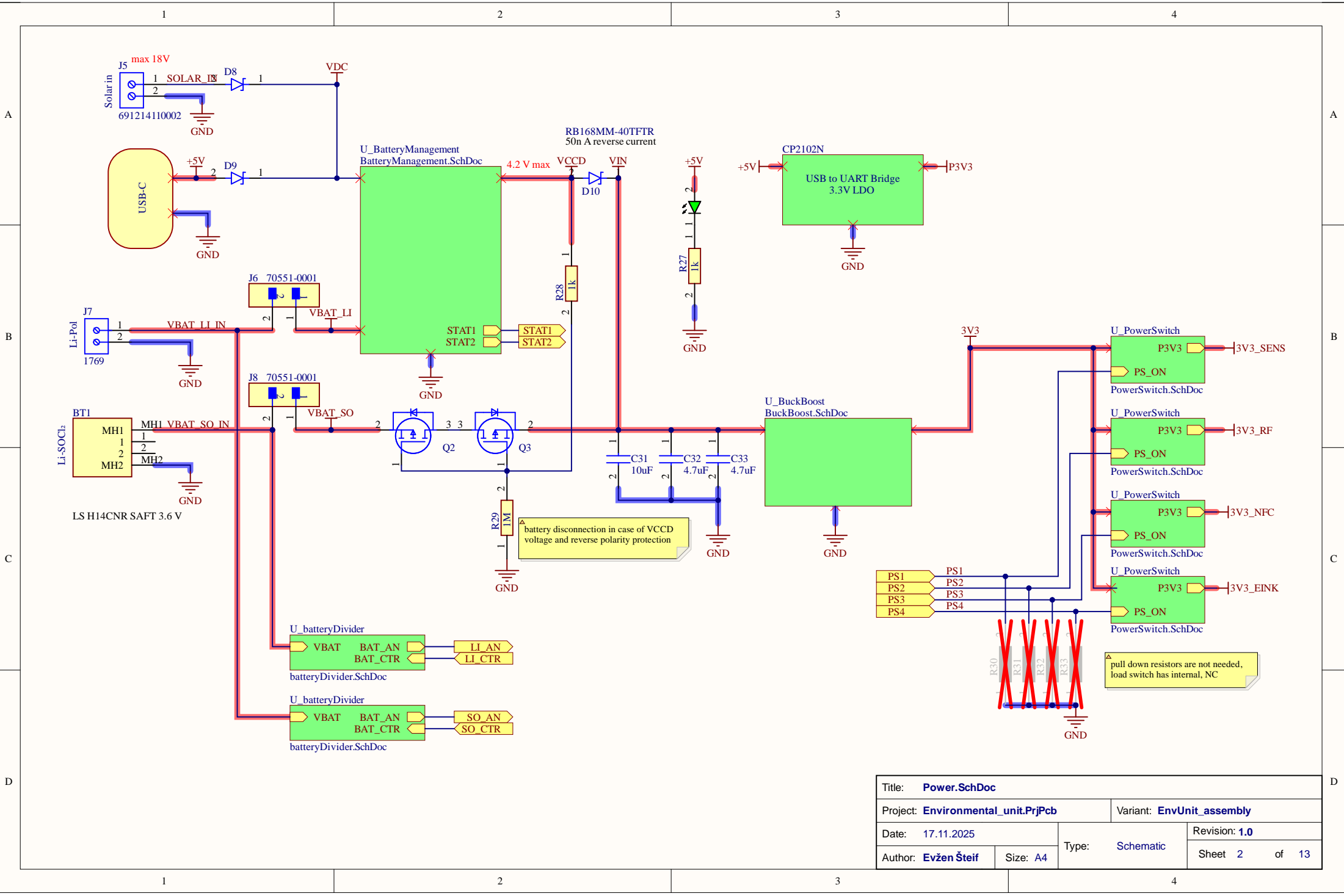
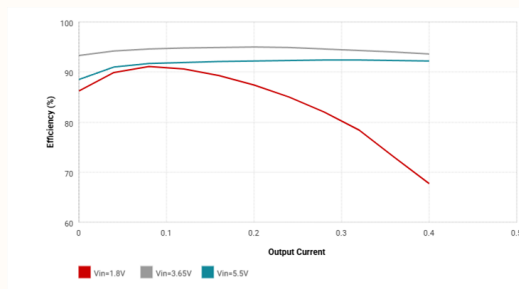
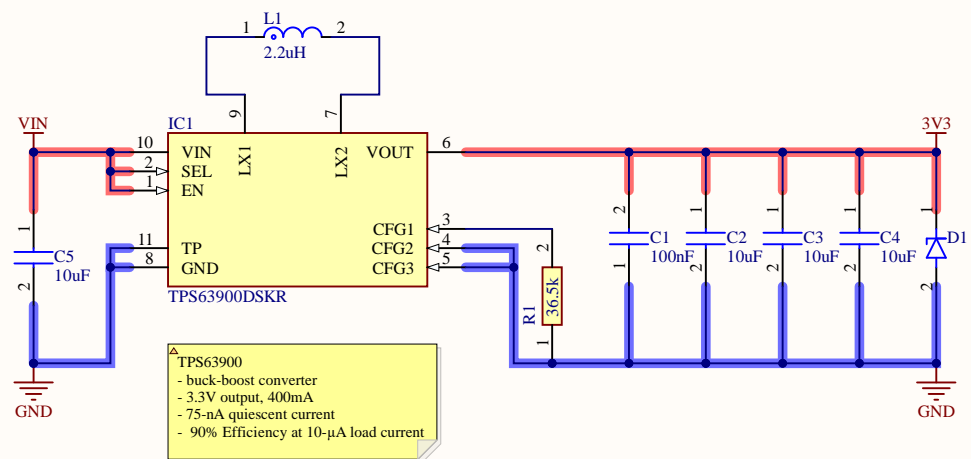


I ² C devices	I ² C 7bit address
SCD41	0x62
SH140	0x44
SGP40	0x59
ST25DV64KC	0x53
M24C02	0x50

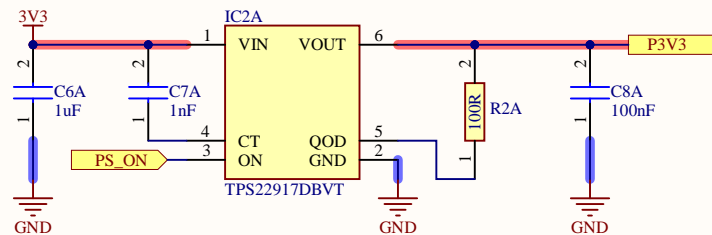
Title: main.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic	Revision: 1.0	
Author: Evžen Šteif		Sheet 1	of 13



Title: Power.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 2 of 13

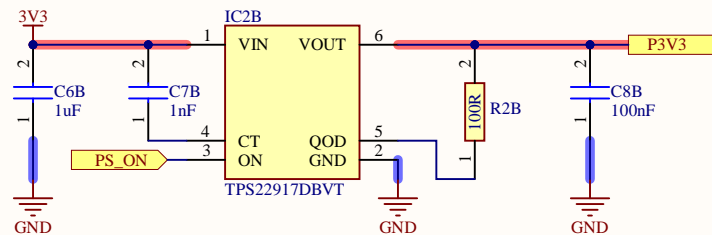


Title: BuckBoost.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic		Revision: 1.0
Author: Evžen Šteif			Sheet 3 of 13
Size: A4			



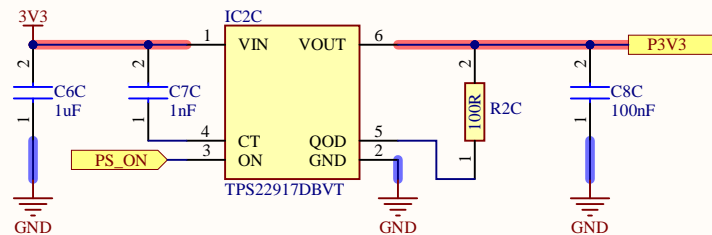
△
TPS229
- load switch, 1 V to 5.5 V, 2A
- ON state (IQ): 0.5 μ A (typical)
- OFF state (ISD): 10 nA (typical)
- Smart ON pin pulldown

Title: PowerSwitch.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 4 of 13



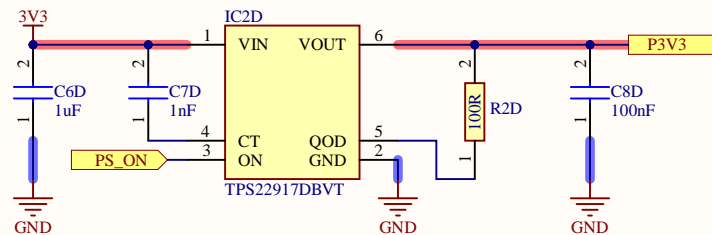
△
TPS229
- load switch, 1 V to 5.5 V, 2A
- ON state (IQ): 0.5 μ A (typical)
- OFF state (ISD): 10 nA (typical)
- Smart ON pin pulldown

Title: PowerSwitch.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 4 of 13



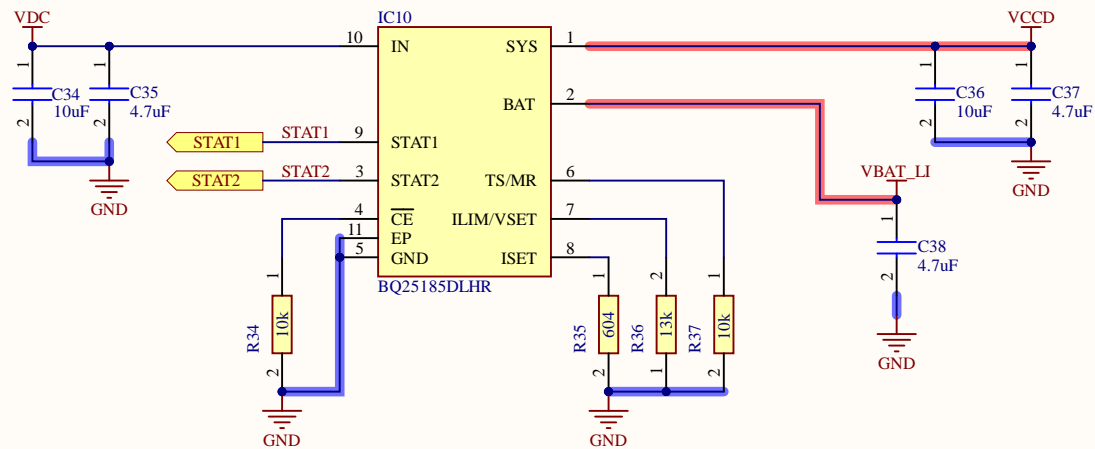
△
TPS229
- load switch, 1 V to 5.5 V, 2A
- ON state (IQ): 0.5 μ A (typical)
- OFF state (ISD): 10 nA (typical)
- Smart ON pin pulldown

Title: PowerSwitch.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 4 of 13



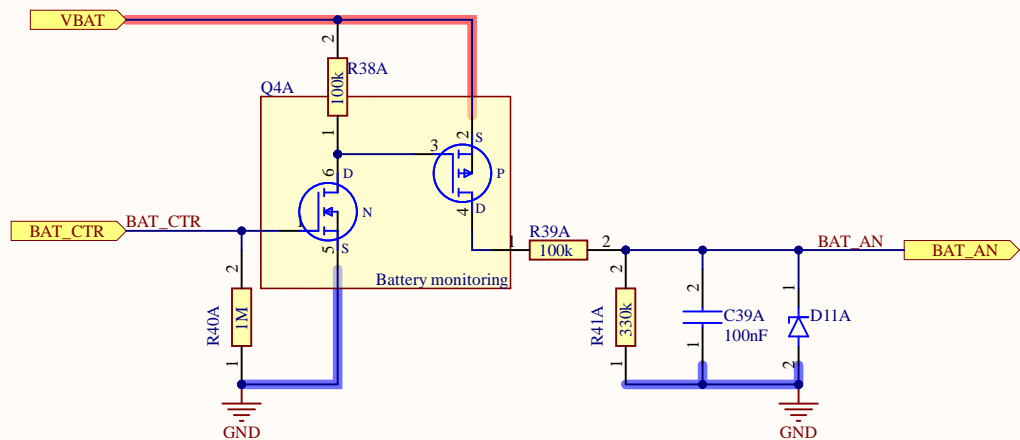
△
TPS229
- load switch, 1 V to 5.5 V, 2A
- ON state (IQ): 0.5 μ A (typical)
- OFF state (ISD): 10 nA (typical)
- Smart ON pin pulldown

Title: PowerSwitch.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 4 of 13

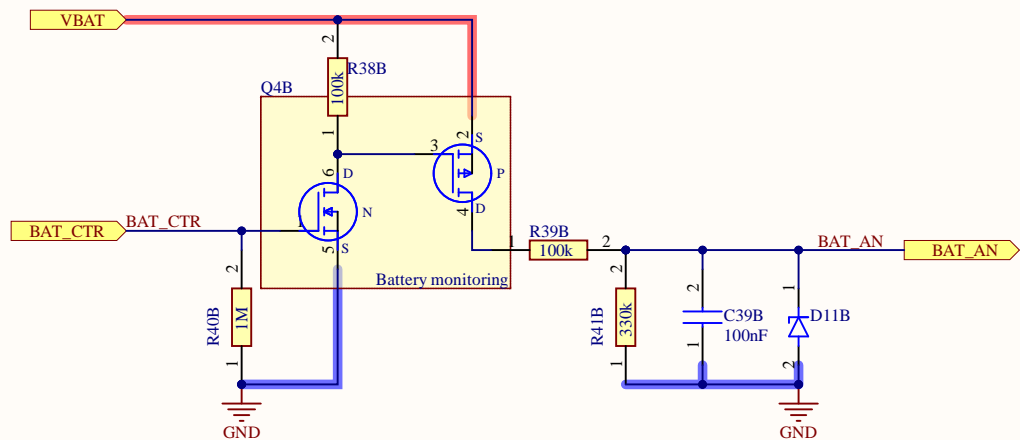


▲ BQ25185
 - Linear Battery Charger
 - 3.0-V to 18-V input voltage
 - input current limit 1A
 - 4.5V regulated max out
 - 500 mA charging current
 - 4-μA quiescent current in Battery Only mode

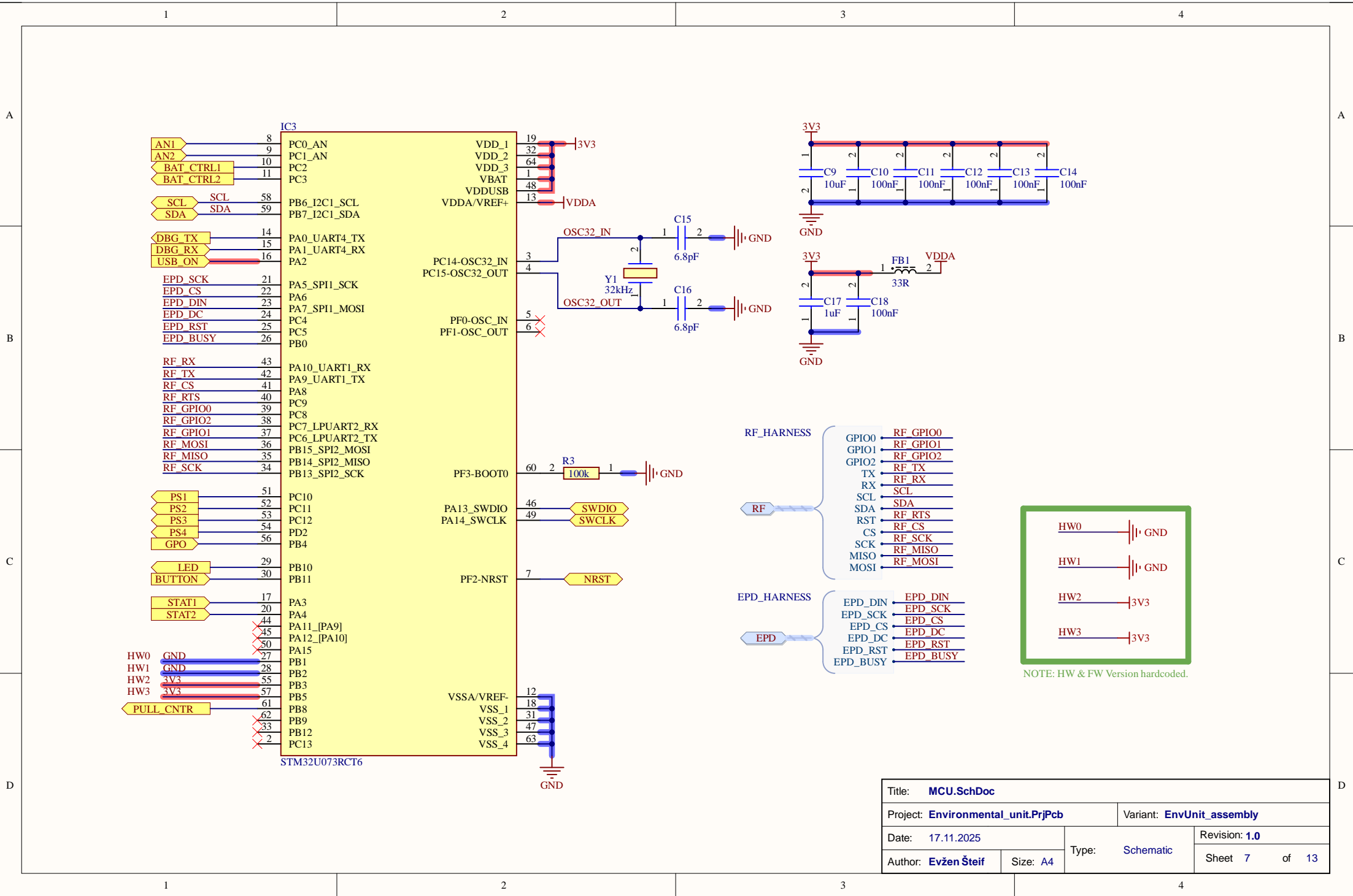
Title: BatteryManagement.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic	Revision: 1.0	
Author: Evžen Šteif		Sheet 5	of 13

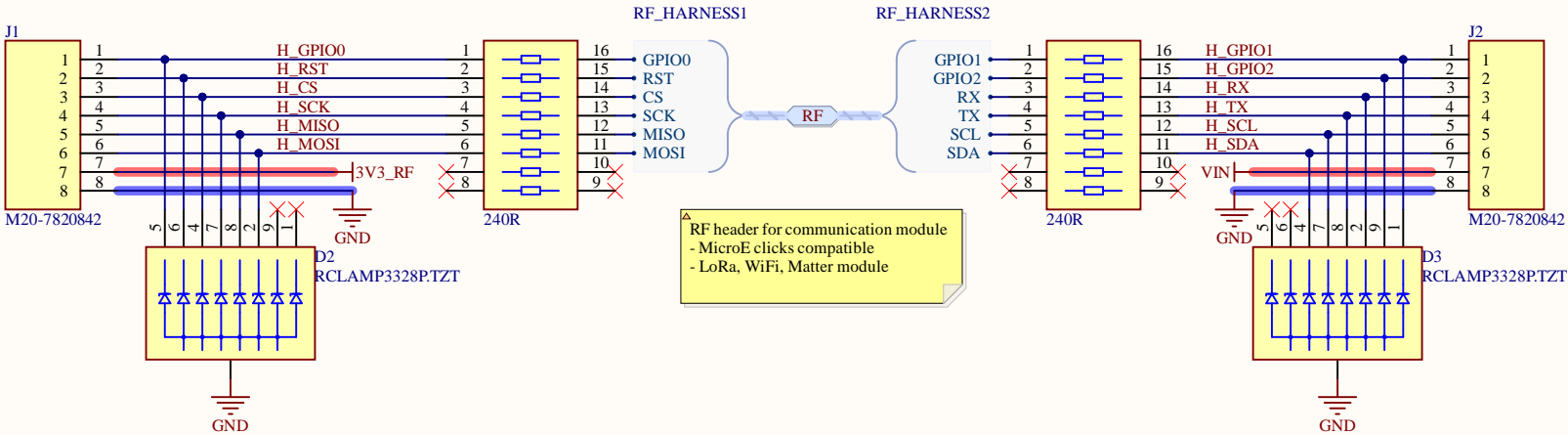


Title: batteryDivider.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic	Revision: 1.0	
Author: Evžen Šteif		Sheet 6	of 13

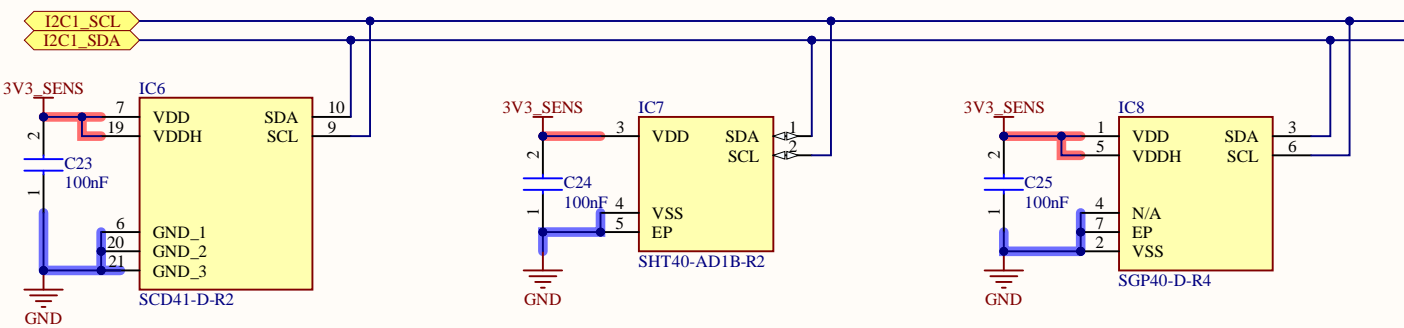


Title: batteryDivider.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic	Revision: 1.0	
Author: Evžen Šteif		Sheet 6	of 13





Title: RFHeader.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 8 of 13

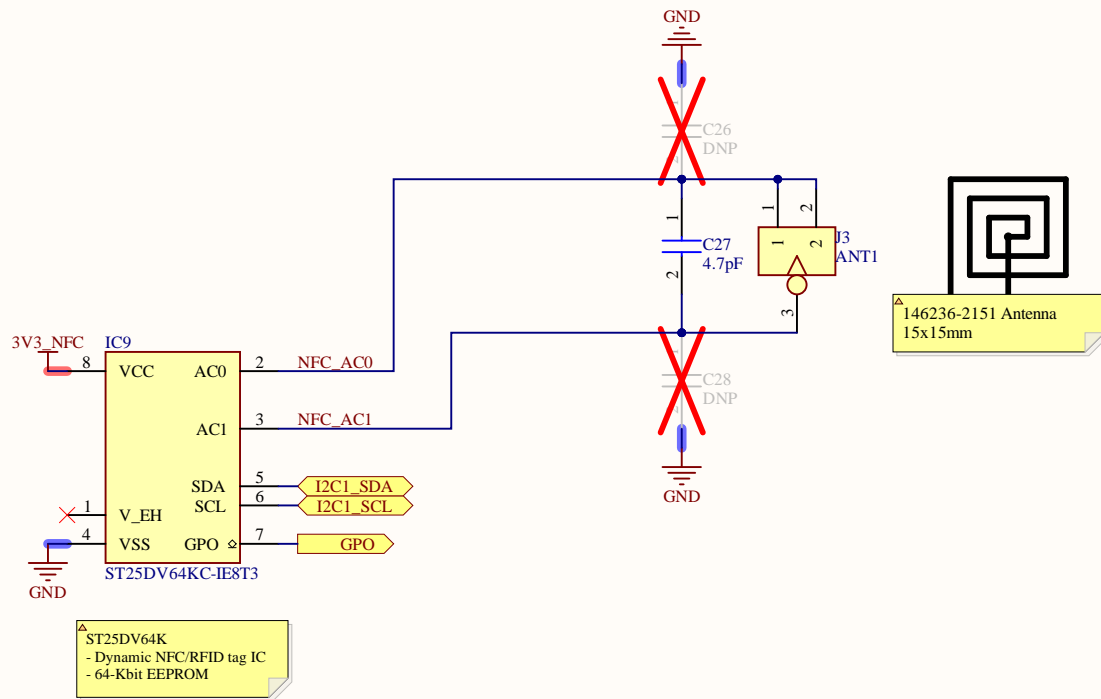


△ SCD41
- NDIR CO2 sensor
- specified range: 400 – 5'000 ppm
- accuracy $\pm(40 \text{ ppm} + 5 \%)$
- single measurement mode
- peak supply current 175 mA
- 14.7 mA, 5000 ms single shot

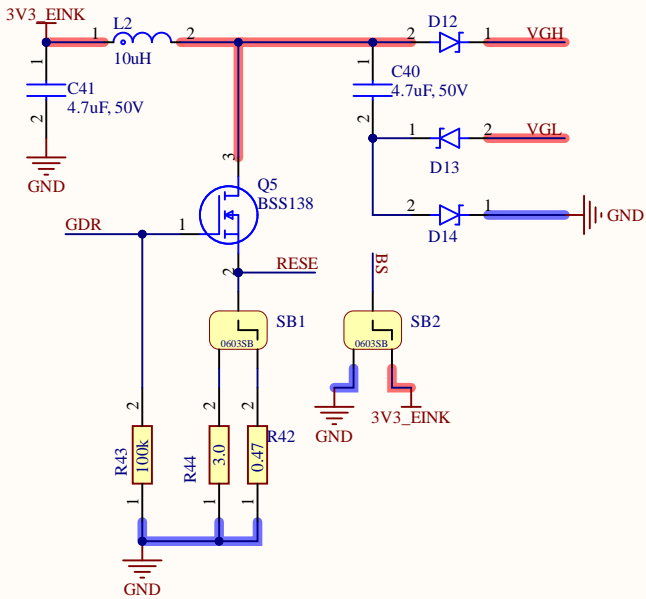
△ SHT40/41
- Relative Humidity and Temperature Sensor
- 320uA meas. current, 10ms
- accuracy $\Delta \text{RH} = \pm 1.0 \%$ RH, $\Delta T = \pm 0.1 \text{ }^\circ\text{C}$

△ SGP40
- MOx based gas sensor, VOC
- 0-500 VOC Index
- 2.6 mA, 30 ms

Title: Sensors.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 10 of 13



Title: NFC.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic		Revision: 1.0
Author: Evžen Šteif			Sheet 11 of 13
Size: A4			



SB1 selection:

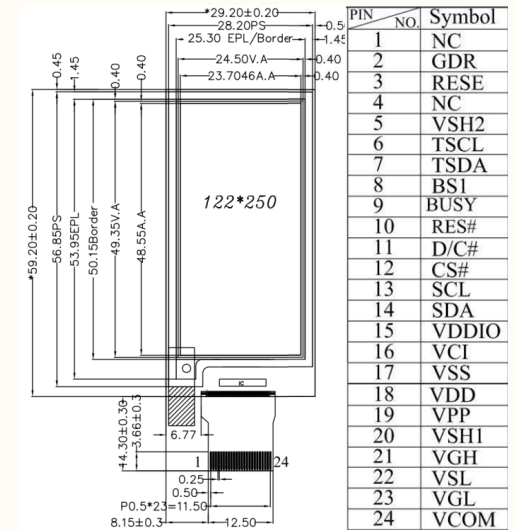
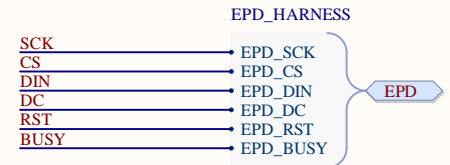
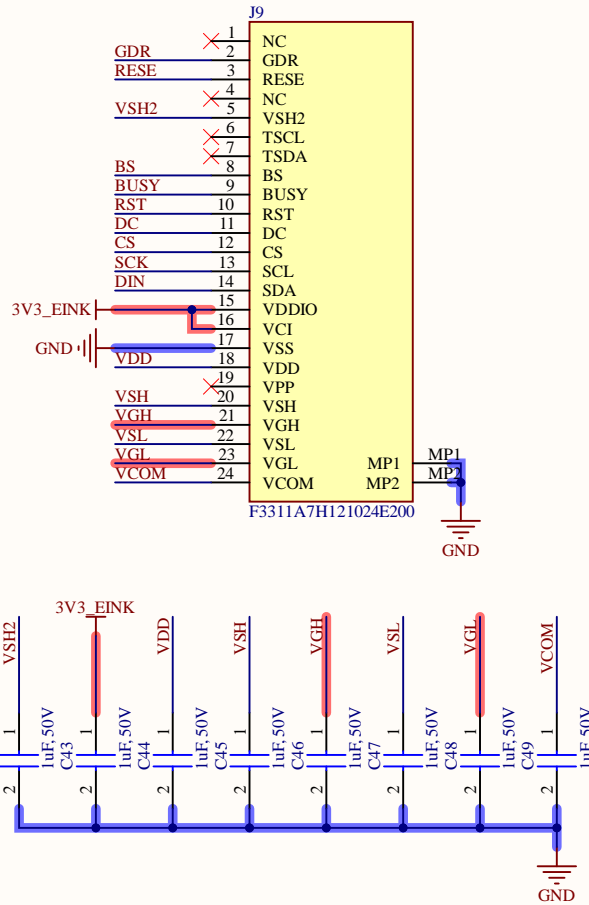
Resistor (Display Config)	Display
0.47R (B)	2.13inch e-Paper (D), 2.7inch e-Paper, 2.9inch e-Paper (D)
	4.01inch e-Paper (F), 4.2inch e-Paper (C), 5.65inch e-Paper (F)
	5.83inch e-Paper, 5.83inch e-Paper (B), 7.5inch e-Paper
	7.5inch e-Paper (B)
3R (A)	1.54inch e-Paper, 1.54inch e-Paper(B), 2.13inch e-Paper
	2.13inch e-Paper (B), 2.66inch e-Paper, 2.66inch e-Paper (B)
	2.9inch e-Paper, 2.9inch e-Paper (B), 3.7inch e-Paper
	4.2inch e-Paper, 4.2inch e-Paper (B), 13.3inch e-Paper (B)
	13.3inch e-Paper

SB2 selection:

BS	VCC	GND
Interface	3-line SPI	4-line SPI

Compatible with waveshare e-ink displays

for example:
2.13 inch E-Ink display



Title: EInkHeader.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025	Type: Schematic	Revision: 1.0	
Author: Evžen Šteif		Sheet 12	of 13

1

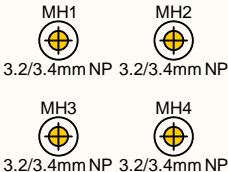
2

3

4

A

A



B

B

C

C

D

D

1

2

3

4

Title: Mechanical.SchDoc			
Project: Environmental_unit.PrjPcb		Variant: EnvUnit_assembly	
Date: 17.11.2025		Type: Schematic	Revision: 1.0
Author: Evžen Šteif	Size: A4		Sheet 13 of 13

