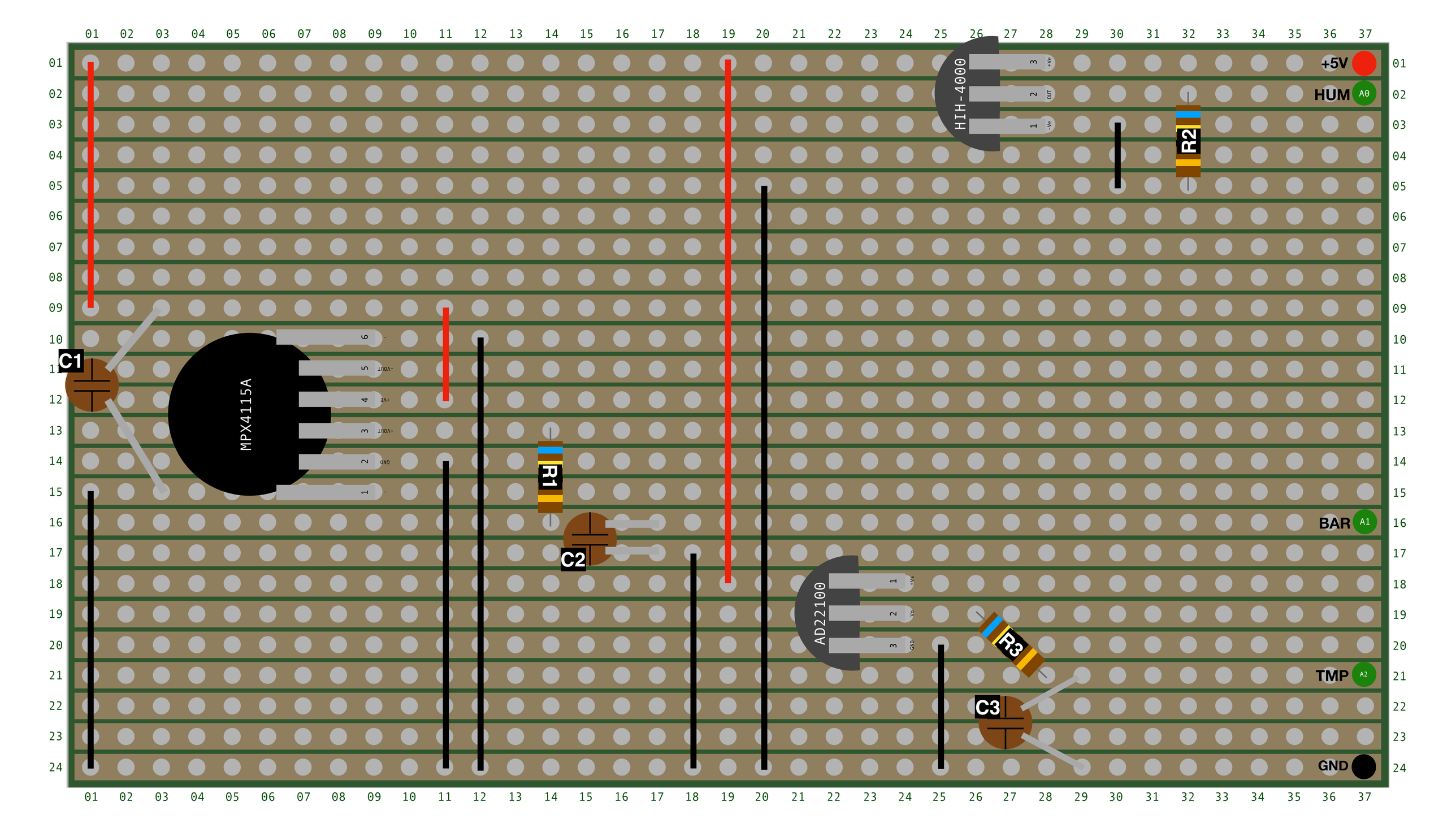






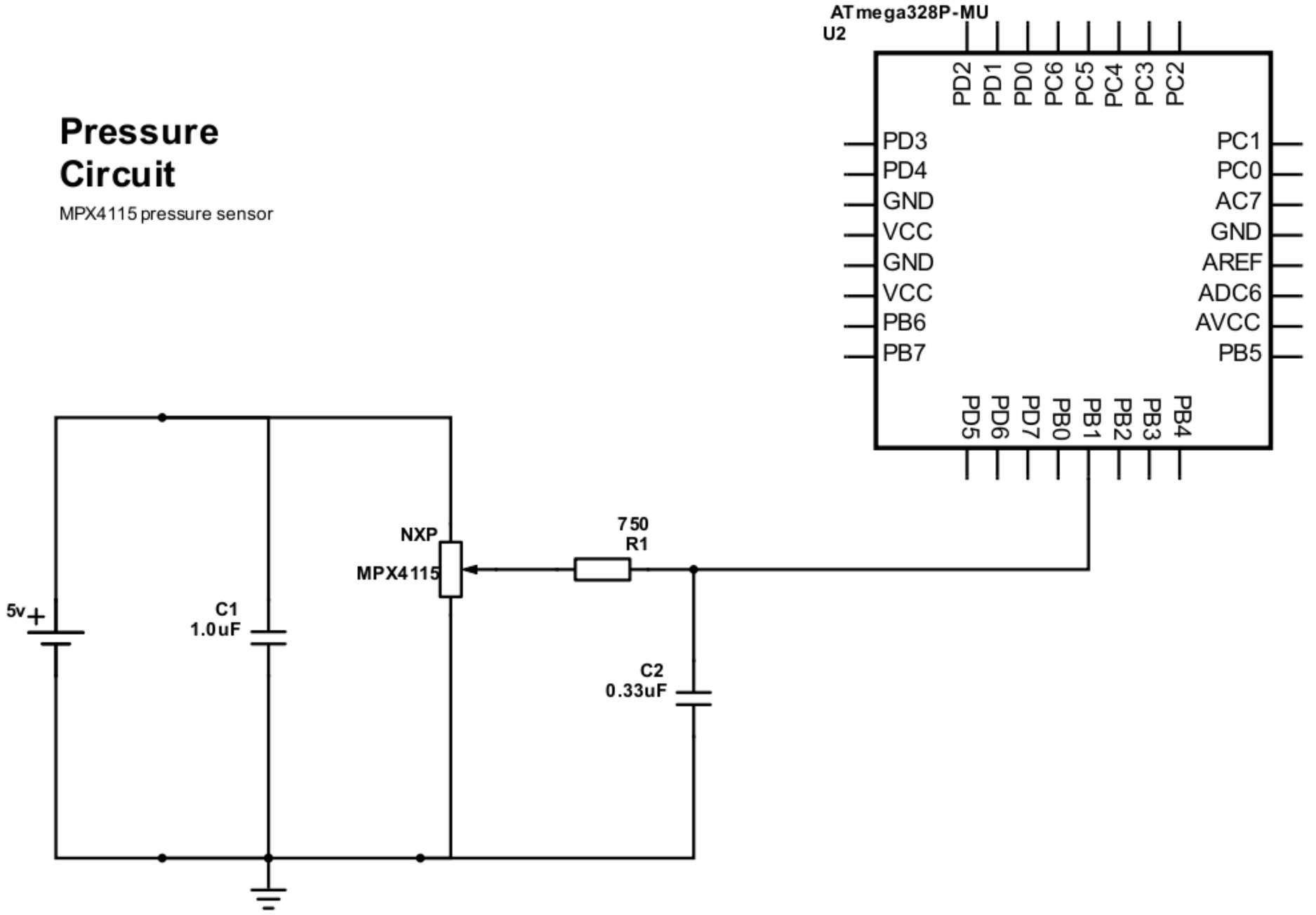

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
+5V
GND
+5V
GND
MPX4115A
LM35
HIH-4000
AD623
R1
R2
R4a
R4b
R5
R6a
R6b
R7a
R7b
R8
Break all tracks between
USB
ARDUINO NANO


01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
+5V
GND
+5V
GND
MPX4115A
LM35
HIH-4000
AD623
AD623
AD623
R1
R1
R2
R2
R4a
R4b
R6a
R6b
R5
R7a
R7b
R8
+5V
HUM
BAR
T+
T-
GND
A0
A1
A2
A3
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


MPX4115A
HIH-4000
AD22100
C1
C2
C3
R1
R2
R3
+5V
HUM
A0
BAR
A1
TMP
A2
GND

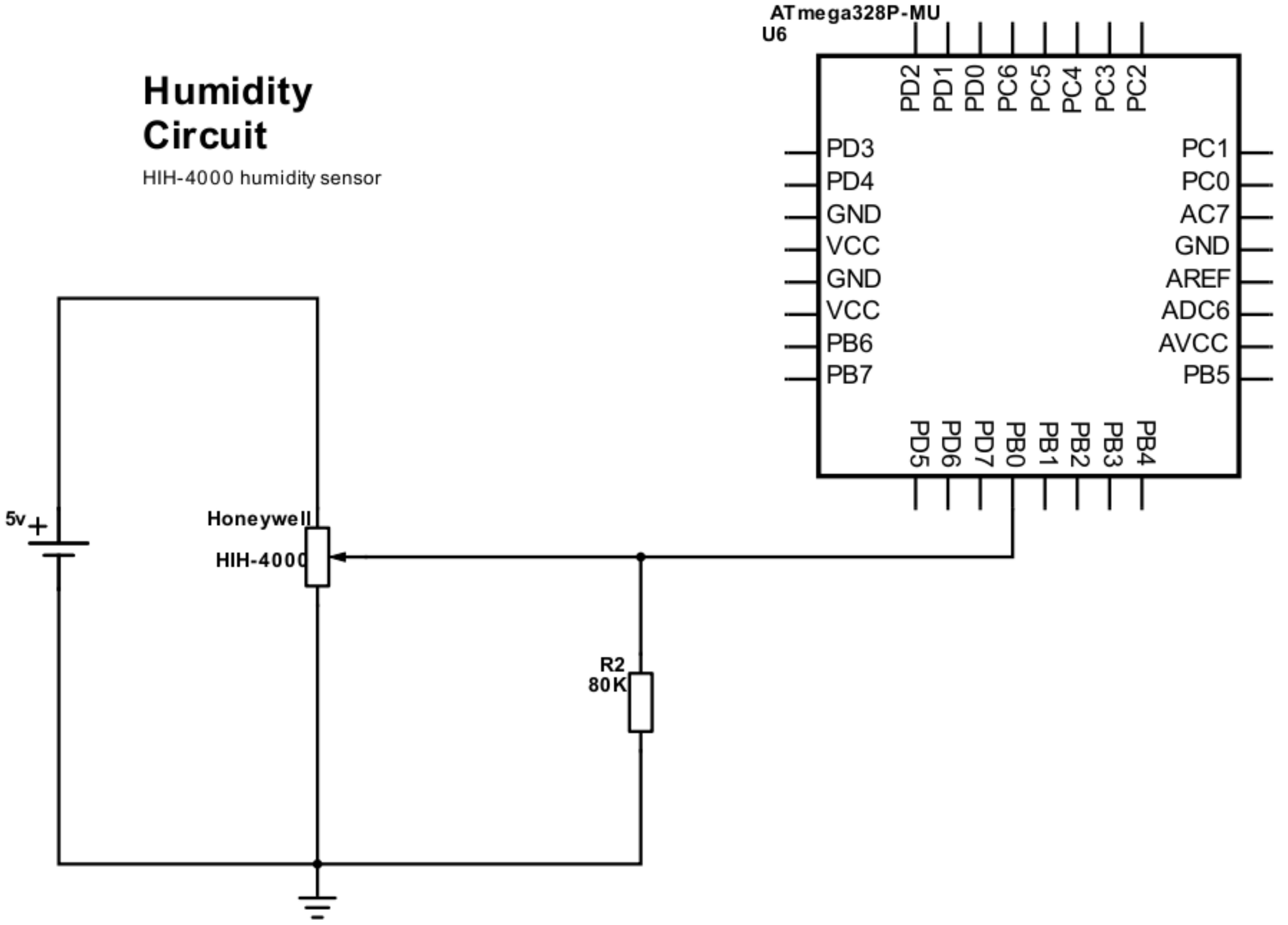
Pressure Circuit

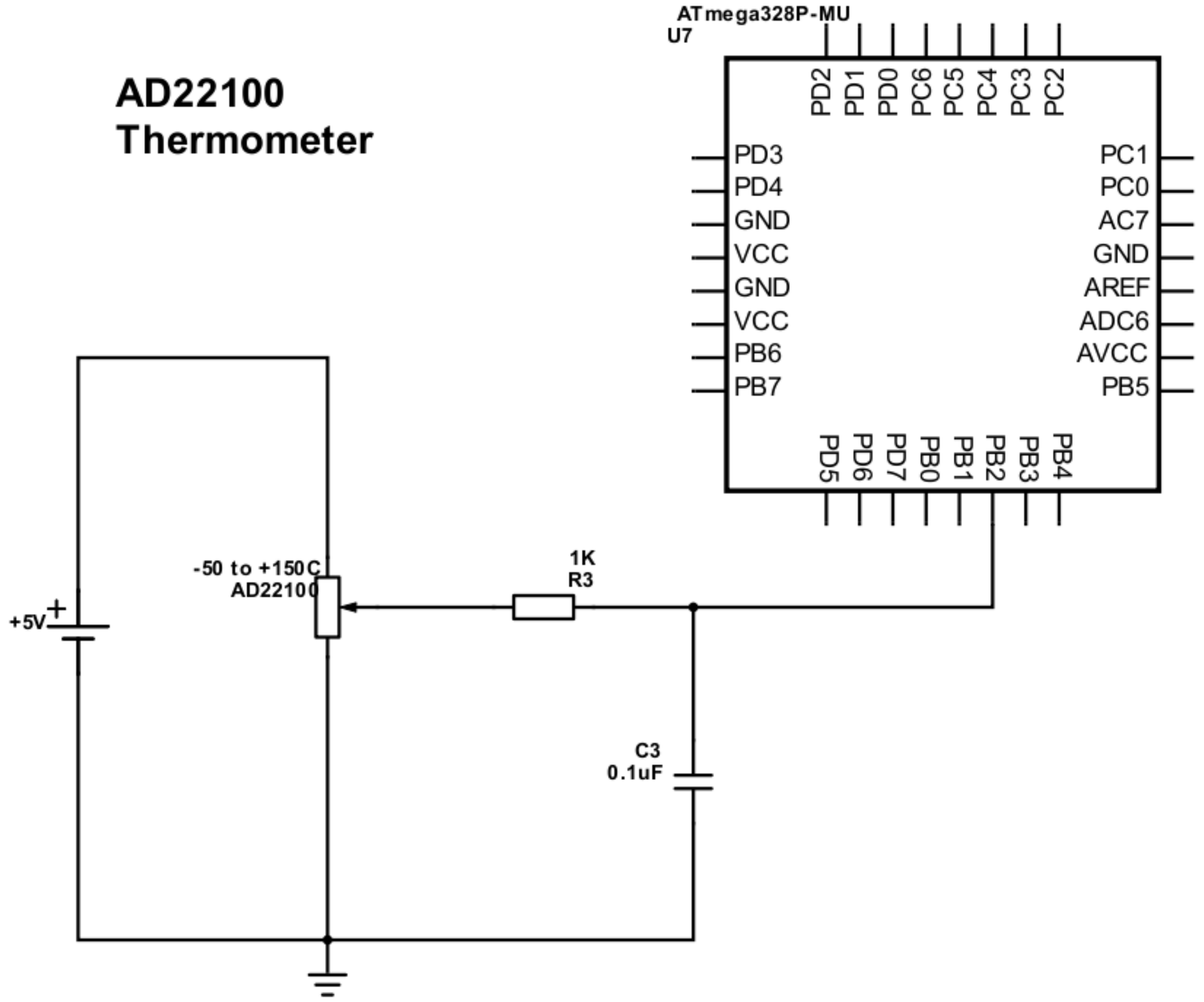
MPX4115 pressure sensor



Humidity Circuit

HIH-4000 humidity sensor



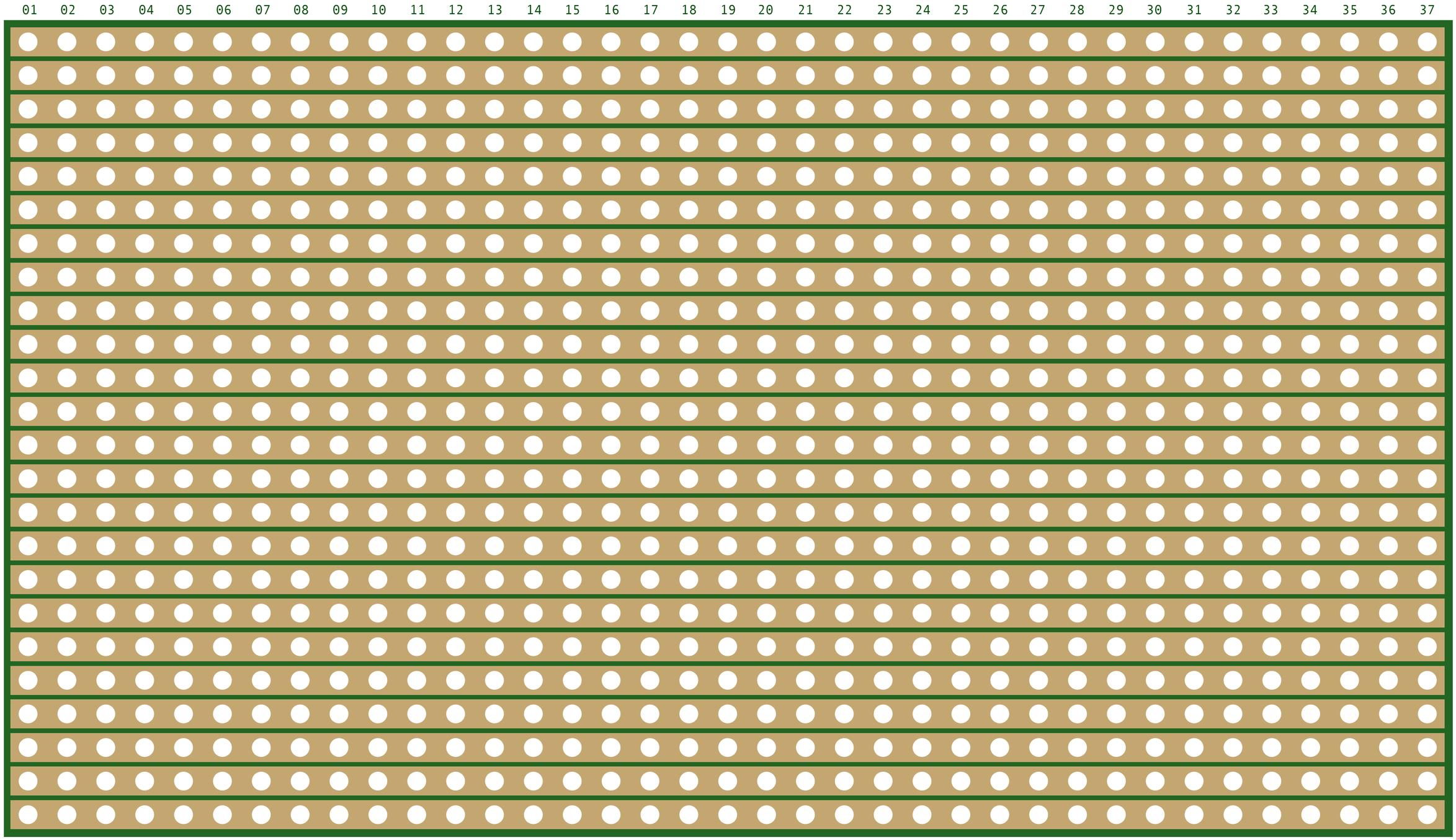

AD22100
Thermometer
ATmega328P-MU
U7
PD2
PD1
PD0
PC6
PC5
PC4
PC3
PC2
PD3
PD4
GND
VCC
GND
VCC
PB6
PB7
PC1
PC0
AC7
GND
AREF
ADC6
AVCC
PB5
PD5
PD6
PD7
PB0
PB1
PB2
PB3
PB4
-50 to +150C
AD22100
1K
R3
+5V
C3
0.1uF

Resistor Values

- R1 (750Ω)
- R2 (80KΩ) 82KΩ
- R3 (1KΩ) 1KΩ

Capacitor Values

- C1 (1.0μF)
- C2 (0.33μF)
- C3 (0.1μF)


01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
01
02
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