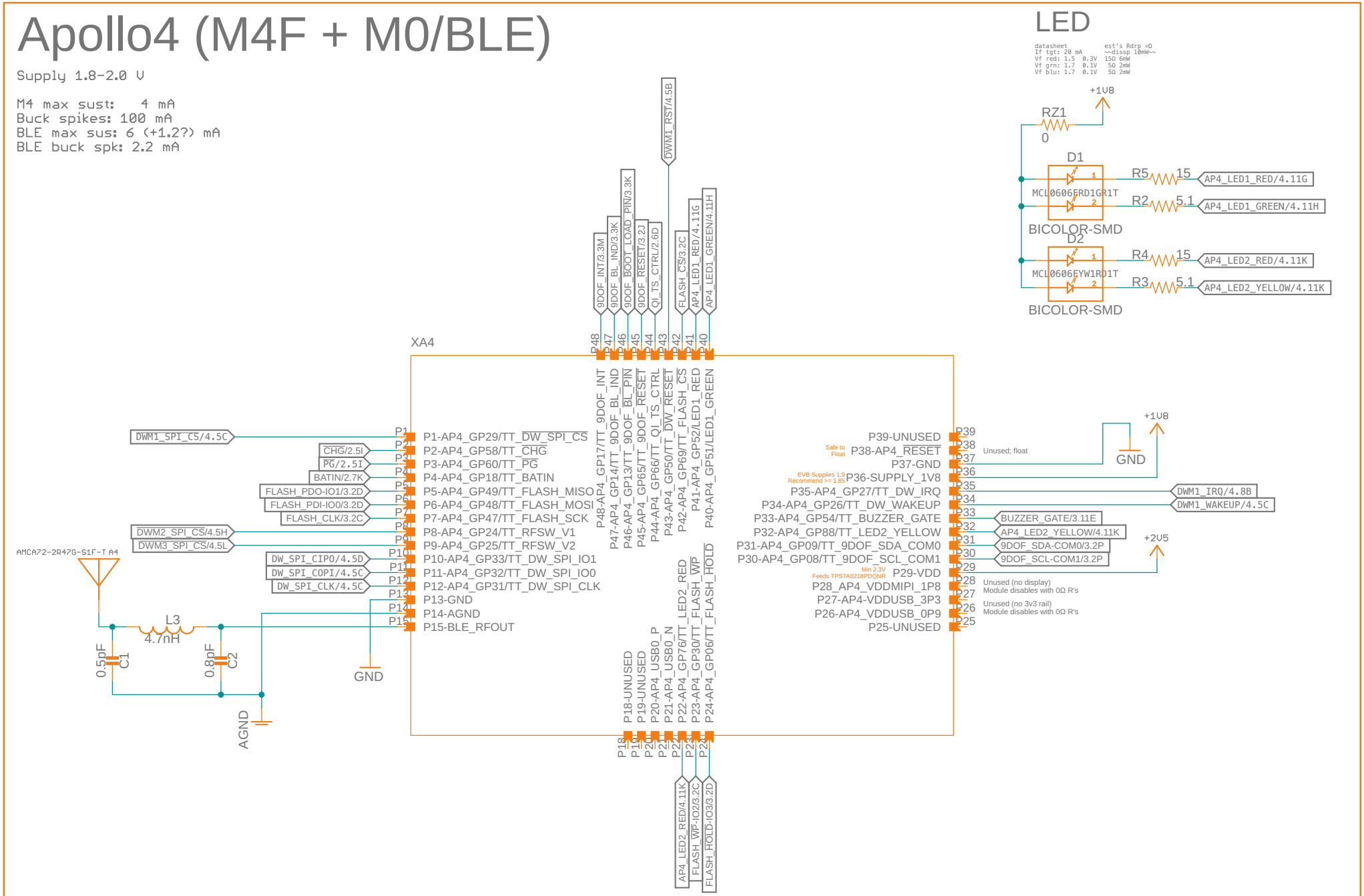
Apollo4 (M4F + M0/BLE)

Supply 1.8-2.0 V

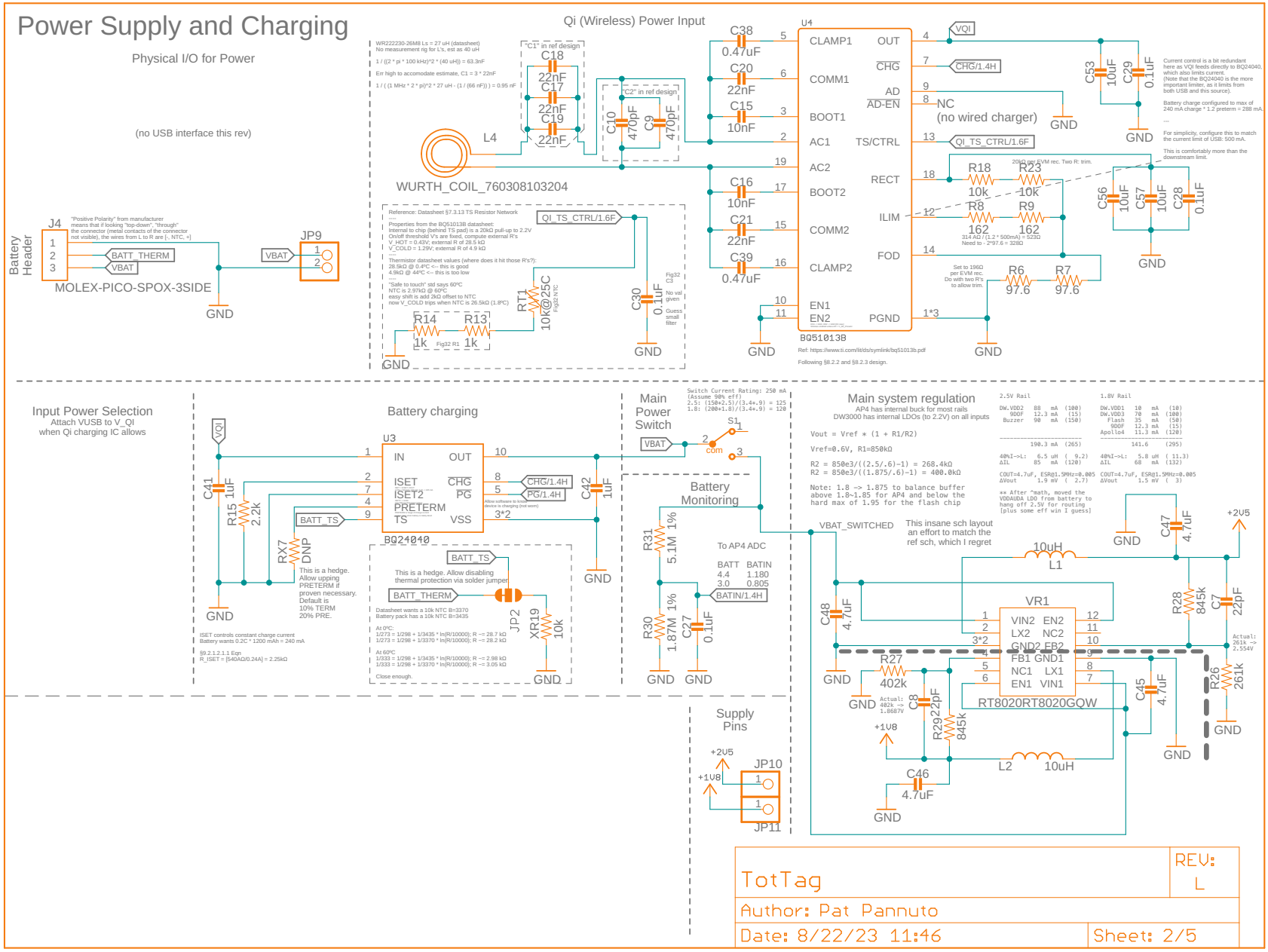
M4 max sust: 4 mA
Buck spikes: 100 mA
BLE max sus: 6 (+1.2?) mA
BLE buck spk: 2.2 mA



TotTag	REV: L
Author: Pat Pannuto	
Date: 8/22/23 11:46	Sheet: 1/5

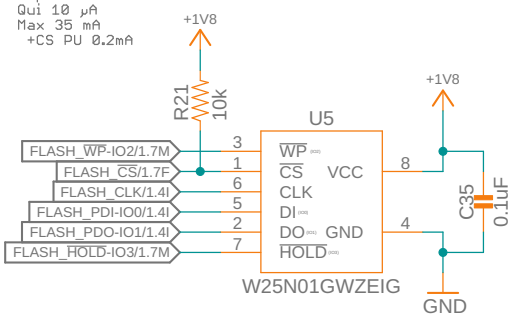
BATTERY

HCP643450NZC, 3.7V, 1200mah
Bare raw cell: 6.4*34.5*50.5mm max. in T*W*L
Assemble size: 6.4*34.5*52 mm max. in T*W*L
Over-charge voltage: 4.28V
Over- discharge voltage: 3.0V
Continuous charge rate: 0.2C
Peak charge rate:1C
Continuous discharge rate: 0.2C
Peak discharge rate:1C, for 2-3ms
NTC, 10K B=3435
Wire: UL1571-28AWG#, 100mm, from left
Connector: MOLEX87439-3P, positive
PCM added



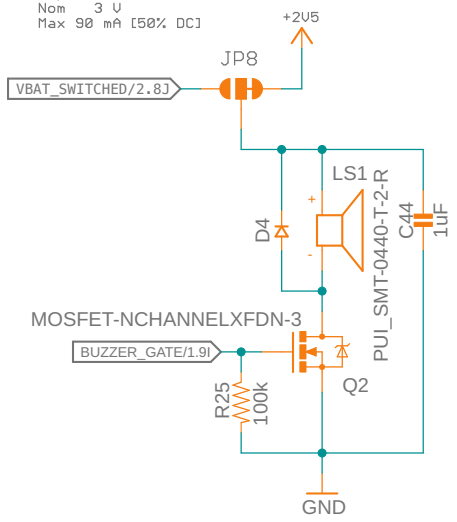
External Flash

Sup 1.7 - 1.95 V
Qui 10 µA
Max 35 mA
+CS PU 0.2mA



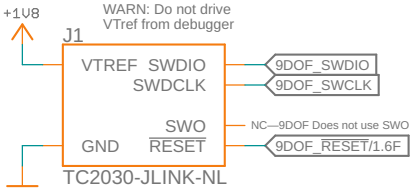
Buzzer

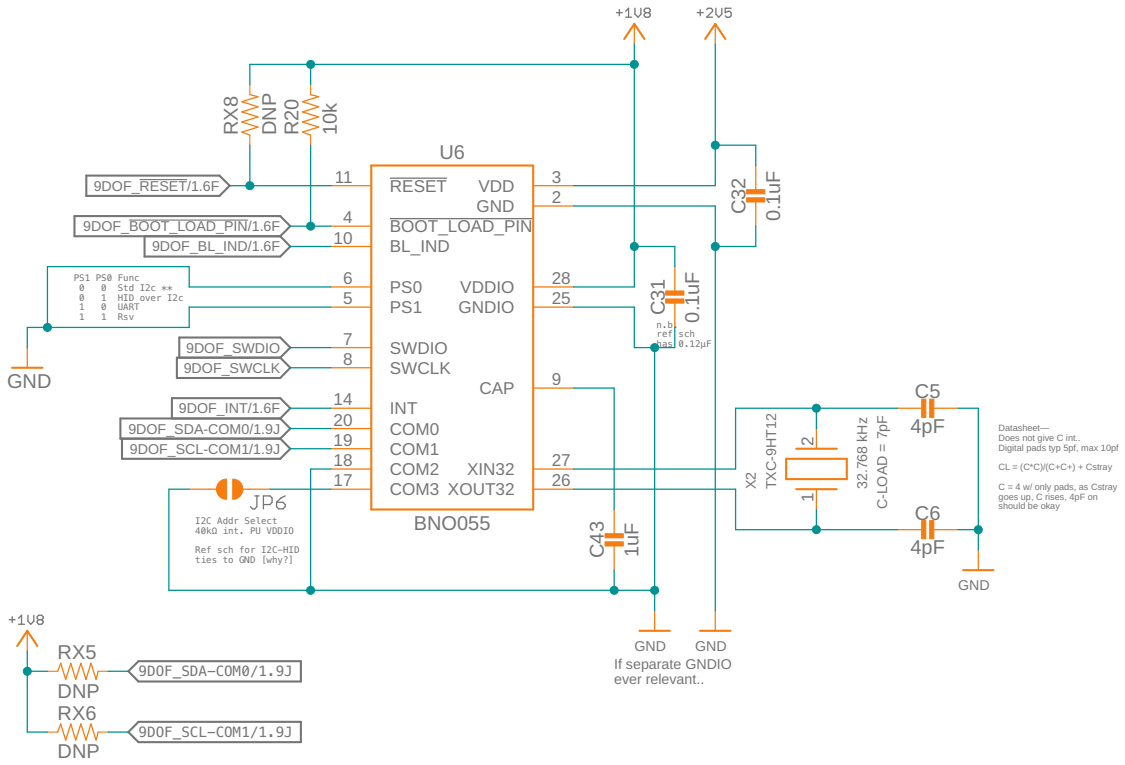
Sup 2 - 4 V
Nom 3 V
Max 90 mA [50% DC]



9-DOF

Sensors 2.4 - 3.6 V
I/O 1.7 - 3.6 V
Qui 40 µA
Max 12.3 mA
(current max sum rails)





TotTag	REV: L
Author: Pat Pannuto	
Date: 8/22/23 11:46	Sheet: 3/5

UWB: DWM3000 (x3?)

DWM3000 Req's

	min	typ	max
VDD1	1.6		3.6
VDD3V3	2.5		3.6

DEEP SLEEP	260 nA
SLEEP	850 nA
IDLE	12–20 mA
INIT	6 mA
TX	40–45 mA
RX	50–55 mA

DW3xx0 Chip Req's

Supply 2.4 – 3.6 V
ds #'s @ 3.0 V

	min	typ	max
VDD1	1.6	3.0	3.6
VDD2a,b	2.4	3.0	3.6
VDD3	1.5	3.0	3.6

Voltage on GPIO0–5, WAKEUP, RSTn, SPICSn, SPIMOSI, SPICLK
-> Max: VDD1+0.3V

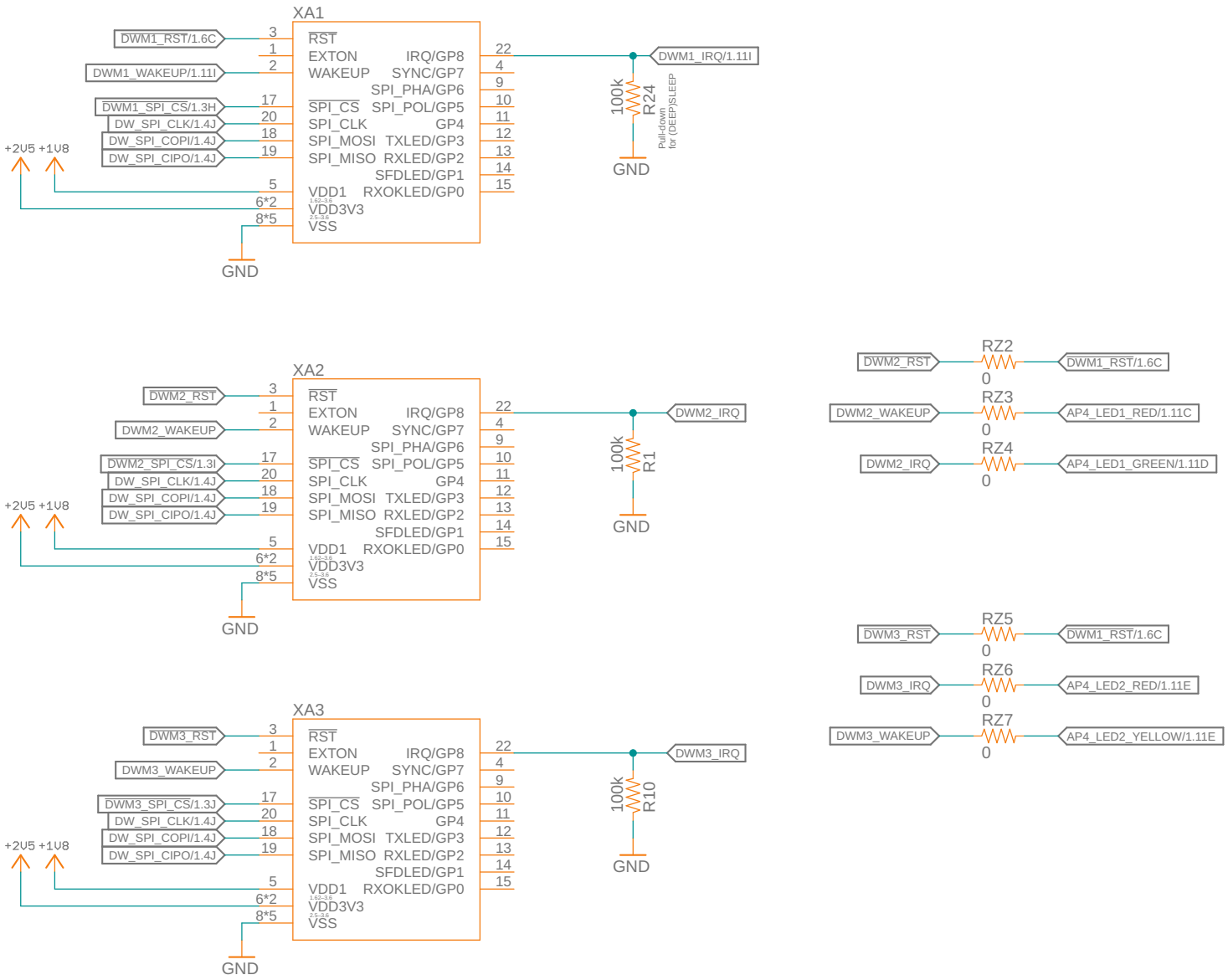
I/O current (max): 10 mA
VDD1 -> I/O

Peak cont current is RX CH9: 88 mA

TX worst-case:
VDD2a/b: 20 mA
VDD3: 20 mA

RX worst-case:
VDD2a/b: ~5 mA
VDD3: ~70 mA

Quiescent: 0.26 µA



TotTag	REV: L
Author: Pat Pannuto	
Date: 8/22/23 11:46	Sheet: 4/5

Miscellany

Fiducials - Top

Fiducials - Bottom

Test Points

TotTag	REV: L
Author: Pat Pannuto	
Date: 8/22/23 11:46	Sheet: 5/5