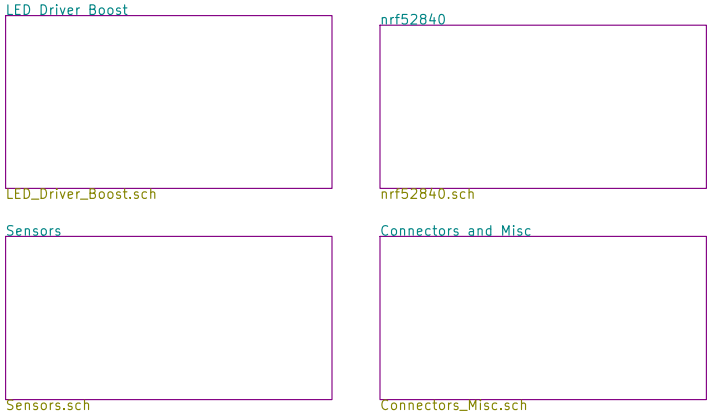

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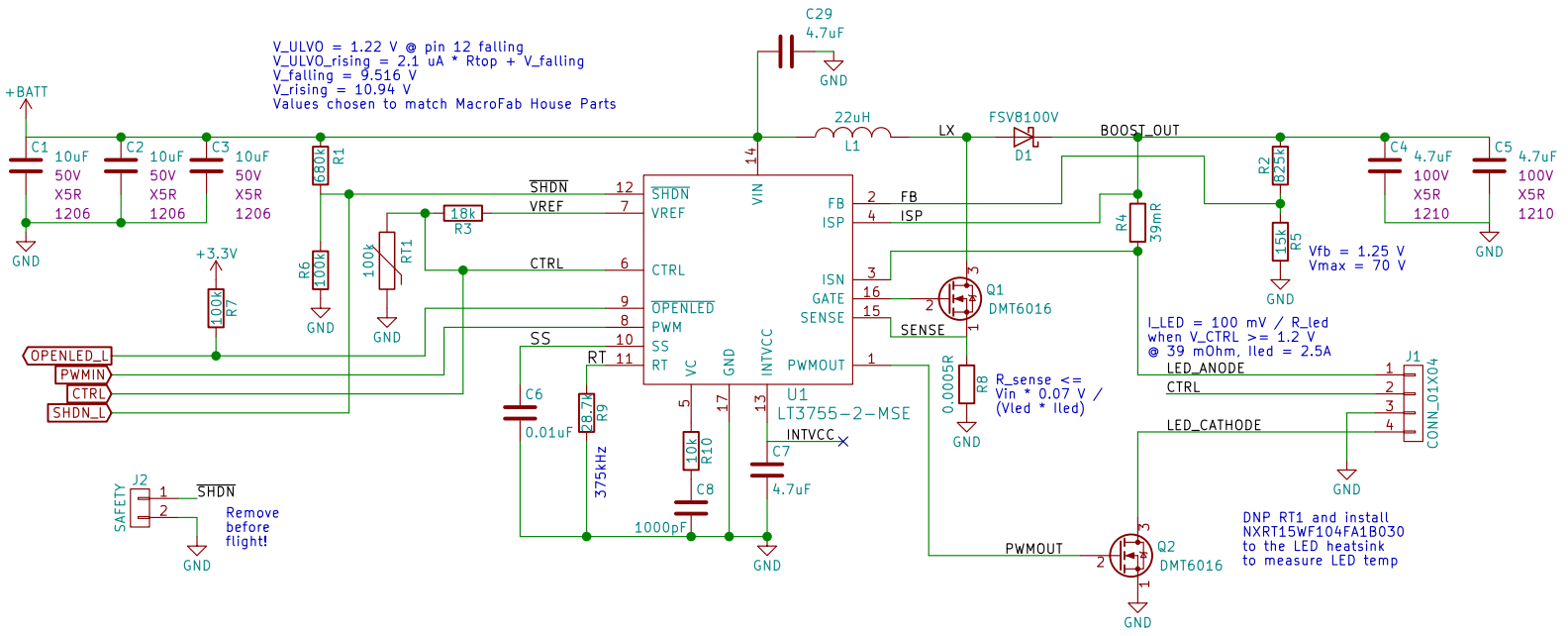
Sheet: /
File: dronelight.sch

Title: Dronelight

Size: USLetter	Date: 2017-05-29	**Rev: 2**
KiCad E.D.A. kicad 4.0.6		Id: 1/5



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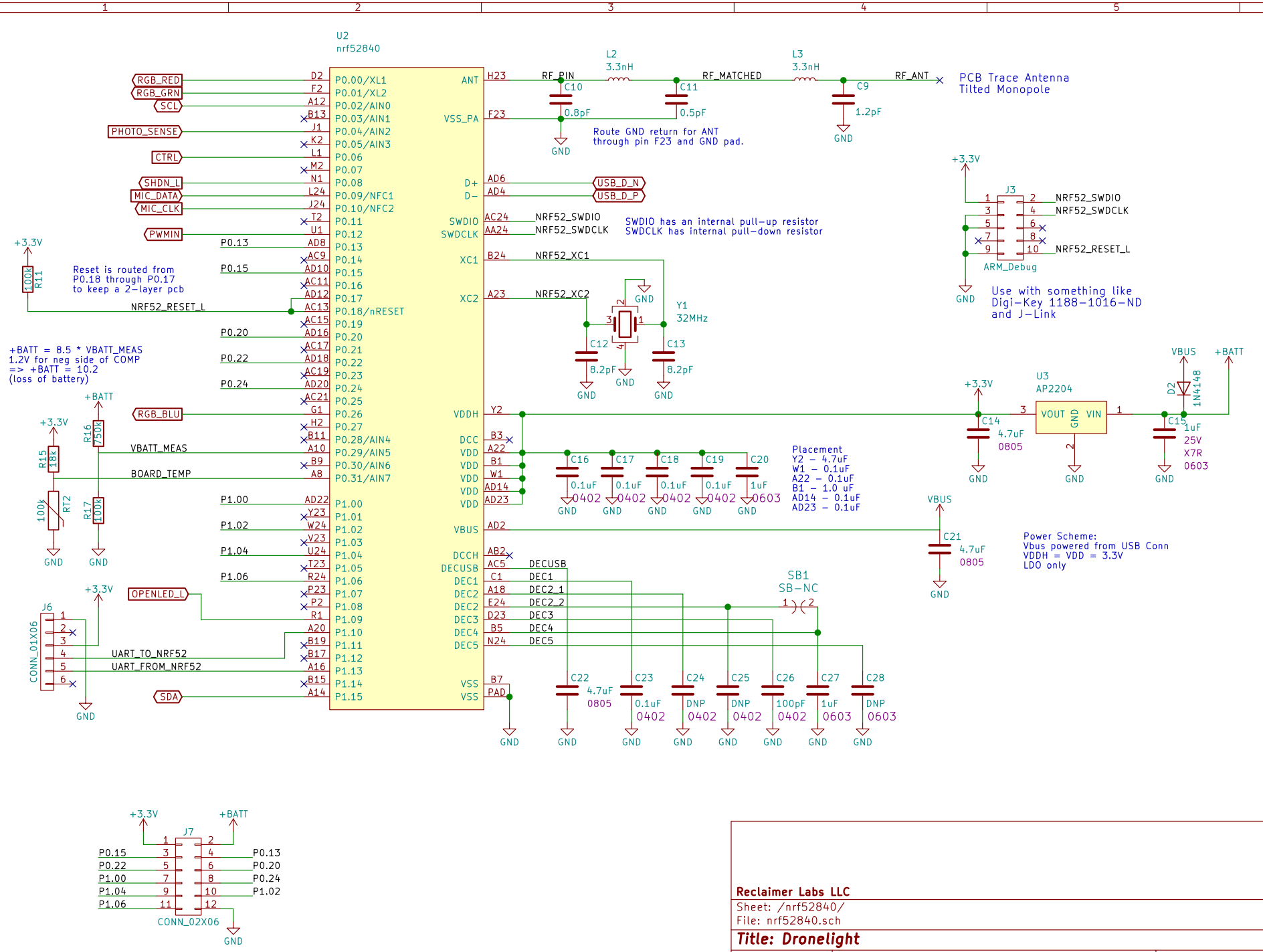
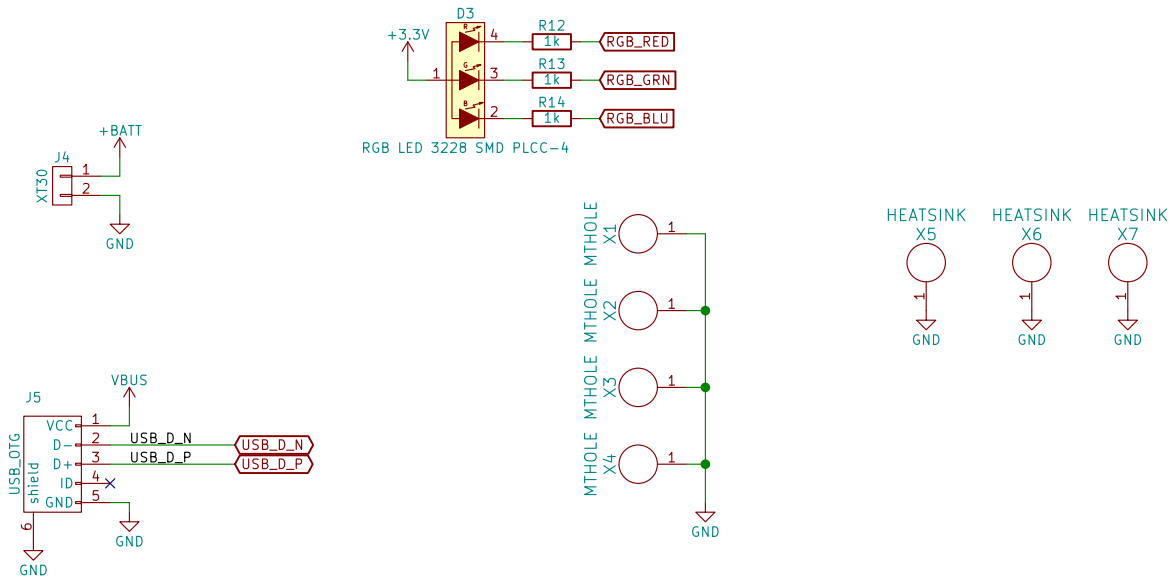
File: LED_Driver_Boost.sch	
Title: Dronelight	
Size: USLetter | Date: 2017-05-29	**Rev: 2**
KiCad E.D.A. kicad 4.0.6	Id: 2/5


U2
nrf52840
RGB_RED
RGB_GRN
SCL
PHOTO_SENSE
CTRL
SHDN_L
MIC_DATA
MIC_CLK
PWMIN
RGB_BLU
VBATT_MEAS
BOARD_TEMP
OPENLED_L
UART_TO_NRF52
UART_FROM_NRF52
SDA
P0.13
P0.15
P0.20
P0.22
P0.24
P1.00
P1.02
P1.04
P1.06
L2
3.3nH
L3
3.3nH
RF_PIN
RF_MATCHED
RF_ANT
PCB Trace Antenna
Tilted Monopole
Route GND return for ANT
through pin F23 and GND pad.
USB_D_N
USB_D_P
NRF52_SWDIO
NRF52_SWDCLK
SWDIO has an internal pull-up resistor
SWDCLK has internal pull-down resistor
NRF52_XC1
NRF52_XC2
Y1
32MHz
NRF52_RESET_L
Reset is routed from
P0.18 through P0.17
to keep a 2-layer pcb
+BATT = 8.5 * VBATT_MEAS
1.2V for neg side of COMP
=> +BATT = 10.2
(loss of battery)
Placement
Y2 - 4.7uF
W1 - 0.1uF
A22 - 0.1uF
B1 - 1.0 uF
AD14 - 0.1uF
AD23 - 0.1uF
U3
AP2204
VOUT
GND
VIN
1N4148
Power Scheme:
Vbus powered from USB Conn
VDDH = VDD = 3.3V
LDO only
SB1
SB-NC
DECUSB
DEC1
DEC2_1
DEC2_2
DEC3
DEC4
DEC5
ARM_Debug
Use with something like
Digi-Key 1188-1016-ND
and J-Link
CONN_01X06
CONN_02X06
Reclaimer Labs LLC
Sheet: /nrf52840/
File: nrf52840.sch
Title: Dronelight
Size: USLetter
Date: 2017-05-29
Rev: 2
KiCad E.D.A. kicad 4.0.6
Id: 3/5



Reclaimer Labs LLC		
Sheet: /Connectors and Misc/		
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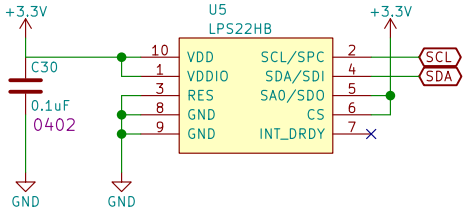
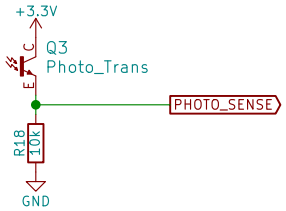
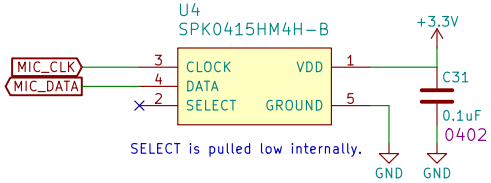
Title: Dronelight		
Size: USLetter	Date: 2017-05-29	**Rev: 2**
KiCad E.D.A. kicad 4.0.6		Id: 4/5







Reclaimer Labs LLC		
Sheet: /Sensors/		
File: Sensors.sch		
Title: Dronelight		
Size: USLetter	Date: 2017-05-29	**Rev: 2**
KiCad E.D.A. kicad 4.0.6		Id: 5/5