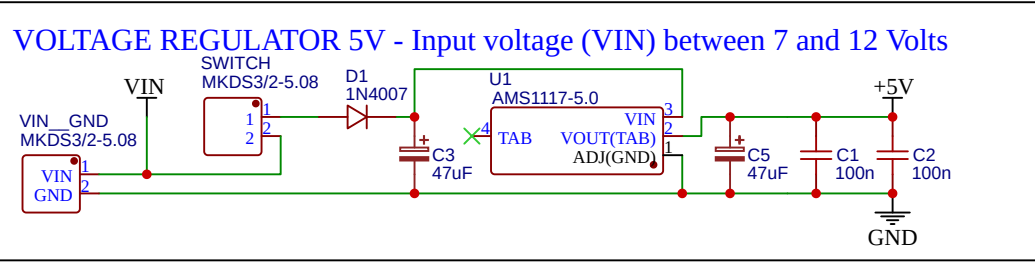


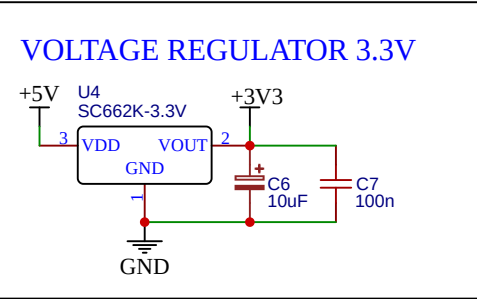
VOLTAGE REGULATOR 5V - Input voltage (VIN) between 7 and 12 Volts

The diagram shows a 5V voltage regulator circuit. The input voltage (VIN) is between 7 and 12 Volts. The circuit includes a diode D1 (1N4007) for reverse polarity protection, a 47uF capacitor C3 for input filtering, and a 47uF capacitor C5 for output filtering. The output is connected to a 5V output pin. The ground connection is labeled GND.



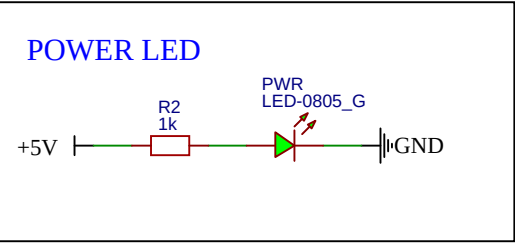
VOLTAJE REGULATOR 3.3V

The diagram shows a 3.3V voltage regulator circuit. A 5V input is connected to the VDD pin (pin 3) of the SC662K-3.3V regulator (U4). The GND pin (pin 1) is connected to ground. The VOUT pin (pin 2) is connected to the +3V3 output. A 10uF capacitor (C6) is connected between the output and ground, and a 100nF capacitor (C7) is connected between the output and ground.



POWER LED

The diagram shows a simple circuit for a power LED. A +5V supply is connected to a resistor labeled R2 with a value of 1k. This resistor is in series with a power LED labeled PWR LED-0805_G. The LED is connected to GND. The LED is shown with two red arrows indicating light emission.



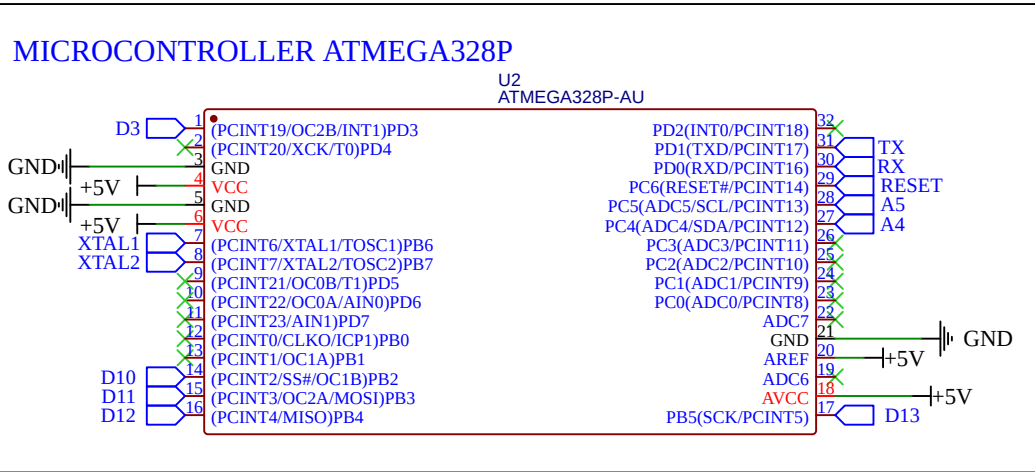
MICROCONTROLLER ATMEGA328P

U2
ATMEGA328P-AU

Pin	Function
1	(PCINT19/OC2B/INT1)PD3
2	(PCINT20/XCK/T0)PD4
3	GND
4	VCC
5	GND
6	VCC
7	(PCINT6/XTAL1/TOSC1)PB6
8	(PCINT7/XTAL2/TOSC2)PB7
9	(PCINT21/OC0B/T1)PD5
10	(PCINT22/OC0A/AIN0)PD6
11	(PCINT23/AIN1)PD7
12	(PCINT0/CLKO/ICP1)PB0
13	(PCINT1/OC1A)PB1
14	(PCINT2/SS#/OC1B)PB2
15	(PCINT3/OC2A/MOSI)PB3
16	(PCINT4/MISO)PB4
17	PD2(INT0/PCINT18)
18	PD1(TXD/PCINT17)
19	PD0(RXD/PCINT16)
20	PC6(RESET#/PCINT14)
21	PC5(ADC5/SCL/PCINT13)
22	PC4(ADC4/SDA/PCINT12)
23	PC3(ADC3/PCINT11)
24	PC2(ADC2/PCINT10)
25	PC1(ADC1/PCINT9)
26	PC0(ADC0/PCINT8)
27	ADC7
28	GND
29	AREF
30	ADC6
31	AVCC
32	PB5(SCK/PCINT5)

External connections shown in the diagram:

- Pin 1: D3
- Pin 2: GND
- Pin 3: +5V
- Pin 4: GND
- Pin 5: +5V
- Pin 6: XTAL1
- Pin 7: XTAL2
- Pin 14: D10
- Pin 15: D11
- Pin 16: D12
- Pin 17: D13
- Pin 18: TX
- Pin 19: RX
- Pin 20: RESET
- Pin 21: A5
- Pin 22: A4
- Pin 23: GND
- Pin 24: +5V
- Pin 25: GND
- Pin 26: +5V
- Pin 27: D13



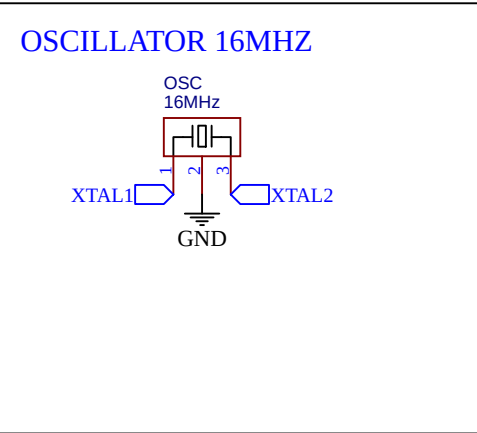
OSCILLATOR 16MHZ

OSC
16MHz


XTAL1

XTAL2

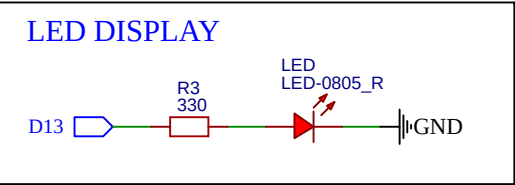
GND



LED DISPLAY



The diagram shows a circuit for an LED display. It starts with a component labeled D13, which is a blue rectangle with a trapezoidal shape on its right side. This is connected in series to a resistor labeled R3 330, represented by a red rectangle. Following the resistor is an LED component labeled LED-0805_R, shown as a red triangle pointing right with two red arrows indicating light emission. The circuit then connects to a ground symbol labeled GND.



RESET BUTTON

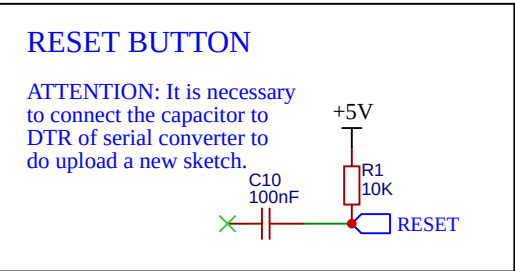
ATTENTION: It is necessary to connect the capacitor to DTR of serial converter to do upload a new sketch.

```
graph TD
    GND(( )) --- C10[C10 100nF]
    C10 --- R1[R1 10K]
    R1 --- V5V[+5V]
    R1 --- RESET[RESET]
```

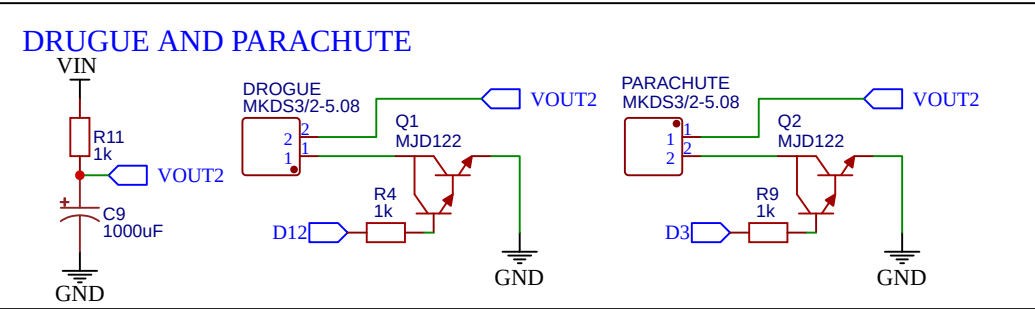
RESET BUTTON

ATTENTION: It is necessary to connect the capacitor to DTR of serial converter to do upload a new sketch.

```
graph TD
    GND(( )) --- C10[C10 100nF]
    C10 --- R1[R1 10K]
    R1 --- V5V[+5V]
    R1 --- RESET[RESET]
```



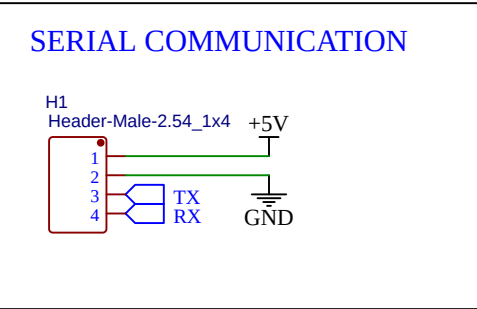
DRUGUE AND PARACHUTE



SERIAL COMMUNICATION

H1
Header-Male-2.54_1x4

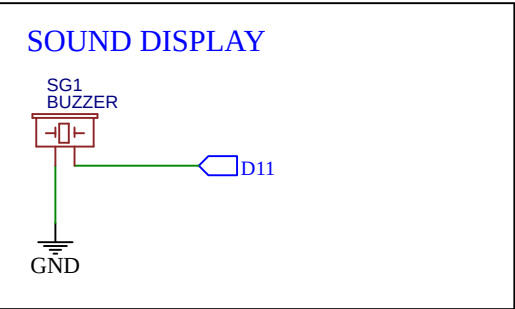
The diagram shows a 4-pin header labeled H1 with pins numbered 1 to 4. Pin 1 is connected to a +5V power source. Pin 2 is connected to the TX pin of a serial module. Pin 3 is connected to the RX pin of a serial module. Pin 4 is connected to a GND (ground) symbol.



SG1
BUZZER

D11

GND

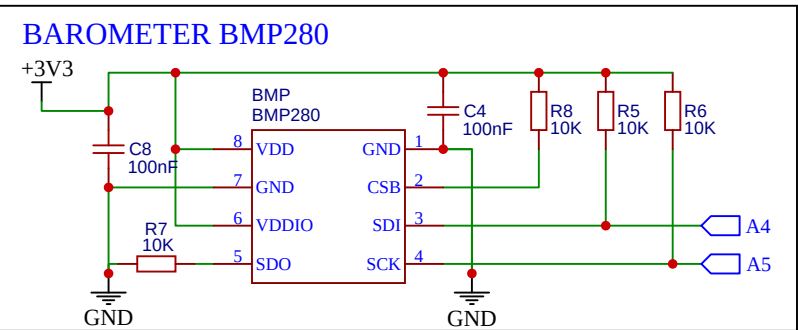


BAROMETER BMP280

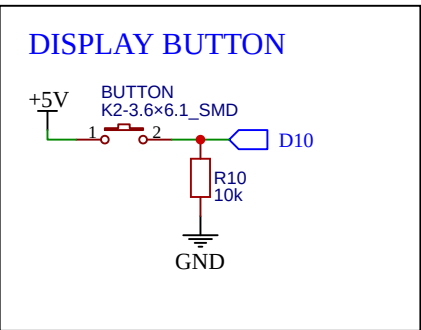
The diagram illustrates the wiring for a BMP280 barometer module. The module's pins are connected as follows:

- Pin 1 (GND):** Connected to the common ground.
- Pin 2 (CSB):** Connected to ground via a 100nF capacitor (C4) and to the SDI pin via a 10K resistor (R8).
- Pin 3 (SDI):** Connected to the SCK pin via a 10K resistor (R5).
- Pin 4 (SCK):** Connected to the SDO pin via a 10K resistor (R6).
- Pin 5 (SDO):** Connected to the SCK pin via a 10K resistor (R6).
- Pin 6 (VDDIO):** Connected to ground via a 10K resistor (R7).
- Pin 7 (GND):** Connected to the common ground.
- Pin 8 (VDD):** Connected to the 3V3 power supply and to ground via a 100nF capacitor (C8).

The output signals are labeled A4 and A5.



DISPLAY BUTTON



TITLE: rRocket		REV: 2.0
	Company: GFT UTFPR	Sheet: 1/1
	Date: 02/02/2022	Drawn By: Jonas Joacir Radtke

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