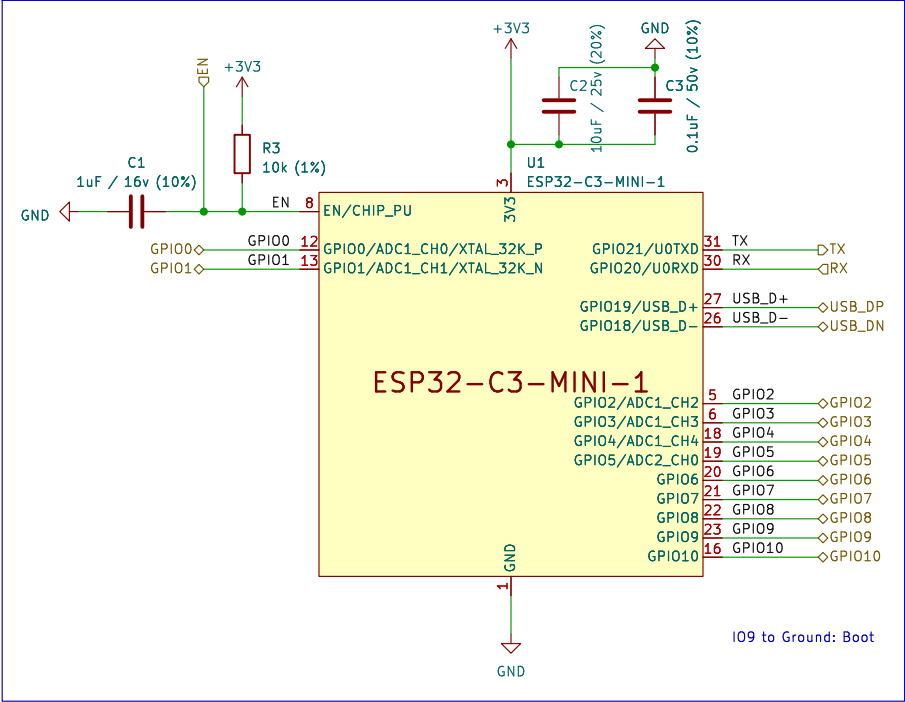


ESP32 Microprocessor



Created By: Erin Reed (FireLabs - www.firelabs.ca)

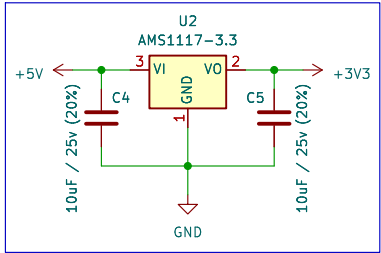
Sheet: /ESP32 Microprocessor/
File: ic_esp32_c3_mini.kicad_sch

Title: Kwartlab Environmental Sensor

Size: USLetter Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

Rev: 1
Id: 2/13

5v to 3v3 Regulator



Notes:
Max Current Output is 1A

Created By: Erin Reed (FireLabs – www.firelabs.ca)

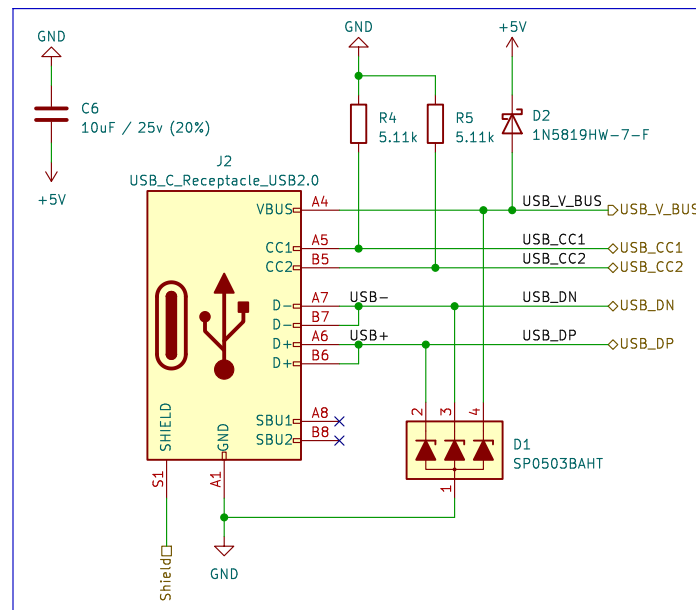
Sheet: /3.3v Regulator/
File: ic_5v_to_3v3.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

Rev: 1
Id: 3/13

USB C Port



USB Type C Port in USB 2.0 Mode

Created By: Erin Reed (FireLabs – www.firelabs.ca)

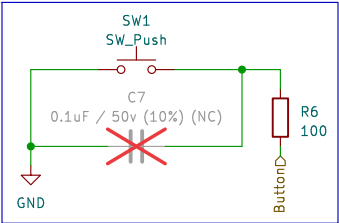
Sheet: /USB C Connector/
File: connector_usb_c.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

Rev: 1
Id: 4/13

Grounded Button



Created By: Erin Reed (FireLabs – www.firelabs.ca)

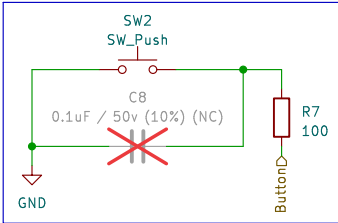
Sheet: /Boot Button/
File: misc_grounded_button_boot.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

Rev: 1
Id: 5/13

Grounded Button



Created By: Erin Reed (FireLabs – www.firelabs.ca)

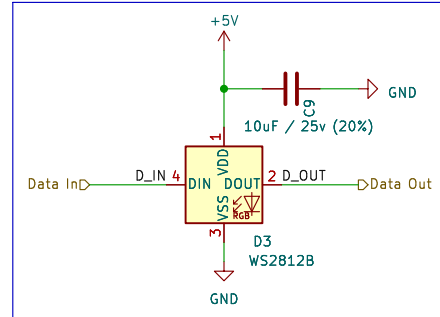
Sheet: /Reset Button/
File: misc_grounded_button_reset.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

Rev: 1
Id: 6/13

WS2812B LED



Created By: Erin Reed (FireLabs – www.firelabs.ca)

Sheet: /Status LED/

File: misc_status_led.kicad_sch

Title: Kwartzlab Environmental Sensor

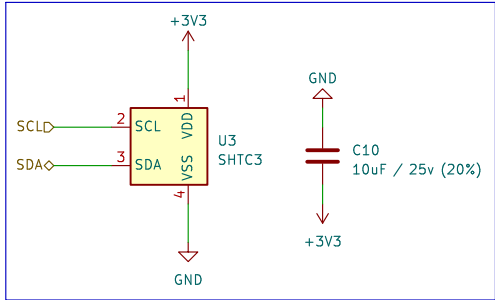
Size: USLetter Date: 2023-03-24

KiCad E.D.A. kicad (7.0.0-0)

Rev: 1

Id: 7/13

Temperature, Humidity Sensor



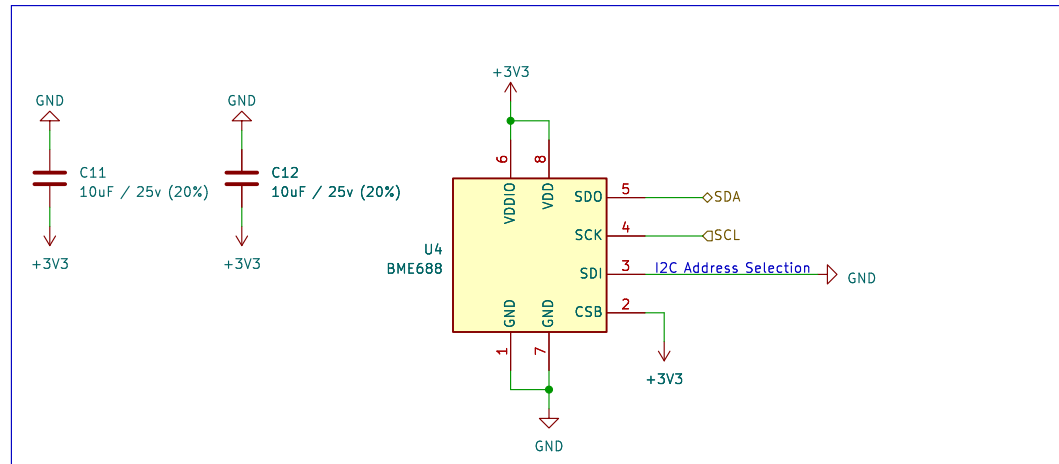
Created By: Erin Reed (FireLabs – www.firelabs.ca)

Sheet: /SHTC3/
File: sensor_shtc3.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter	Date: 2023-03-24	Rev: 1
KiCad E.D.A. kicad (7.0.0-0)		Id: 8/13

VOC, CO2, Gas, Pressure Sensor



Created By: Erin Reed (FireLabs – www.firelabs.ca)

Sheet: /BME688/

File: sensor_bme688.kicad_sch

Title: Kwartzlab Environmental Sensor

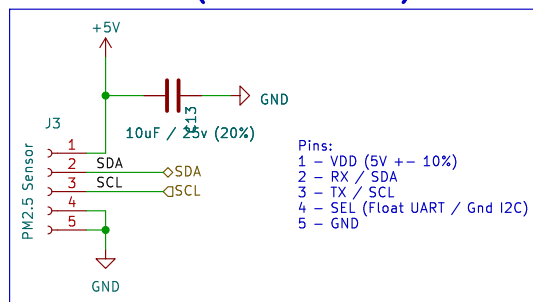
Size: USLetter Date: 2023-03-24

KiCad E.D.A. kicad (7.0.0-0)

Rev: 1

Id: 9/13

PM2.5 Sensor (JST Connection)



Created By: Erin Reed (FireLabs - www.firelabs.ca)

Sheet: /SPS30 Sensor/

File: ic_sps30_sensor.kicad_sch

Title: Kwartzlab Environmental Sensor

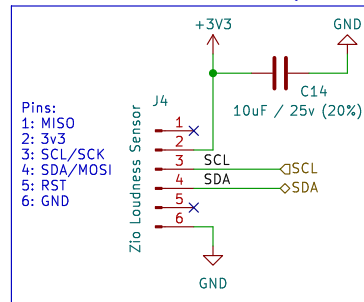
Size: USLetter Date: 2023-03-24

KiCad E.D.A. kicad (7.0.0-0)

Rev: 1

Id: 10/13

Zio Loudness Sensor (2x3 Pin Connection)



Created By: Erin Reed (FireLabs – www.firelabs.ca)

Sheet: //Zio Loudness Sensor/
File: bob_zio_qwiic_loudness_sensor.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter | Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

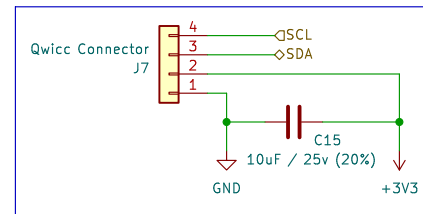
Rev: 1
Id: 11/13

The schematic diagram illustrates a relay control circuit. It features a 5V power supply connected to a status LED (D4) through a 1k resistor (R10). A 1N4148 diode (D6) is connected in parallel with the LED. The relay (K1, 5V Relay) is controlled by a 5V signal through a 10k resistor (R11) and an NPN transistor (Q1, MMBT3904-TP). The relay's common terminal (RELAY1_COM) is connected to a screw terminal (J5) with three pins. The relay's normally closed (RELAY1_NC) and normally open (RELAY1_NO) terminals are also connected to the screw terminal. The circuit is labeled with components like RELAY1_STATUS_LED, RELAY1_EN, RELAY1_NC, RELAY1_NO, RELAY1_COM, RELAY1_F_EN, and RELAY1_EN.

The schematic diagram illustrates a relay control circuit. A 5V power supply is connected to the circuit. A diode (D7, 1N4148W) is connected in series with the power supply. A resistor (R12, 1k (1%)) is connected in parallel with the diode. A diode (D5, LED) is connected in parallel with the resistor. A resistor (R13, 10k (1%)) is connected in parallel with the diode. A transistor (Q2, MMBT3904-TP) is connected in series with the diode. A resistor (R9, 1k (1%)) is connected in parallel with the transistor. The relay (K2, 5v Relay) is connected to the circuit. The relay has four terminals: RELAY2_NC, RELAY2_NO, RELAY2_COM, and RELAY2_EN. The relay is connected to a screw terminal (J6, Screw_Terminal_01x03). The circuit is labeled with various components and their values.

Rev: 1
Id: 12/13

Qwicc Connector



Created By: Erin Reed (FireLabs – www.firelabs.ca)

Sheet: /Qwicc Connection/
File: qwicc_segment_display.kicad_sch

Title: Kwartzlab Environmental Sensor

Size: USLetter Date: 2023-03-24
KiCad E.D.A. kicad (7.0.0-0)

Rev: 1
Id: 13/13