stm32_bluet_pill

DATE	NOTES	REVISION
2024-04-03	Initial Proto Release	Proto

Table of Contents

BLE_MCU

File: MCU_BLE.kicad_sch

POWER

File: POWER.kicad_sch

CONN

File: CONN.kicad_sch

Brendan Bleker

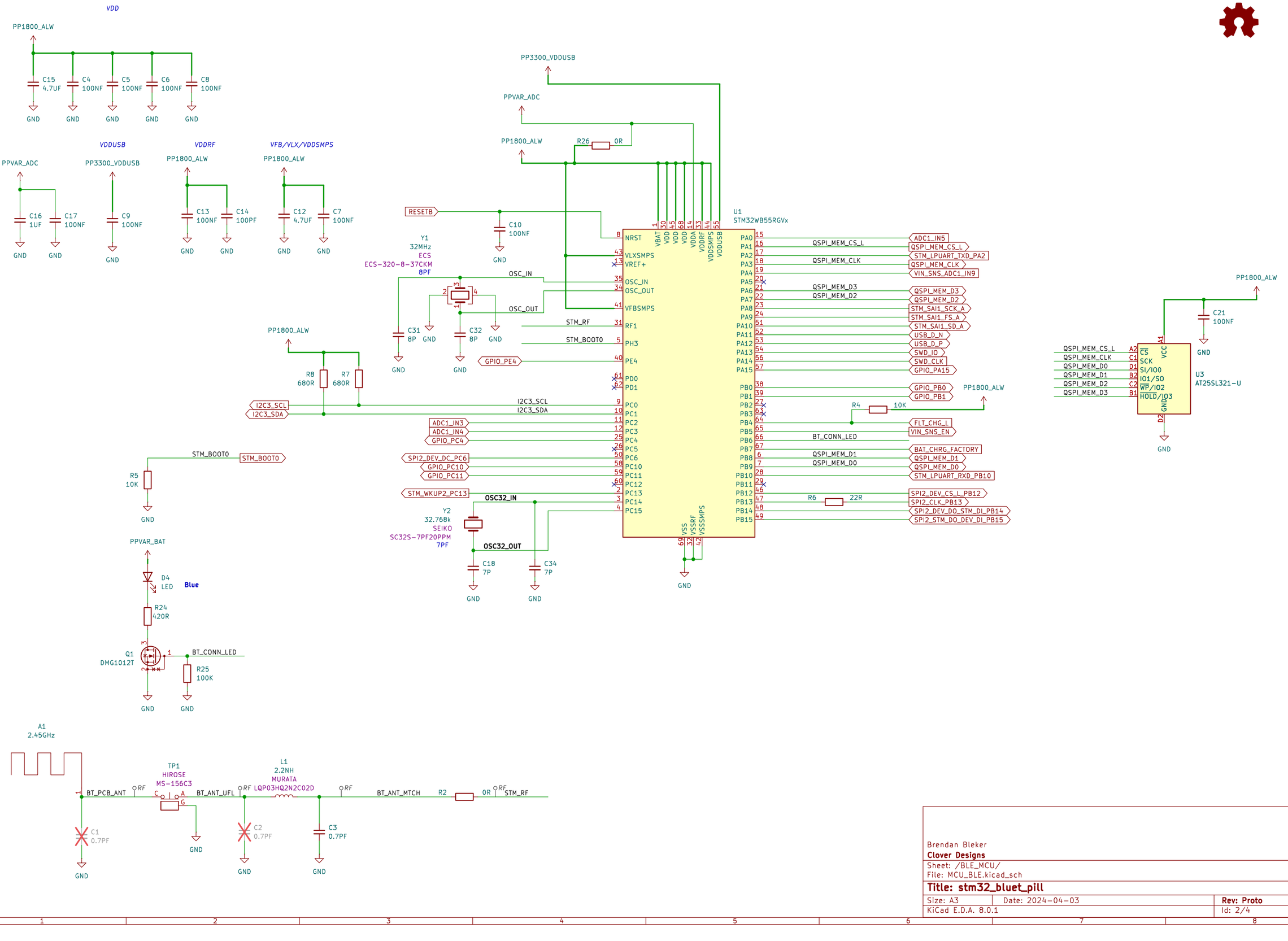
Clover Designs

Sheet: /

File: Bluetooth_OSHW.kicad_sch

Title: stm32_bluet_pill

Size: A3	Date: 2024-04-03	**Rev: Proto**
KiCad E.D.A. 8.0.1		Id: 1/4


VDD
PP1800_ALW
C15 4.7UF
C4 100NF
C5 100NF
C6 100NF
C8 100NF
GND
VDDUSB
PPVAR_ADC
C16 1UF
C17 100NF
PP3300_VDDUSB
C9 100NF
VDDRF
PP1800_ALW
C13 100NF
C14 100PF
VFB/VLX/VDDSMPS
PP1800_ALW
C12 4.7UF
C7 100NF
PP3300_VDDUSB
PPVAR_ADC
PP1800_ALW
R26 0R
RESETB
C10 100NF
Y1
32MHz
ECS
ECS-320-8-37CKM
8PF
OSC_IN
OSC_OUT
C31 8P
C32 8P
U1
STM32WB55RGVx
NRST
VLXSMPS
VREF+
OSC_IN
OSC_OUT
VFBSMPS
RF1
PH3
PE4
PD0
PD1
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC10
PC11
PC12
PC13
PC14
PC15
VBAT
VDD
VDDA
VDDRF
VDDSMPS
VDDUSB
VSS
VSSRF
VSSSMPS
STM_RF
STM_BOOT0
GPIO_PE4
PP1800_ALW
R8 680R
R7 680R
I2C3_SCL
I2C3_SDA
ADC1_IN3
ADC1_IN4
GPIO_PC4
SPI2_DEV_DC_PC6
GPIO_PC10
GPIO_PC11
STM_WKUP2_PC13
OSC32_IN
OSC32_OUT
Y2
32.768k
SEIKO
SC32S-7PF20PPM
7PF
C18 7P
C34 7P
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11
PA12
PA13
PA14
PA15
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PB8
PB9
PB10
PB11
PB12
PB13
PB14
PB15
ADC1_IN5
QSPI_MEM_CS_L
STM_LPUART_TXD_PA2
QSPI_MEM_CLK
VIN_SNS_ADC1_IN9
QSPI_MEM_D3
QSPI_MEM_D2
STM_SAI1_SCK_A
STM_SAI1_FS_A
STM_SAI1_SD_A
USB_D_N
USB_D_P
SWD_IO
SWD_CLK
GPIO_PA15
GPIO_PB0
GPIO_PB1
PP1800_ALW
R4 10K
FLT_CHG_L
VIN_SNS_EN
BT_CONN_LED
BAT_CHRG_FACTORY
QSPI_MEM_D1
QSPI_MEM_D0
STM_LPUART_RXD_PB10
R6 22R
SPI2_DEV_CS_L_PB12
SPI2_CLK_PB13
SPI2_DEV_DO_STM_DI_PB14
SPI2_STM_DO_DEV_DI_PB15
PP1800_ALW
C21 100NF
U3
AT25SL321-U
QSPI_MEM_CS_L
QSPI_MEM_CLK
QSPI_MEM_D0
QSPI_MEM_D1
QSPI_MEM_D2
QSPI_MEM_D3
CS
SCK
SI/IO0
IO1/SO
WP/IO2
HOLD/IO3
VCC
GND
STM_BOOT0
R5 10K
PPVAR_BAT
D4 LED
Blue
R24 420R
Q1
DMG1012T
BT_CONN_LED
R25 100K
A1
2.45GHz
TP1
HIROSE
MS-156C3
L1
2.2NH
MURATA
LQP03HQ2N2C02D
BT_PCB_ANT
BT_ANT_UFL
BT_ANT_MTCH
R2 0R
STM_RF
C1 0.7PF
C2 0.7PF
C3 0.7PF
Brendan Bleker
Clover Designs
Sheet: /BLE_MCU/
File: MCU_BLE.kicad_sch
Title: stm32_bluet_pill
Size: A3
Date: 2024-04-03
Rev: Proto
KiCad E.D.A. 8.0.1
Id: 2/4

CHARGER BYPASS RESISTOR

R13
0R

PPVAR_VIN

U4
BQ25185

PPVAR_SYS

PPVAR_BAT

D1
LED

R3
420R

Green

CHG_LED_GRN

C22
1.0UF

GND

R9
0R

R10
0R

FLT_CHG_L

CHG_LED_GRN

IN
CE
STAT1
STAT2
ILIM/VSET
ISET
SYS
BAT
TS/MR
GND
EP

R11
2.4K
1%

R12
600R
1%

NOTE: ILIM, 2.4K
* 1100mA Ilim
* 3.6V VBAT

NOTE: ISET, 600R
* 500mA Ichg
* 100mA Iprechg

CHGR_BAT_THERM

C23
4.7UF
X7R

R14
0R

R15
0R

BAT_CHRG_FACTORY

J3
BAT_SOCKET
JST
PH_S3B-PH-K

C24
4.7UF
X7R

PP3300_DBG

D3
BAT54LP

U5
TPS62746

L4
2.2UH
MURATA
DFE201610C

PP1800_ALW

R23
0R

C26
10UF
X7R

NOTE:
VSEL = 1 (Vout = 1.8V)

VIN
EN
VSEL
SW
VOS
CTRL
VINSW
GND

VIN_SNS_EN

R16
1K

VIN_SNS_ADC1_IN9

R17
10K

C25
100NF

R19
100K

VBUS

U8
TPS7A0533PDBV

PP3300_VDDUSB

R18
1K

C33
1.0UF

C30
100N

R1
100K

IN
EN
GND
OUT

C11
4.7UF
X7R

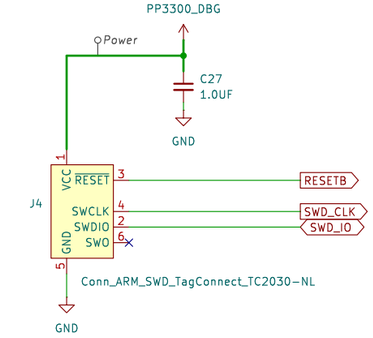
Power

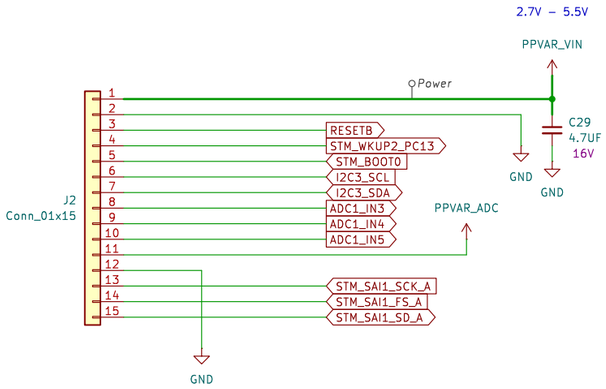
Brendan Bleker
Clover Designs

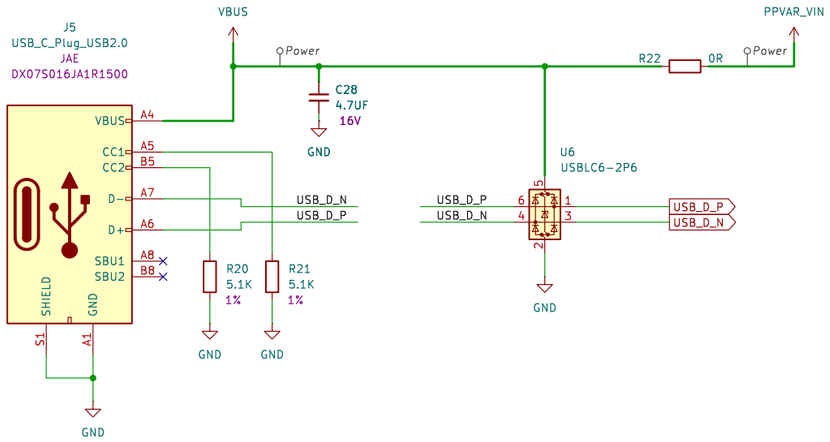
Sheet: /POWER/
File: POWER.kicad_sch

Title: stm32_bluet_pill

Size: A3	Date: 2024-04-03	**Rev: Proto**
KiCad E.D.A. 8.0.1		Id: 4/4







Brendan Bleker
Clover Designs
Sheet: /CONN/
File: CONN.kicad_sch

Title: stm32_bluet_pill

Size: A3	Date: 2024-04-03	**Rev: Proto**
KiCad E.D.A. 8.0.1		Id: 5/4