CO2 Sensor

Connect PWM jumper to enable PWM output. Internal PUR.

Set PSEL jumper to 3.3V to set the module to communicate over UART.

3.3V
R7 10k
GND

PWM
PWM_OUT
PSEL
GND

3.3V U1
3V3
PWM_DIS
PWM
PSEL
GND
GND

12V
12VIN
INT   I2C_INT
SCL   SCL
SDA/TX   SDA/TX
RX   RX

PASCO2V01BUMA1

3.3V
I2C
R4 2.2k   R5 2.2k

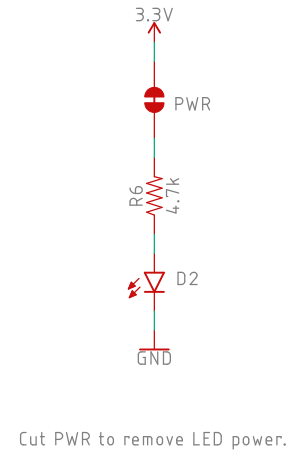Cut I2C jumpers when communicating over UART.
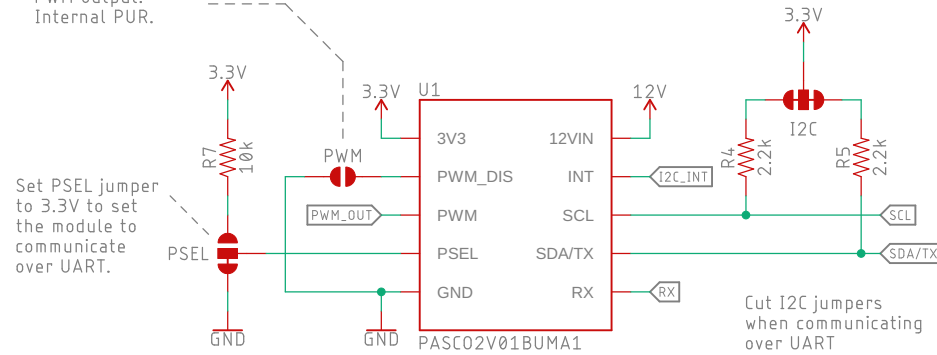
7-bit unshifted address: 0x28

Power requirements:
3.3V – 10mA peak, 6.1mA average
12V – 130mA peak, 0.8mA average

3.3V   3.3V
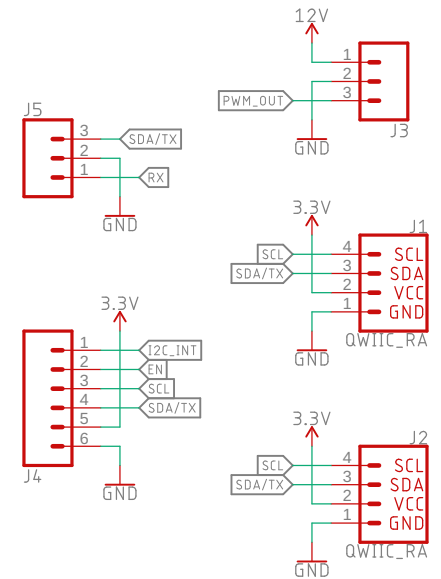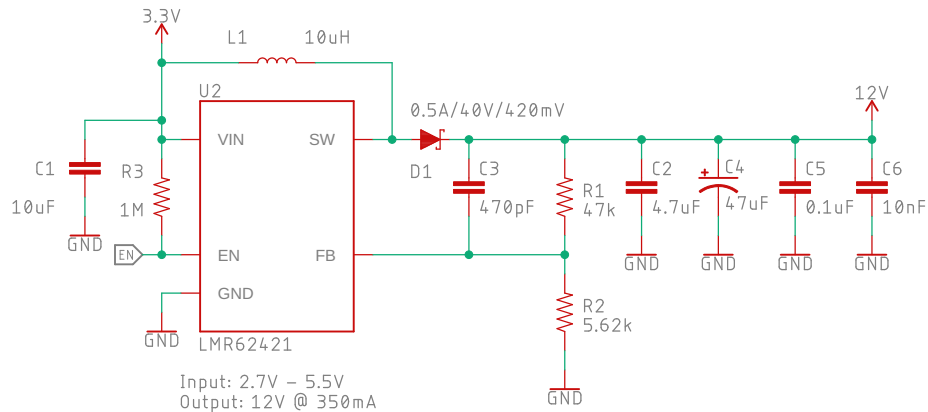C8   C7
4.7uF   0.1uF
GND   GND
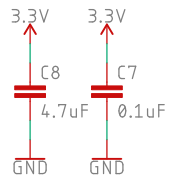
Power LED

3.3V
PWR
R6 4.7k
D2
GND

Cut PWR to remove LED power.

Connectors

12V
1
2   PWM_OUT
3
J3
GND

J5
3   SDA/TX
2
1   RX
GND

3.3V
J1
4   SCL   SCL
3   SDA   SDA/TX
2   VCC
1   GND
QWIIC_RA
GND

3.3V
J4
1   I2C_INT
2   EN
3   SCL
4   SDA/TX
5
6
GND

3.3V
J2
4   SCL   SCL
3   SDA   SDA/TX
2   VCC
1   GND
QWIIC_RA
GND

3.3V to 12V Boost Regulator

3.3V
L1   10uH

U2
VIN
EN
GND
SW
FB

C1 10uF
R3 1M
GND   EN
GND
LMR62421

0.5A/40V/420mV
D1
C3 470pF
R1 47k
C2 4.7uF
+ C4 47uF
C5 0.1uF
C6 10nF
12V

GND   GND   GND   GND   GND

R2 5.62k
GND

Input: 2.7V – 5.5V
Output: 12V @ 350mA

sparkfun

open hardware

qwiic

TITLE: SparkFun_Qwiic_CO2_Sensor_XENSIV_PAS

Design by: Alex Brudner

REV: v10

Date: 8/17/2023 3:14 PM   Sheet: 1/1