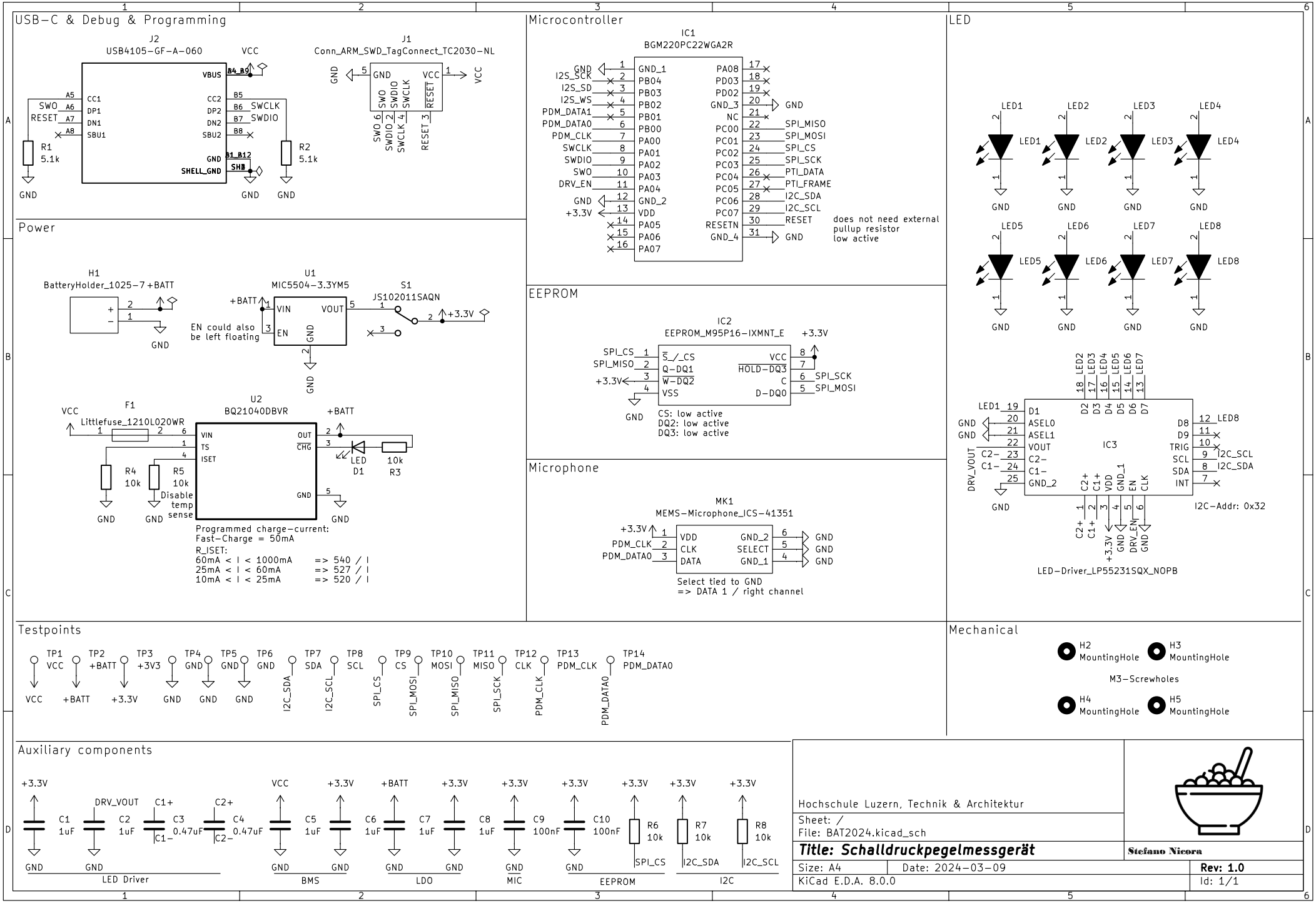
USB-C & Debug & Programming
J2
USB4105-GF-A-060
VCC
VBUS
A4_A9
CC1
DP1
DN1
SBU1
CC2
DP2
DN2
SBU2
GND
SHELL_GND
B5
B6 SWCLK
B7 SWDIO
B8
B1_B12
SHIELD
SWO A6
RESET A7
A5
A8
R1
5.1k
R2
5.1k
GND
J1
Conn_ARM_SWD_TagConnect_TC2030-NL
GND
VCC
SWO
SWDIO
SWCLK
RESET
SWO_6
SWDIO_2
SWCLK_4
RESET_3
Microcontroller
IC1
BGM220PC22WGA2R
GND_1
PB04
PB03
PB02
PB01
PB00
PA00
PA01
PA02
PA03
PA04
GND_2
VDD
PA05
PA06
PA07
PA08
PD03
PD02
GND_3
NC
PC00
PC01
PC02
PC03
PC04
PC05
PC06
PC07
RESETN
GND_4
I2S_SCK
I2S_SD
I2S_WS
PDM_DATA1
PDM_DATA0
PDM_CLK
SWCLK
SWDIO
SWO
DRV_EN
+3.3V
SPI_MISO
SPI_MOSI
SPI_CS
SPI_SCK
PTI_DATA
PTI_FRAME
I2C_SDA
I2C_SCL
RESET
does not need external
pullup resistor
low active
LED
LED1
LED2
LED3
LED4
LED5
LED6
LED7
LED8
IC3
D1
ASEL0
ASEL1
VOUT
C2-
C1-
GND_2
D2
D3
D4
D5
D6
D7
D8
D9
TRIG
SCL
SDA
INT
C2+
C1+
VDD
GND_1
EN
CLK
DRV_VOUT
I2C-Addr: 0x32
LED-Driver_LP55231SQX_NOPB
Power
H1
BatteryHolder_1025-7+BATT
U1
MIC5504-3.3YM5
+BATT
VIN
EN
VOUT
GND
EN could also
be left floating
S1
JS102011SAQN
+3.3V
F1
Littlefuse_1210L020WR
VCC
U2
BQ21040DBVR
VIN
TS
ISET
OUT
CHG
GND
LED
D1
10k
R3
R4
10k
R5
10k
Disable
temp
sense
Programmed charge-current:
Fast-Charge = 50mA
R_ISET:
60mA < I < 1000mA => 540 / I
25mA < I < 60mA => 527 / I
10mA < I < 25mA => 520 / I
EEPROM
IC2
EEPROM_M95P16-IXMNT_E
S_/_CS
Q-DQ1
W-DQ2
VSS
VCC
HOLD-DQ3
C
D-DQ0
SPI_CS
SPI_MISO
SPI_SCK
SPI_MOSI
CS: low active
DQ2: low active
DQ3: low active
Microphone
MK1
MEMS-Microphone_ICS-41351
VDD
CLK
DATA
GND_2
SELECT
GND_1
PDM_CLK
PDM_DATA0
Select tied to GND
=> DATA 1 / right channel
Testpoints
TP1 VCC
TP2 +BATT
TP3 +3V3
TP4 GND
TP5 GND
TP6 GND
TP7 SDA
TP8 SCL
TP9 CS
TP10 MOSI
TP11 MISO
TP12 CLK
TP13 PDM_CLK
TP14 PDM_DATA0
Mechanical
H2
MountingHole
H3
MountingHole
M3-Screwholes
H4
MountingHole
H5
MountingHole
Auxiliary components
C1
1uF
C2
1uF
C3
0.47uF
C4
0.47uF
C5
1uF
C6
1uF
C7
1uF
C8
1uF
C9
100nF
C10
100nF
R6
10k
R7
10k
R8
10k
DRV_VOUT
C1+
C1-
C2+
C2-
LED Driver
BMS
LDO
MIC
EEPROM
I2C
Hochschule Luzern, Technik & Architektur
Sheet: /
File: BAT2024.kicad_sch
Title: Schalldruckpegelmessgerät
Stefano Nicora
Size: A4
Date: 2024-03-09
Rev: 1.0
KiCad E.D.A. 8.0.0
Id: 1/1