Ignis

Power Stage

Fichier: power_stage.kicad_sch

Function Stage
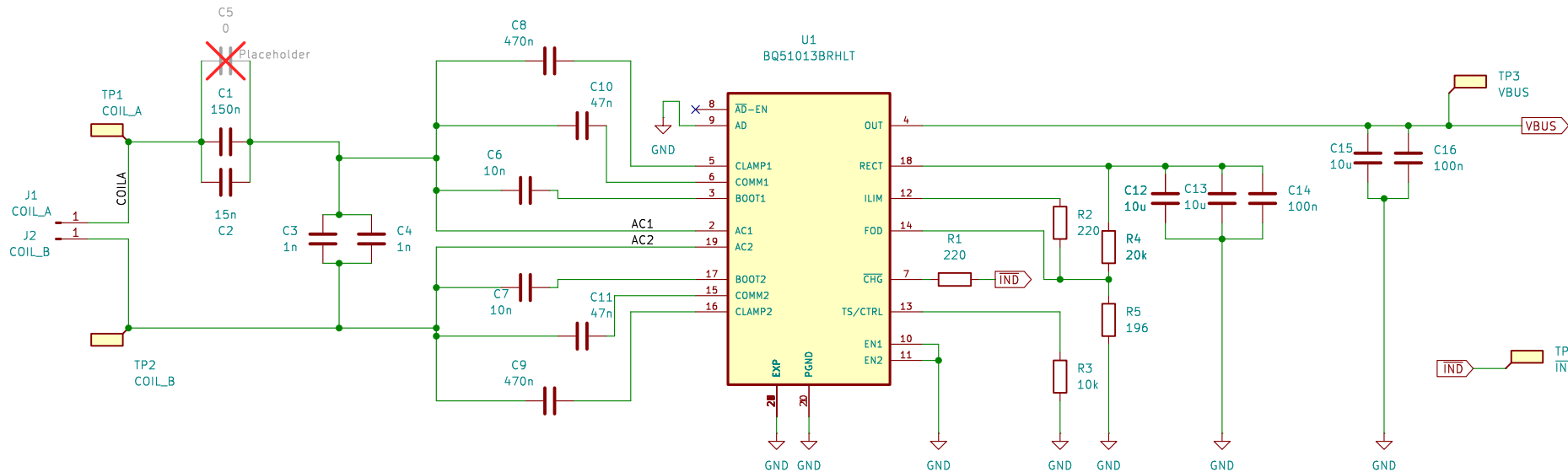
Fichier: function_stage.kicad_sch
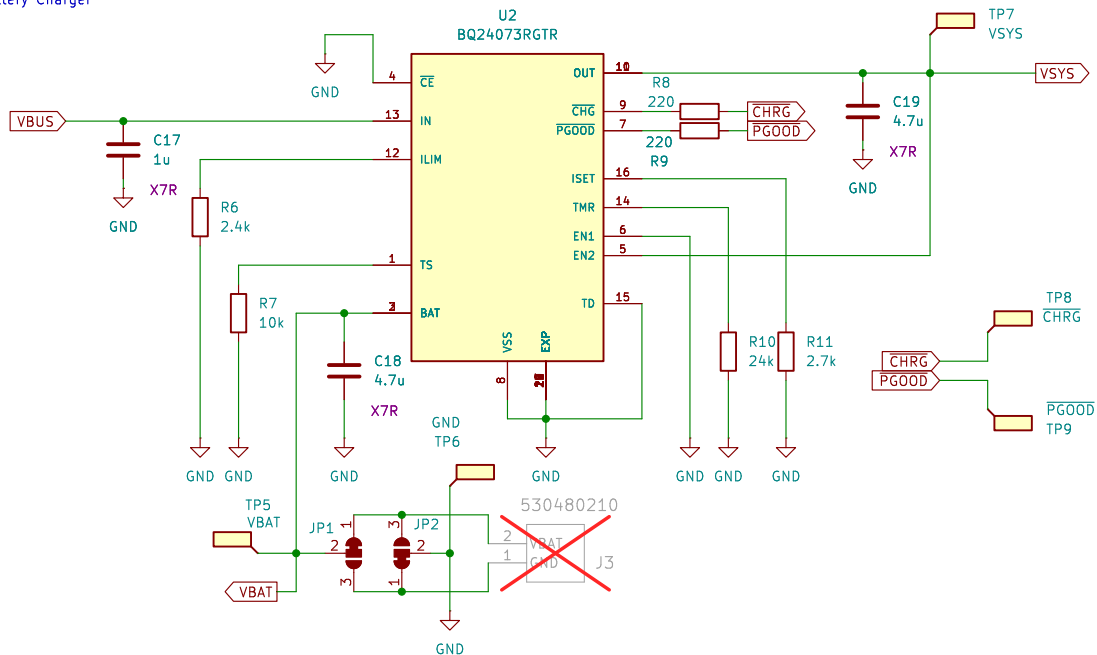
Inductive Charger

C5 0 Placeholder
C1 150n
C2 15n
C3 1n
C4 1n
C6 10n
C7 10n
C8 470n
C9 470n
C10 47n
C11 47n
C12 10u
C13 10u
C14 100n
C15 10u
C16 100n

TP1 COIL_A
TP2 COIL_B
TP3 VBUS
TP4 IND

J1 COIL_A 1
J2 COIL_B 1
COILA

U1 BQ51013BRHLT
- 8 AD-EN
- 9 AD
- 5 CLAMP1
- 6 COMM1
- 3 BOOT1
- 2 AC1
- 19 AC2
- 17 BOOT2
- 15 COMM2
- 16 CLAMP2
- 4 OUT
- 18 RECT
- 12 ILIM
- 14 FOD
- 7 CHG
- 13 TS/CTRL
- 10 EN1
- 11 EN2
- 21 EXP
- 20 PGND

AC1
AC2

R1 220
R2 220
R3 10k
R4 20k
R5 196

IND
VBUS

GND

Battery Charger

U2 BQ24073RGTR
- 4 CE
- 13 IN
- 12 ILIM
- 1 TS
- 2 BAT
- 10 OUT
- 9 CHG
- 7 PGOOD
- 16 ISET
- 14 TMR
- 6 EN1
- 5 EN2
- 15 TD
- 8 VSS
- 21 EXP

C17 1u X7R
C18 4.7u X7R
C19 4.7u X7R

R6 2.4k
R7 10k
R8 220
R9 220
R10 24k
R11 2.7k

TP5 VBAT
TP6 GND
TP7 VSYS
TP8 CHRG
TP9 PGOOD

JP1 JP2
530480210
VBAT GND J3

VBUS
VSYS
CHRG
PGOOD
VBAT
GND

Boost Converter

U3 FP6277XR-G1
- 3 VIN
- 2 LX
- 4 EN
- 7 OC
- 8 VO
- 6 FB
- 9 PGND
- 5 GND

VSYS
VCC

L1 3.3u
C20 22u X7R
C21 22u X7R
C22 100u

R12 390k
R13 75k
R14 10k

GND

TheoToys

Sheet: /Power Stage/
File: power_stage.kicad_sch
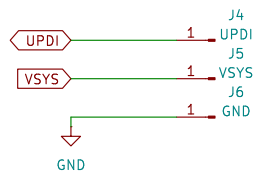Title: Ignis
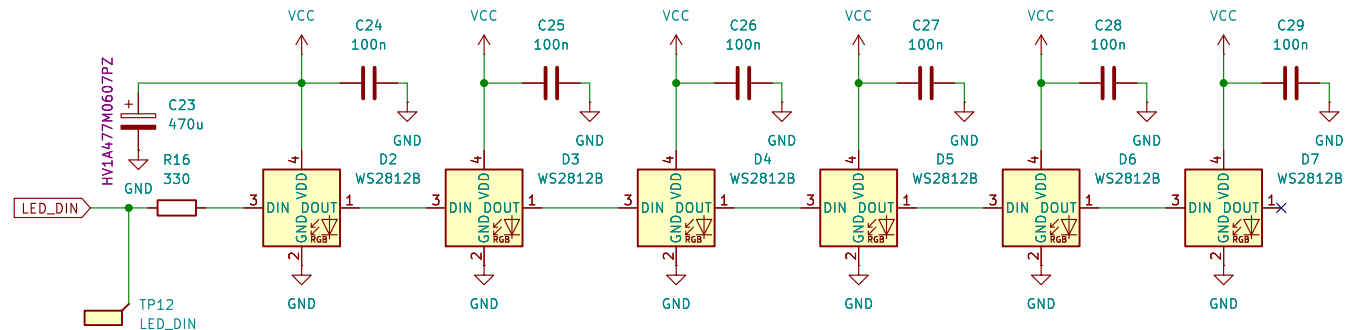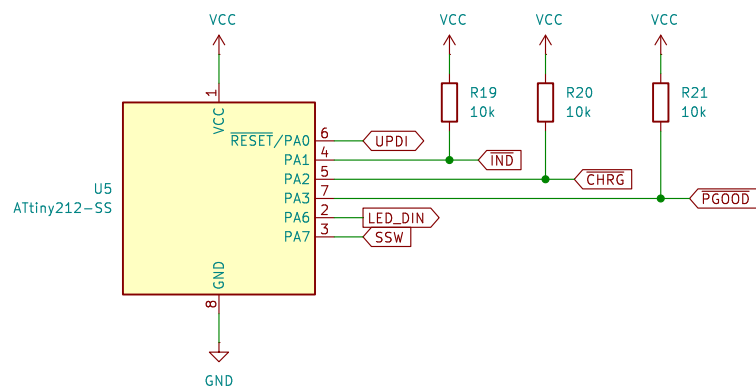Size: A4   Date: 2025-08-26   Rev: v2.2
KiCad E.D.A. 9.0.4   Id: 2/3

UPDI

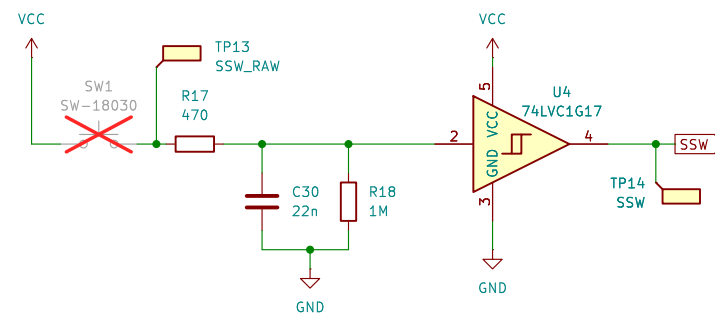Simplified on-board electronics:
UPDI circuitry is on programmer board

UPDI — J4 — 1 — UPDI
VSYS — J5 — 1 — VSYS
J6 — 1 — GND
GND

LED Strip

HV1A477M0607PZ

C23 470u
GND
R16 330
LED_DIN
TP12 LED_DIN

VCC — C24 100n — GND
D2 WS2812B
4 VDD, 3 DIN, DOUT 1, GND 2, RGB
GND

VCC — C25 100n — GND
D3 WS2812B
4 VDD, 3 DIN, DOUT 1, GND 2, RGB
GND

VCC — C26 100n — GND
D4 WS2812B
4 VDD, 3 DIN, DOUT 1, GND 2, RGB
GND

VCC — C27 100n — GND
D5 WS2812B
4 VDD, 3 DIN, DOUT 1, GND 2, RGB
GND

VCC — C28 100n — GND
D6 WS2812B
4 VDD, 3 DIN, DOUT 1, GND 2, RGB
GND

VCC — C29 100n — GND
D7 WS2812B
4 VDD, 3 DIN, DOUT 1, GND 2, RGB
GND

Micro-controller

U5 ATtiny212-SS

VCC
1 VCC
6 RESET/PA0 — UPDI
4 PA1 — IND
5 PA2 — CHRG
7 PA3 — PGOOD
2 PA6 — LED_DIN
3 PA7 — SSW
8 GND
GND

R19 10k (VCC)
R20 10k (VCC)
R21 10k (VCC)

Shock Sensor

VCC
SW1 SW-18030
TP13 SSW_RAW
R17 470
C30 22n
R18 1M
GND

U4 74LVC1G17
2 — 5 VCC — 4 — SSW
3 GND
GND
TP14 SSW

Mechanical

H1 ToolingHole
H2 ToolingHole
H3 ToolingHole