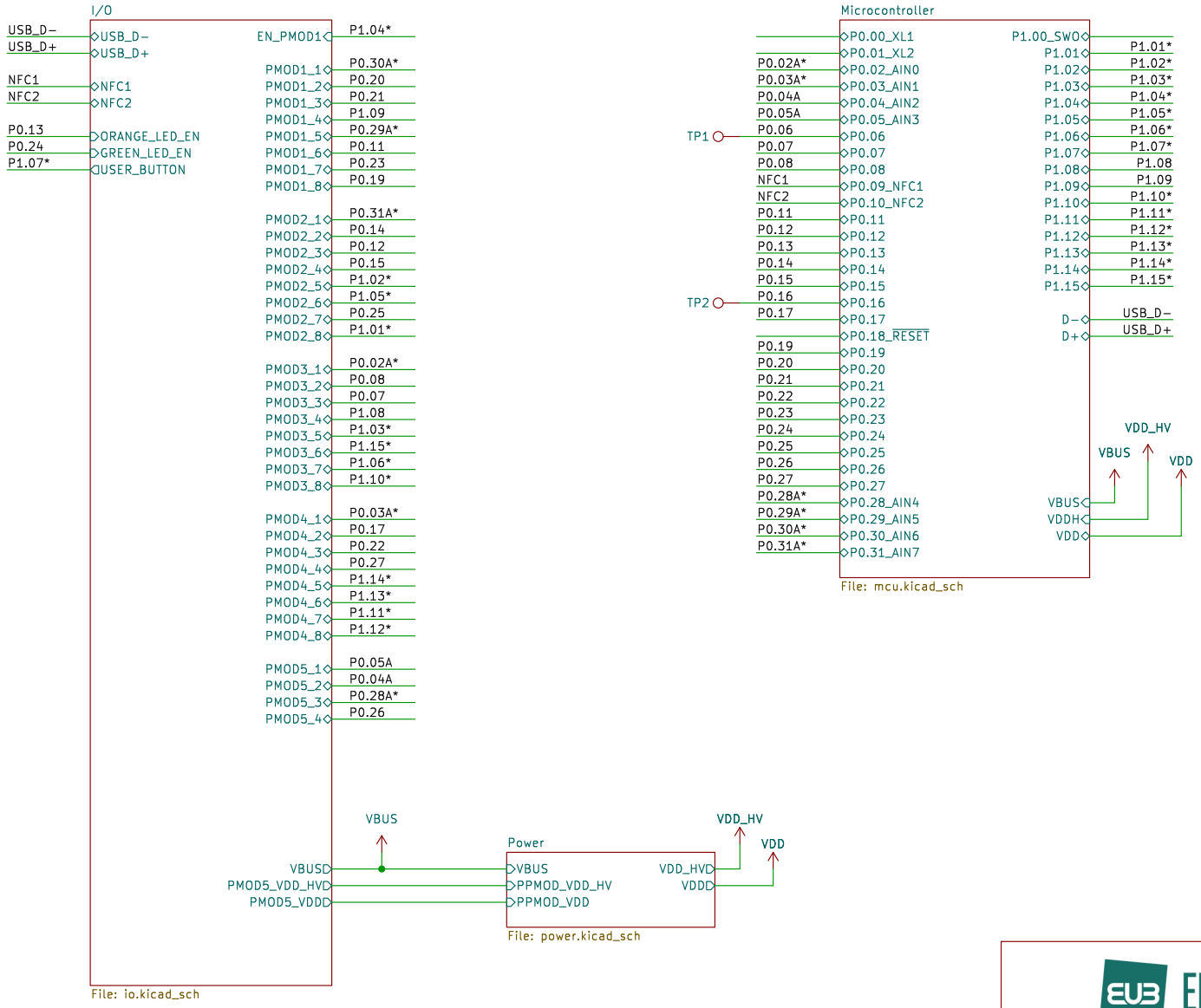

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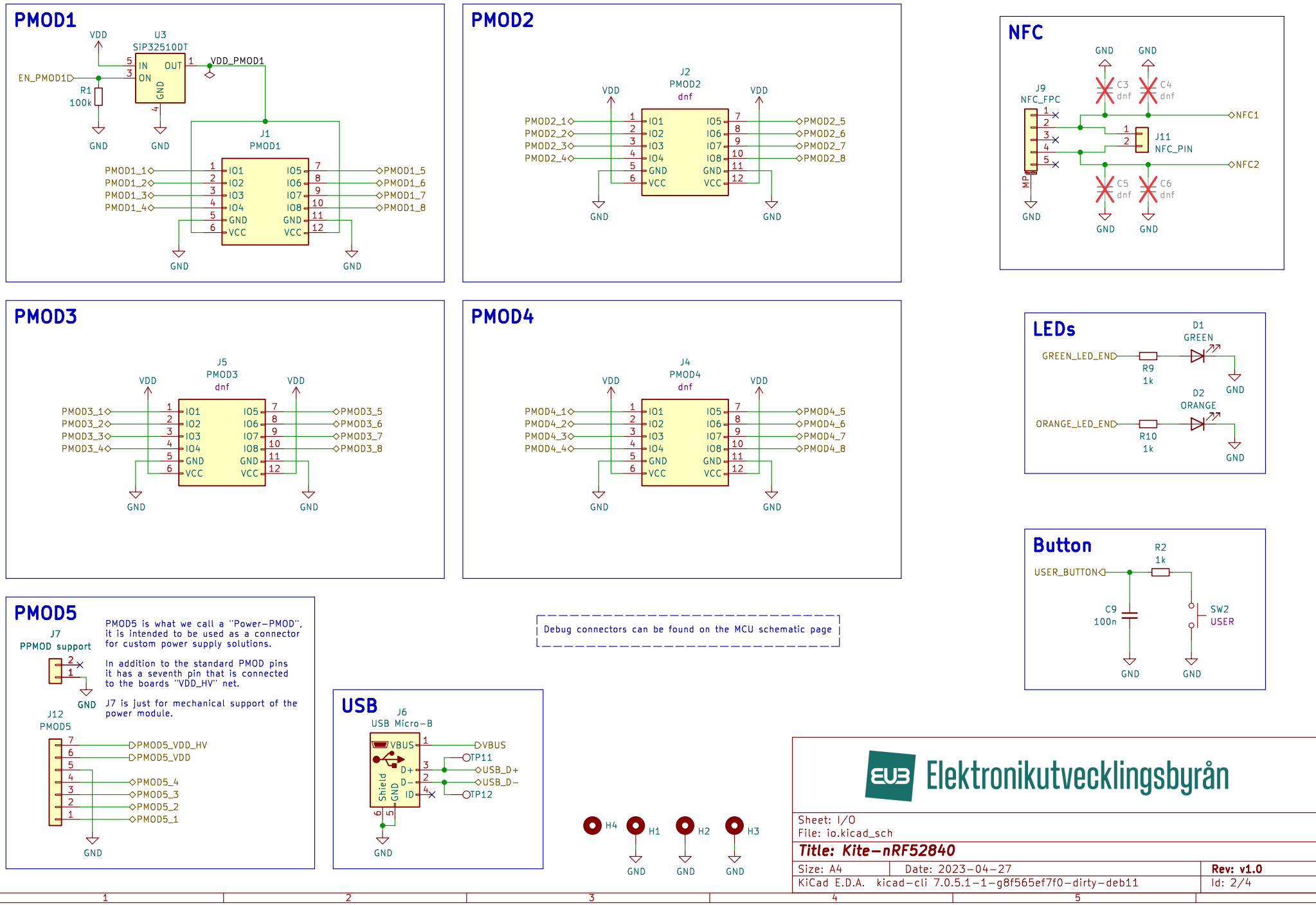
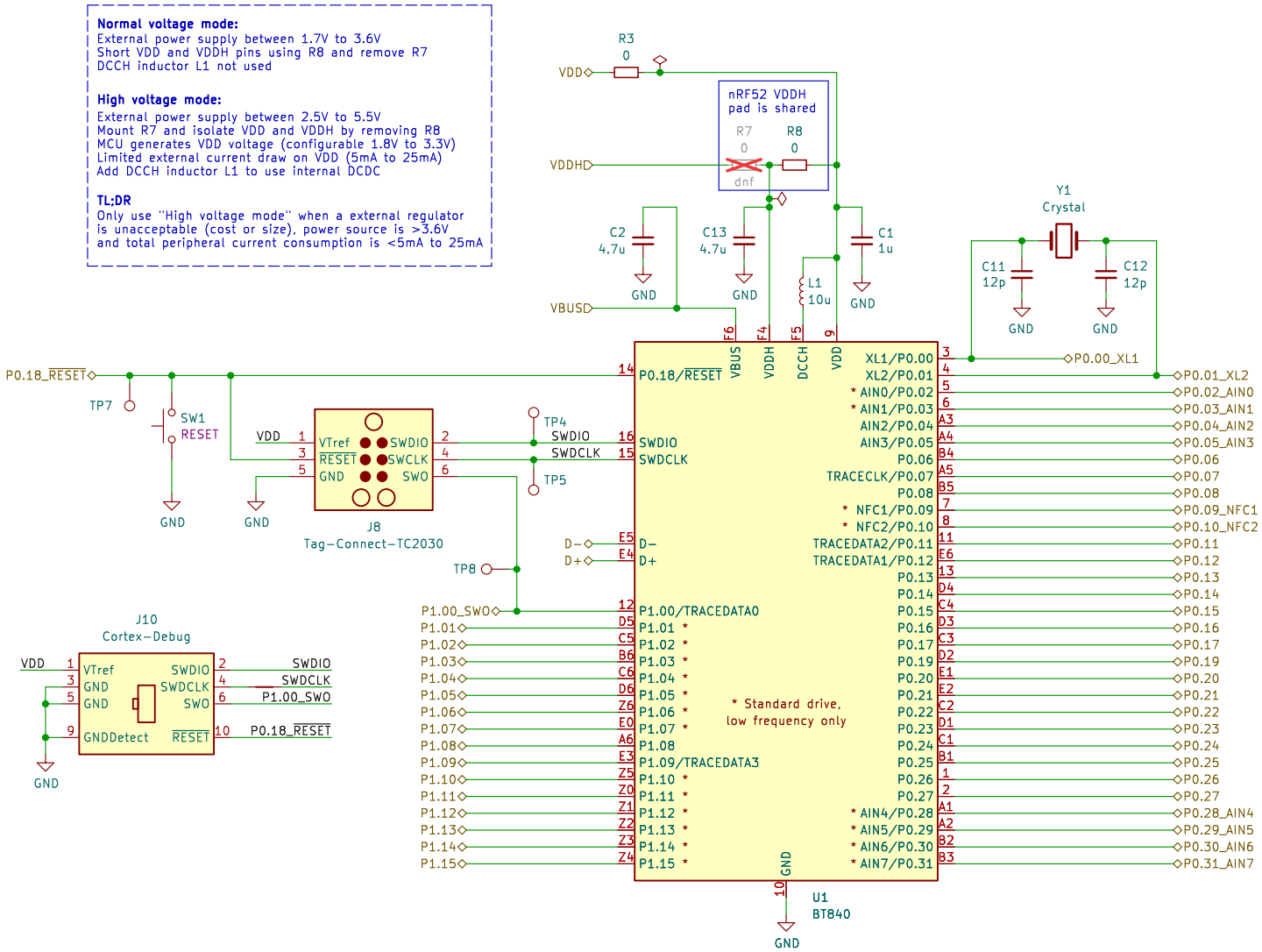
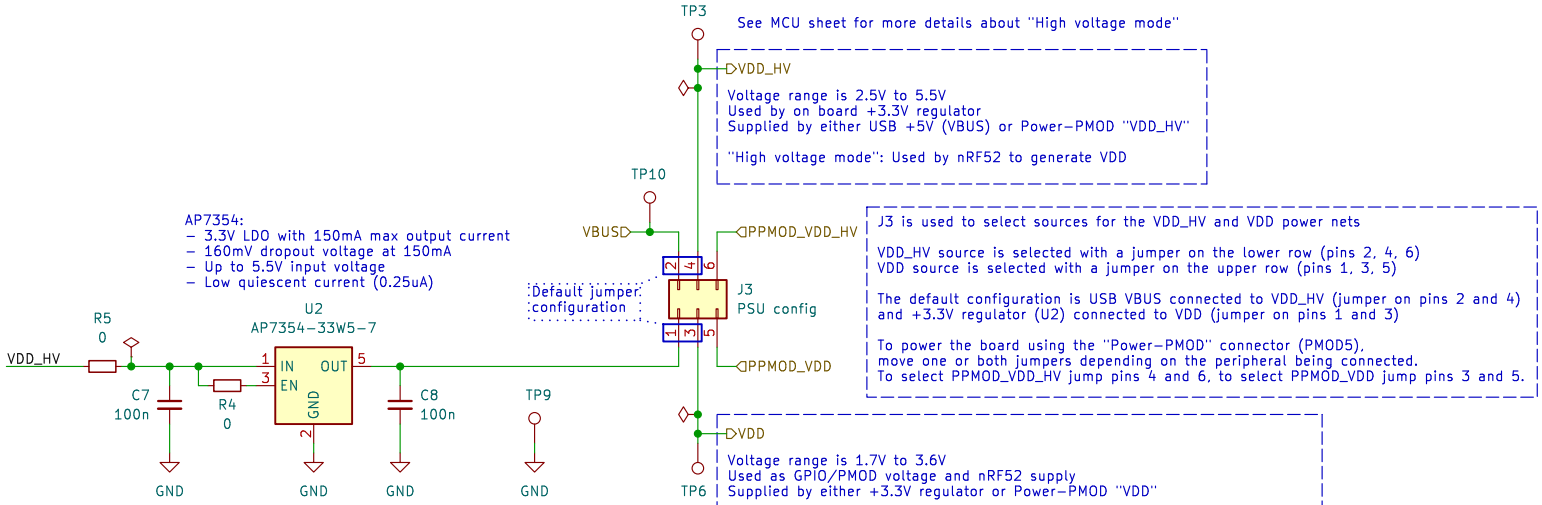
Sheet:
File: kite−nrf52840.kicad_sch

Title: Kite−nRF52840

Size: A4	Date: 2023−04−27	**Rev: v1.0**
KiCad E.D.A. kicad−cli 7.0.5.1−1−g8f565ef7f0−dirty−deb11		Id: 1/4


PMOD1
U3
SiP32510DT
VDD
EN_PMOD1
R1
100k
VDD_PMOD1
GND
J1
PMOD1
PMOD1_1
PMOD1_2
PMOD1_3
PMOD1_4
PMOD1_5
PMOD1_6
PMOD1_7
PMOD1_8
PMOD2
J2
PMOD2
dnf
PMOD2_1
PMOD2_2
PMOD2_3
PMOD2_4
PMOD2_5
PMOD2_6
PMOD2_7
PMOD2_8
NFC
J9
NFC_FPC
C3
C4
C5
C6
dnf
J11
NFC_PIN
NFC1
NFC2
PMOD3
J5
PMOD3
dnf
PMOD3_1
PMOD3_2
PMOD3_3
PMOD3_4
PMOD3_5
PMOD3_6
PMOD3_7
PMOD3_8
PMOD4
J4
PMOD4
dnf
PMOD4_1
PMOD4_2
PMOD4_3
PMOD4_4
PMOD4_5
PMOD4_6
PMOD4_7
PMOD4_8
LEDs
D1
GREEN
GREEN_LED_EN
R9
1k
D2
ORANGE
ORANGE_LED_EN
R10
1k
Button
R2
1k
USER_BUTTON
C9
100n
SW2
USER
PMOD5
J7
PPMOD support
PMOD5 is what we call a "Power-PMOD", it is intended to be used as a connector for custom power supply solutions.
In addition to the standard PMOD pins it has a seventh pin that is connected to the boards "VDD_HV" net.
J7 is just for mechanical support of the power module.
J12
PMOD5
PMOD5_VDD_HV
PMOD5_VDD
PMOD5_4
PMOD5_3
PMOD5_2
PMOD5_1
USB
J6
USB Micro-B
VBUS
TP11
USB_D+
USB_D-
TP12
Shield
Debug connectors can be found on the MCU schematic page
H4
H1
H2
H3
Elektronikutvecklingsbyrån
Sheet: I/O
File: io.kicad_sch
Title: Kite-nRF52840
Size: A4
Date: 2023-04-27
Rev: v1.0
KiCad E.D.A. kicad-cli 7.0.5.1-1-g8f565ef7f0-dirty-deb11
Id: 2/4


Normal voltage mode:
External power supply between 1.7V to 3.6V
Short VDD and VDDH pins using R8 and remove R7
DCCH inductor L1 not used
High voltage mode:
External power supply between 2.5V to 5.5V
Mount R7 and isolate VDD and VDDH by removing R8
MCU generates VDD voltage (configurable 1.8V to 3.3V)
Limited external current draw on VDD (5mA to 25mA)
Add DCCH inductor L1 to use internal DCDC
TL;DR
Only use "High voltage mode" when a external regulator is unacceptable (cost or size), power source is >3.6V and total peripheral current consumption is <5mA to 25mA
R3
0
VDD
nRF52 VDDH pad is shared
R7
0
dnf
R8
0
VDDH
C2
4.7u
C13
4.7u
C1
1u
L1
10u
GND
VBUS
Y1
Crystal
C11
12p
C12
12p
P0.18_RESET
TP7
SW1
RESET
J8
Tag-Connect-TC2030
VTref
SWDIO
RESET
SWCLK
GND
SWO
TP4
TP5
TP8
SWDIO
SWDCLK
D-
D+
P1.00_SWO
J10
Cortex-Debug
GNDDetect
U1
BT840
P0.00_XL1
* Standard drive, low frequency only
P0.01_XL2
P0.02_AIN0
P0.03_AIN1
P0.04_AIN2
P0.05_AIN3
P0.06
P0.07
P0.08
P0.09_NFC1
P0.10_NFC2
P0.11
P0.12
P0.13
P0.14
P0.15
P0.16
P0.17
P0.19
P0.20
P0.21
P0.22
P0.23
P0.24
P0.25
P0.26
P0.27
P0.28_AIN4
P0.29_AIN5
P0.30_AIN6
P0.31_AIN7
Elektronikutvecklingsbyrån
Sheet: Microcontroller
File: mcu.kicad_sch
Title: Kite-nRF52840
Size: A4
Date: 2023-04-27
Rev: v1.0
KiCad E.D.A. kicad-cli 7.0.5.1-1-g8f565ef7f0-dirty-deb11
Id: 3/4



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Sheet: Power
File: power.kicad_sch

Title: Kite-nRF52840

Size: A4	Date: 2023-04-27	**Rev: v1.0**
KiCad E.D.A. kicad-cli 7.0.5.1-1-g8f565ef7f0-dirty-deb11		Id: 4/4