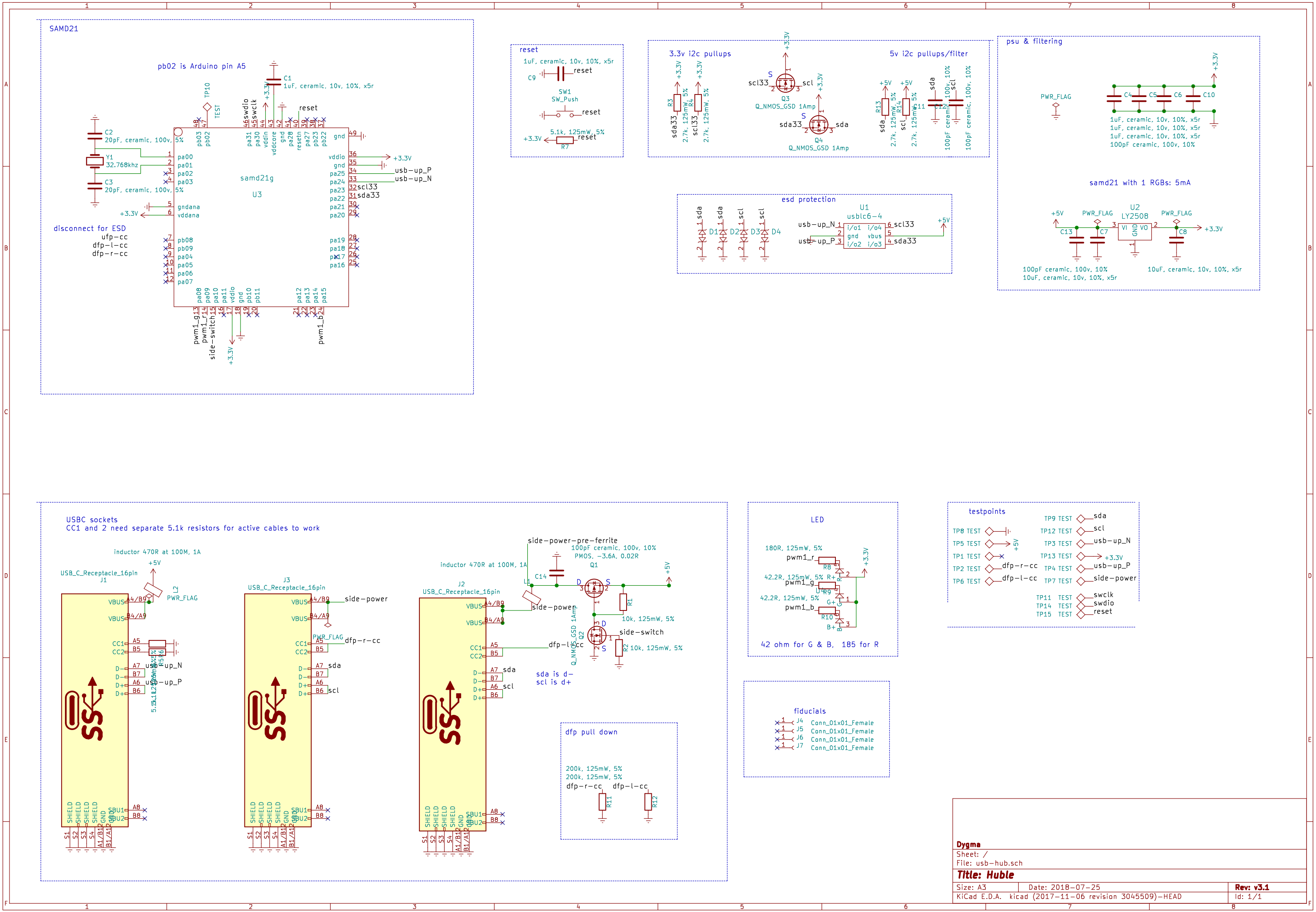
SAMD21
pb02 is Arduino pin A5
C1
1uF, ceramic, 10v, 10%, x5r
C2
20pF, ceramic, 100v, 5%
C3
20pF, ceramic, 100v, 5%
Y1
32.768khz
samd21g
U3
disconnect for ESD
ufp-cc
dfp-l-cc
dfp-r-cc
usb-up_P
usb-up_N
scl33
sda33
reset
reset
1uF, ceramic, 10v, 10%, x5r
C9
SW1
SW_Push
5.1k, 125mW, 5%
R7
3.3v i2c pullups
R3
R4
2.7k, 125mW, 5%
Q3
Q_NMOS_GSD 1Amp
Q4
Q_NMOS_GSD 1Amp
5v i2c pullups/filter
R13
R14
2.7k, 125mW, 5%
C11
C12
100pF ceramic, 100v, 10%
100pF ceramic, 100v, 10%
esd protection
D1
D2
D3
D4
U1
usblc6-4
psu & filtering
PWR_FLAG
C4
C5
C6
C10
1uF, ceramic, 10v, 10%, x5r
1uF, ceramic, 10v, 10%, x5r
1uF, ceramic, 10v, 10%, x5r
100pF ceramic, 100v, 10%
samd21 with 1 RGBs: 5mA
U2
LY2508
C13
C7
C8
100pF ceramic, 100v, 10%
10uF, ceramic, 10v, 10%, x5r
10uF, ceramic, 10v, 10%, x5r
USBC sockets
CC1 and 2 need separate 5.1k resistors for active cables to work
inductor 470R at 100M, 1A
USB_C_Receptacle_16pin
J1
L2
PWR_FLAG
R5
R6
5.1k, 1%, 125mW
J3
USB_C_Receptacle_16pin
side-power
dfp-r-cc
J2
USB_C_Receptacle_16pin
side-power-pre-ferrite
100pF ceramic, 100v, 10%
PMOS, -3.6A, 0.02R
Q1
C14
L1
R1
10k, 125mW, 5%
Q2
Q_NMOS_GSD 1Amp
side-switch
R2
10k, 125mW, 5%
dfp-l-cc
sda is d-
scl is d+
dfp pull down
200k, 125mW, 5%
200k, 125mW, 5%
R11
R12
LED
180R, 125mW, 5%
pwm1_r
R8
42.2R, 125mW, 5%
pwm1_g
R9
42.2R, 125mW, 5%
pwm1_b
R10
42 ohm for G & B, 185 for R
fiducials
J4 Conn_01x01_Female
J5 Conn_01x01_Female
J6 Conn_01x01_Female
J7 Conn_01x01_Female
testpoints
TP8 TEST
TP5 TEST
TP1 TEST
TP2 TEST
TP6 TEST
TP9 TEST
TP12 TEST
TP3 TEST
TP13 TEST
TP4 TEST
TP7 TEST
TP11 TEST
TP14 TEST
TP15 TEST
Dygma
Sheet: /
File: usb-hub.sch
Title: Huble
Size: A3
Date: 2018-07-25
Rev: v3.1
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