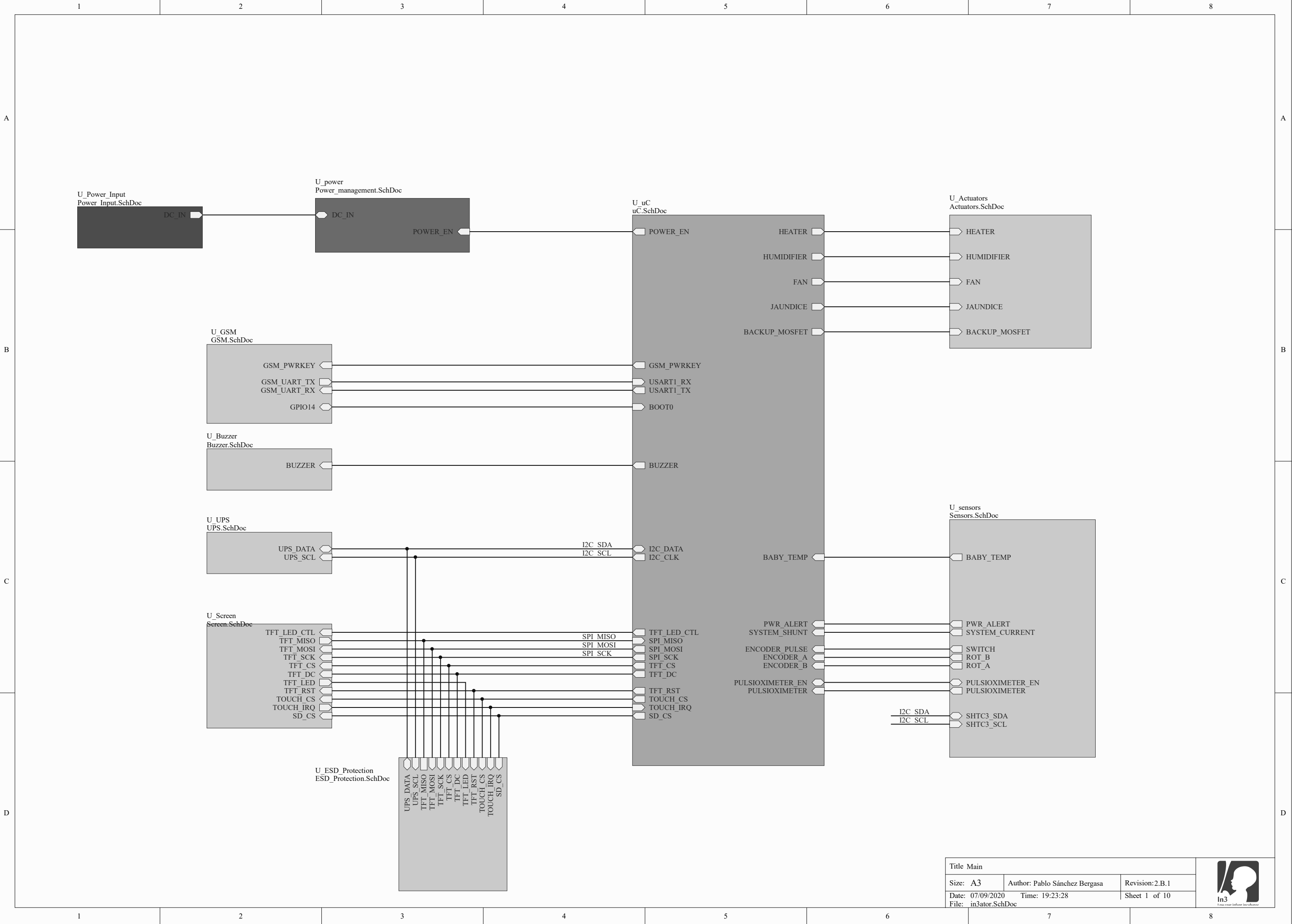
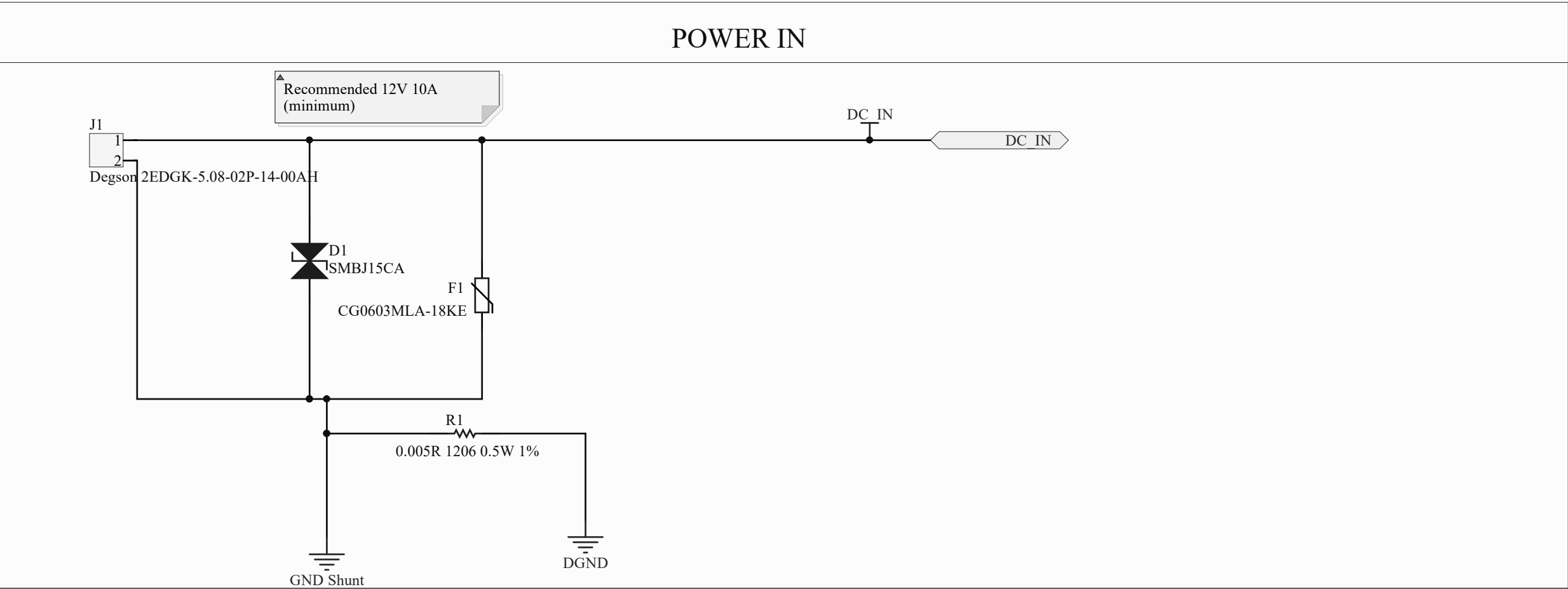
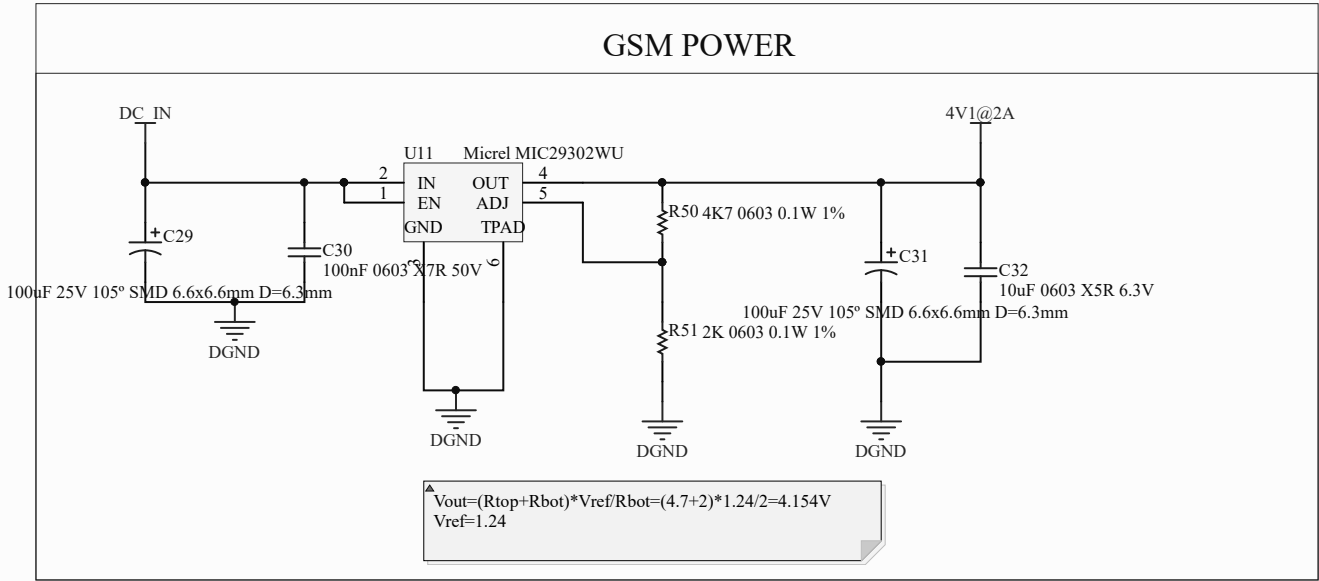
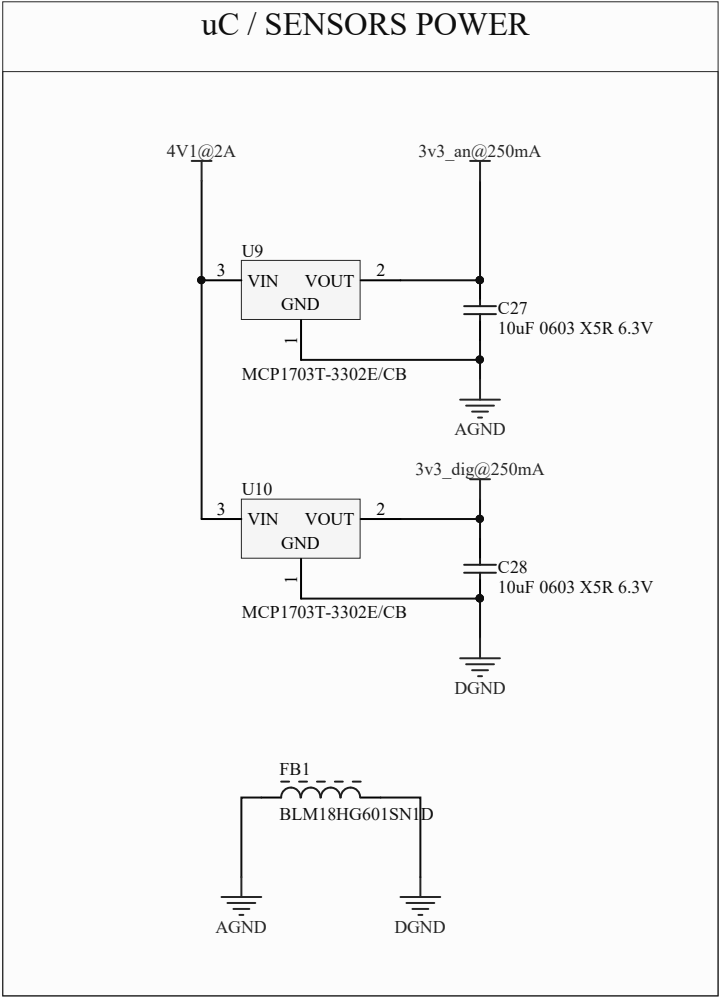
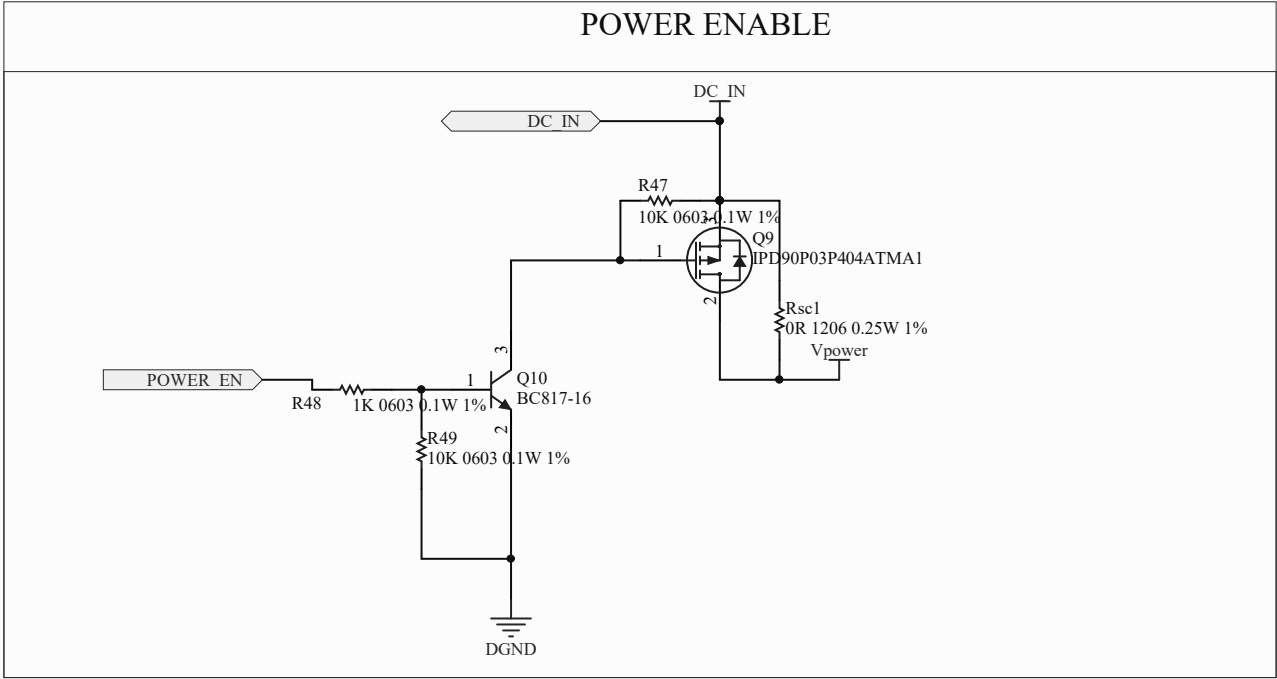


Comment	Quantity	Designator	Manufacturer Part Number	Manufacturer Part Number 2
CUI CMT-1285C-035	1	BUZ1	CMT-1285C-035	GMC1205YA-16R2048
1uF 0603 XSR 16V	6	C1, C2, C3, C4, C6, C17	GRM185R61C105K E44D	
18pF 0603 NPO 5% 50V	3	C5, C7, C12	C0603C180K5RACTU	
100nF 0603 X7R 50V	13	C8, C9, C10, C11, C14, C15, C16, C18, C19, C20, C21, C26, C30		
100uF 25V 105° SMD 6.6x6.6mm D=6.3mm	3	C13, C29, C31	VZL101M1ETR-0607	
4,7 uF 0603 XSR 10V	3	C22, C23, C25	CL10A475KP8NNNC	
2.2 uF 0603 XSR 10V	1	C24	CL10A225KP8NNNC	EMK107B1225MA-T
10uF 0603 XSR 6.3V	3	C27, C28, C32		
SMBJ15CA	1	D1		
ESDA6V1-55C6	4	D2, D4, D5, D6	ESDA6V1-55C6	
LED	1	D3	AM2520ZGC09	
CG0603MLA-18KE	1	F1	CG0603MLA-18KE	
BLM18HG601SN1D	1	F81	BLM18HG601SN1D	
Degson 2EDGK-5.08-02P-14-00AH	1	J1	2EDGK-5.08-02P-14-00AH + 2EDGVC-5.08-02P	WJ2EDGVC-5.08-2P + WJ2EDGK-5.08-2P
Harwin M20-7820446	2	J2, J3	M20-7820446	
Amphenol TBP01R2-508-08BE	1	J4	TBP01R2-508-08BE + TBP01P1-508-08BE	WJ2EDGVC-5.08-8P + KF2EDGK-5.08-8P
JST B2B-PH-K-S(LF)(SN)	1	J5	B2B-PH-K-S(LF)(SN)	
JST B2B-XH-A	1	J6	B2B-XH-A	
CUI SJ1-3523NG	1	J7	SJ1-3523NG	PJ-307C
Kycon STX-3790-5N	1	J8	STX-3790-5N	
PJ-3059-X	1	J9		
Molex 53290-0480	1	J10	53290-0480	
Molex 52418-0410	1	J11	52418-0410	
JST B3B-XH-A (LF)(SN)	1	J12		
Bourns SRN6045TA-221M	1	L1	SRN6045TA-221M	SWPA6045S221MT
BC817-16	3	Q1, Q7, Q10		
Infineon IRLB8314PBF	4	Q2, Q4, Q5, Q6		
BUK98180-100A/CUX	1	Q3	BUK98180-100A/CUX	
NTR1P02LT1G	1	Q8	NTR1P02LT1G	
IPD90P03P404ATMA1	1	Q9	IPD90P03P404ATMA1	WSF70P03
0.005R 1206 0.5W 1%	1	R1	WSLP1206SL000FEA	FMF06FTHR005-LHL
10K 0603 0.1W 1%	17	R2, R7, R11, R19, R20, R21, R23, R24, R25, R26, R37, R39, R40, R41, R45, R47, R49		
2K 0603 0.1W 1%	3	R3, R13, R51		
100R 0603 0.1W 1%	9	R4, R5, R6, R8, R16, R17, R18, R44, R46	CR0603-FX-1001ELF	
0R 0603 0.1W 1%	4	R9, R15, R32, R33		
1K 0603 0.1W 1%	8	R10, R12, R30, R31, R34, R35, R43, R48	CR0603-FX-1001ELF	
30K 0603 0.1W 1%	6	R14, R27, R28, R29, R36, R42		
1ohms 1210 3/4watt 1%	1	R22	CRCW12101R00FK EAFP	
3.3 Mohm 0603 0.1W 1%	1	R38	RC0603FR-07330KL	
4K7 0603 0.1W 1%	1	R50		
U.FL-R-SMT(01)	1	RF_1		
Bourns PEC11R-4215F-S0024	1	SW1	PEC11R-4215F-S0024	
STM32F103RET6	1	U1		
Simcom SIM800C	1	U2	SIM800C	
MFF2	1	U3		
MCP6L02T-E/MS	2	U4, U5		
Avago APDS-9008-020	1	U6	APDS-9008-020	
Sensirion SHTC3	1	U7		
2.2 / 2.4 tft compatible (touch / no touch)	1	U8		
MCP1703T-3302E/CB	2	U9, U10	MCP1703T-3302E/CB	
Micrel MIC29302WU	1	U11		
CX5032GB08000H0HPQZ1	1	Y1	CX5032GB08000H0HPQZ1	





▲ Power consumption table		
Circuit	3V3_digital	3V3_analog
uC	30mA	83mA
Screen		
Buzzer	70mA	
Sensors		15mA



▲ $V_{out} = (R_{top} + R_{bot}) * V_{ref} / R_{bot} = (4.7 + 2) * 1.24 / 2 = 4.154V$
 $V_{ref} = 1.24$

Title Power		
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A

B

C

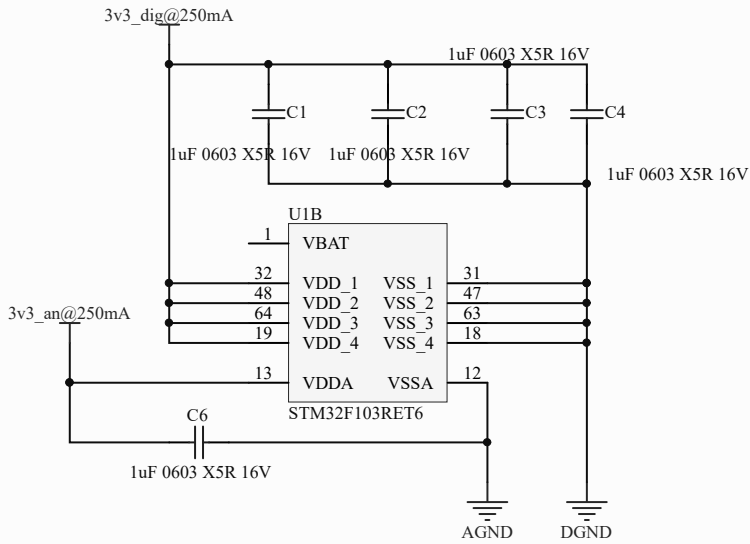
D

A

B

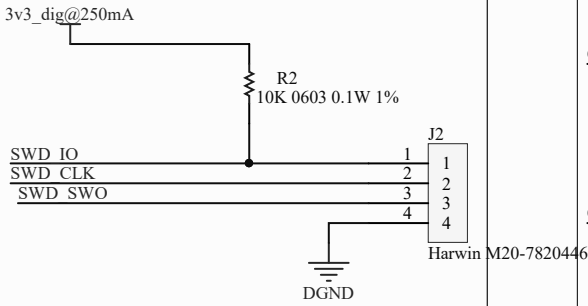
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D

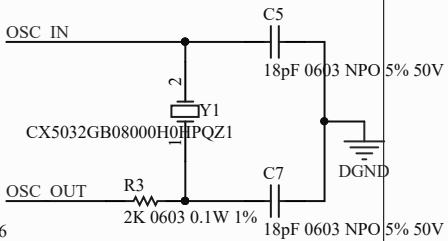


HSE OSC clock:
 $R_s = 6 * ERC = 6 * 330 \text{ohm}$
 $CL = CL1 * CL2 / (CL1 + CL2) + C_{stray} = CL1 / 2 + 3$
 $CL1 = CL2 = 18 \text{pf}$

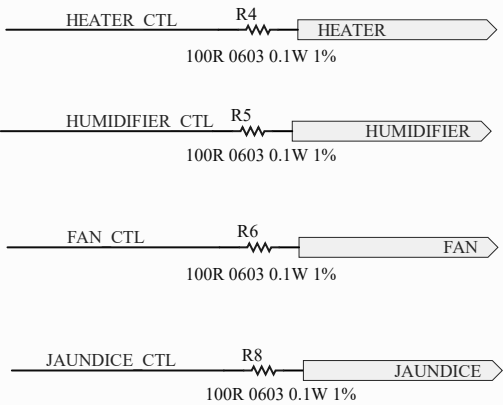
SWD PROGRAMMING



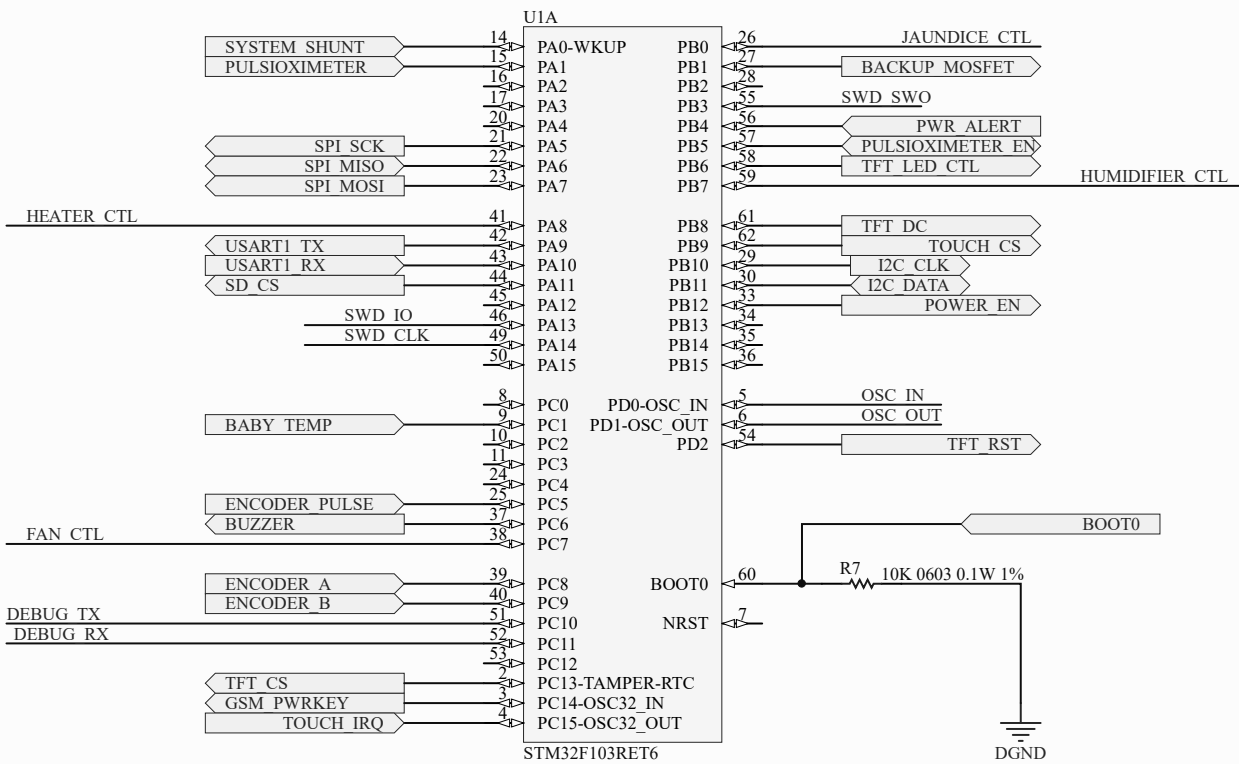
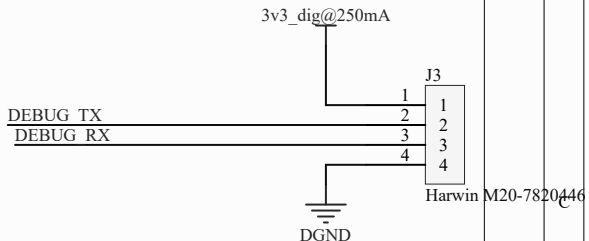
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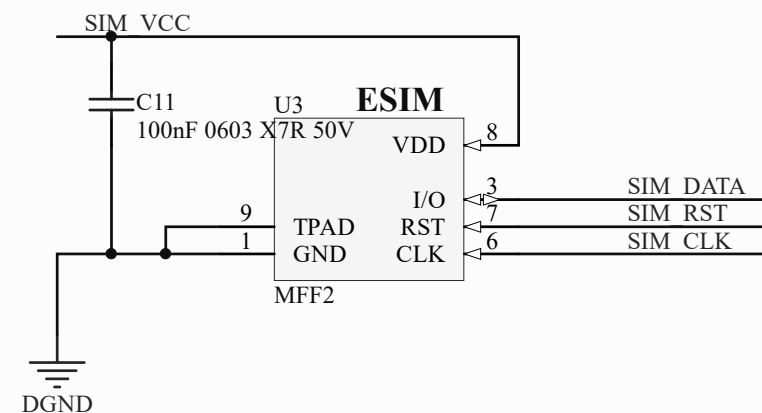
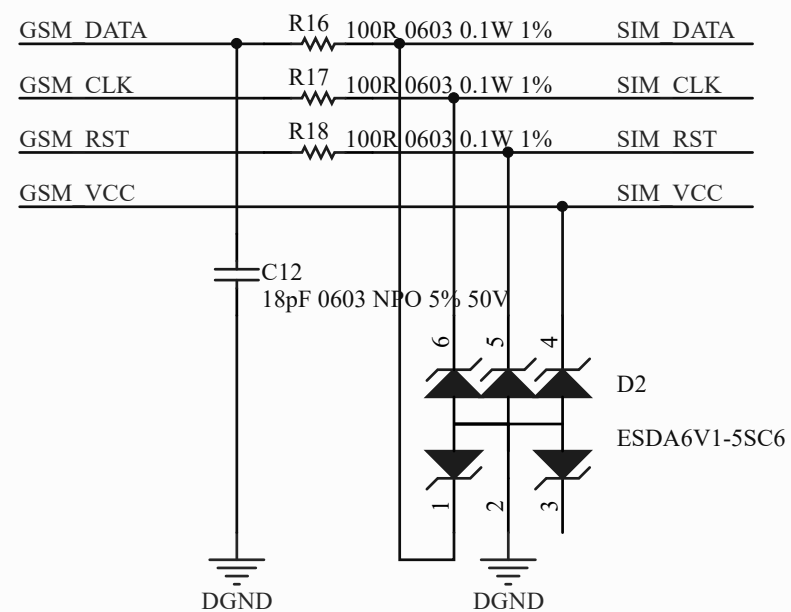


GATE RESISTORS



UART DEBUG

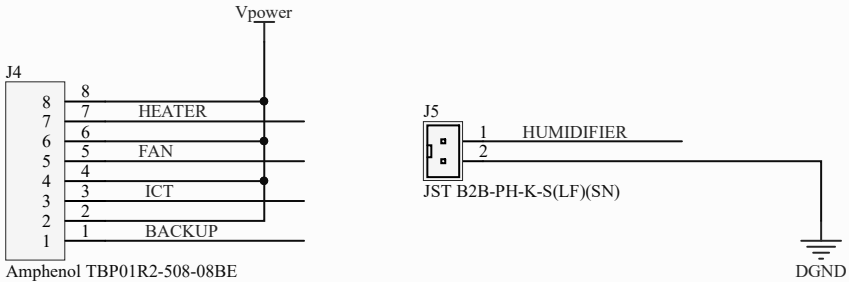
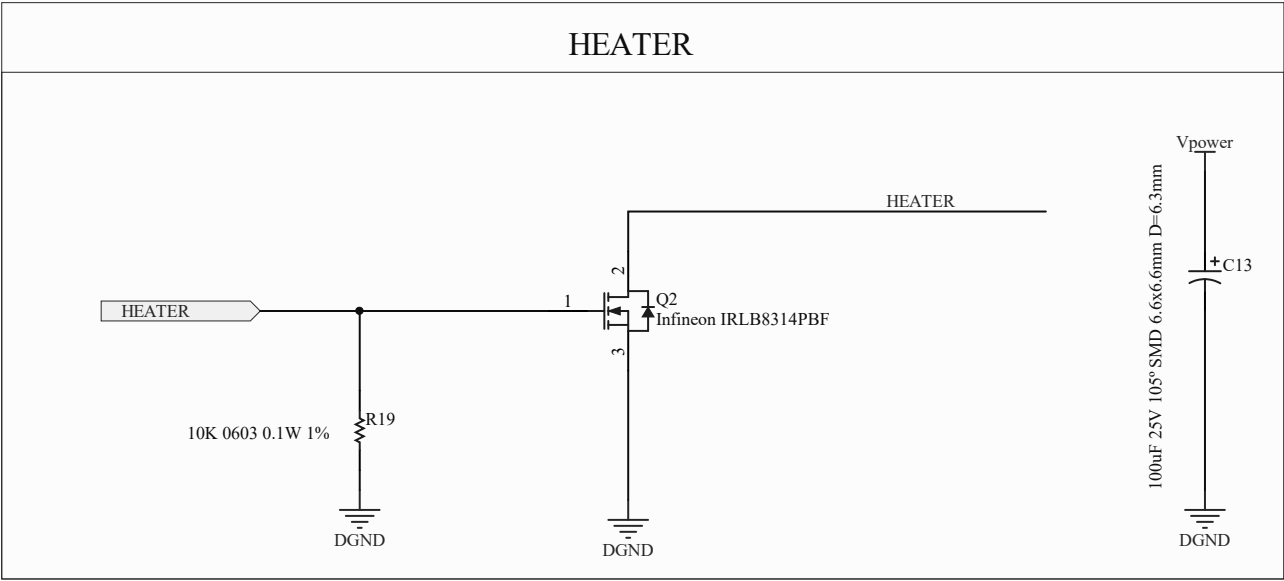


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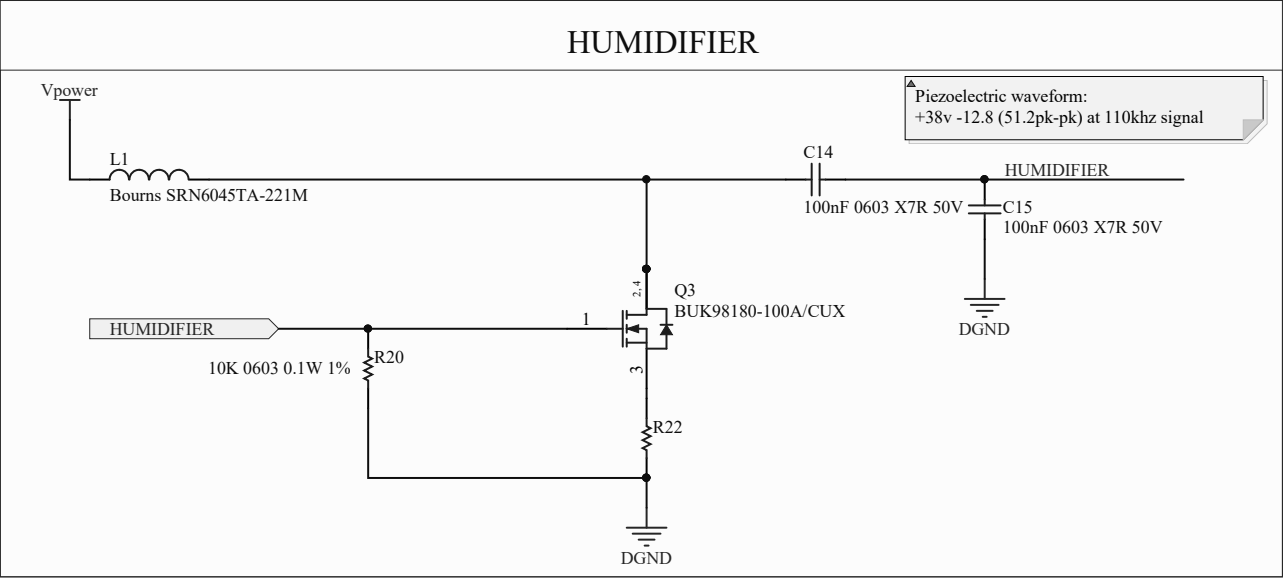
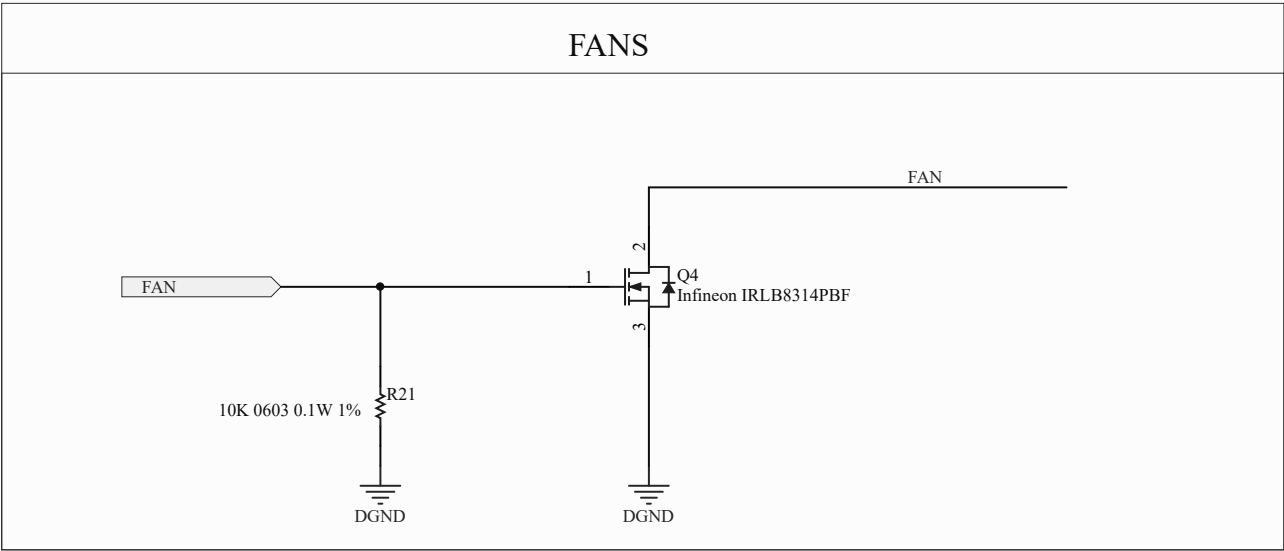
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Low power connector

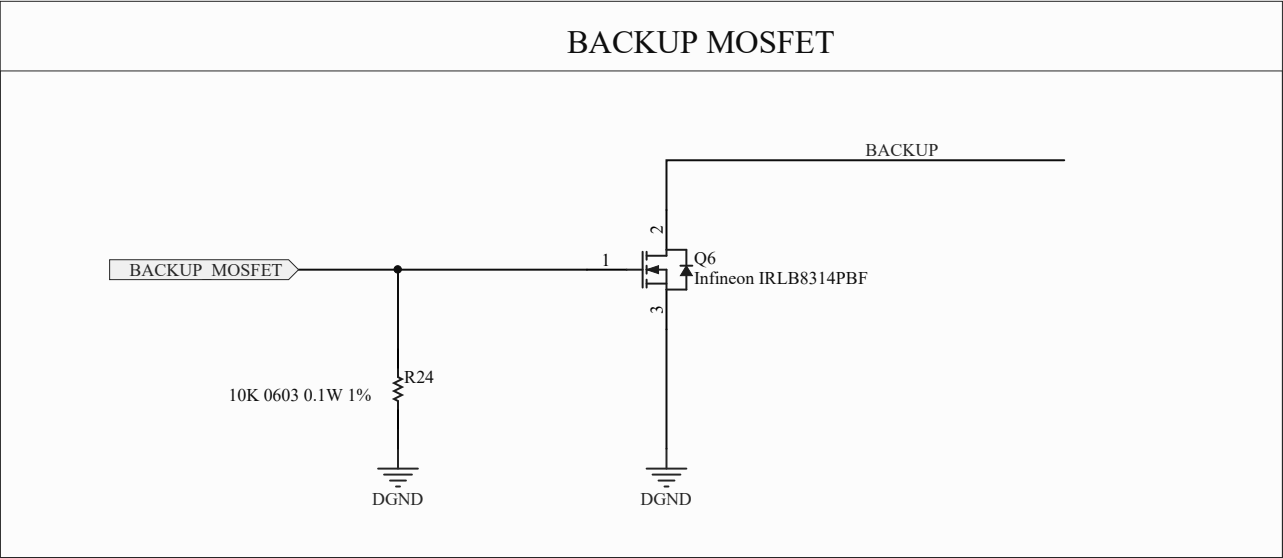
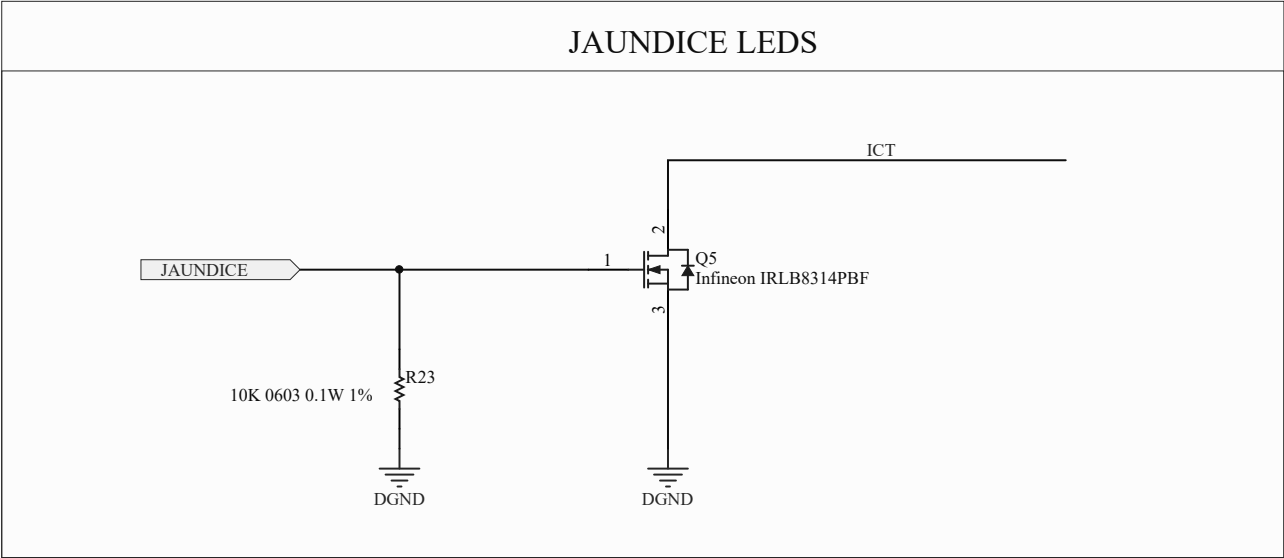
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B



B

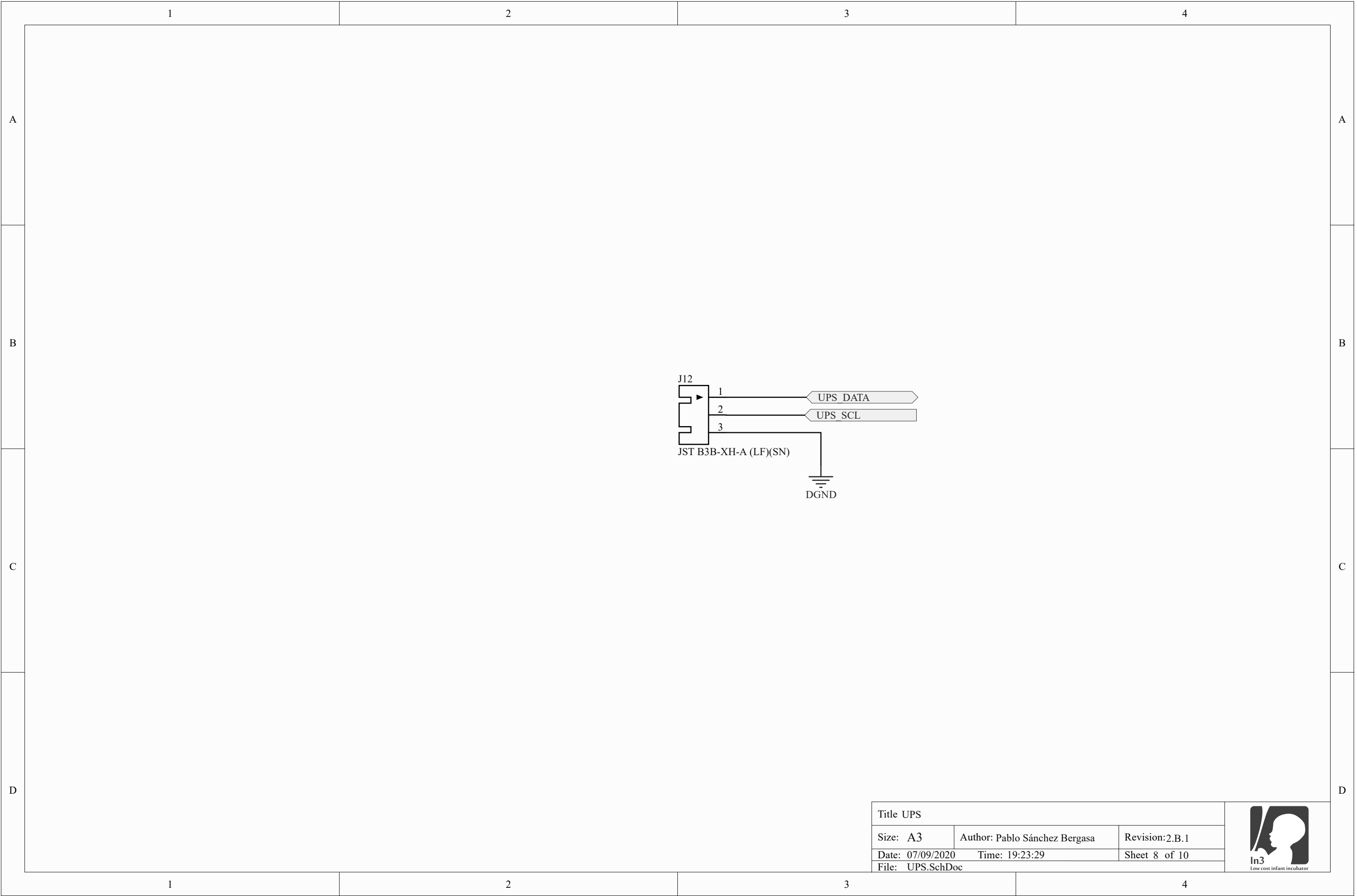
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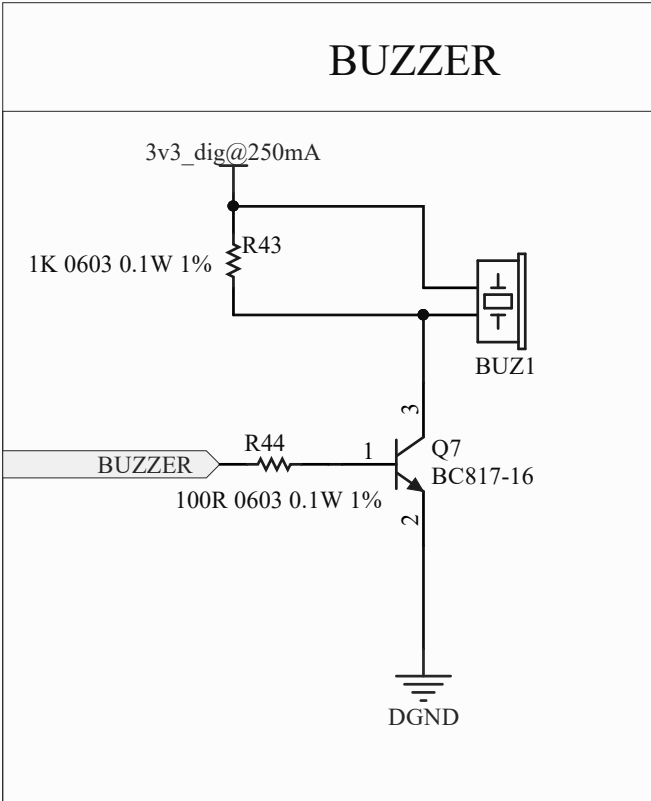



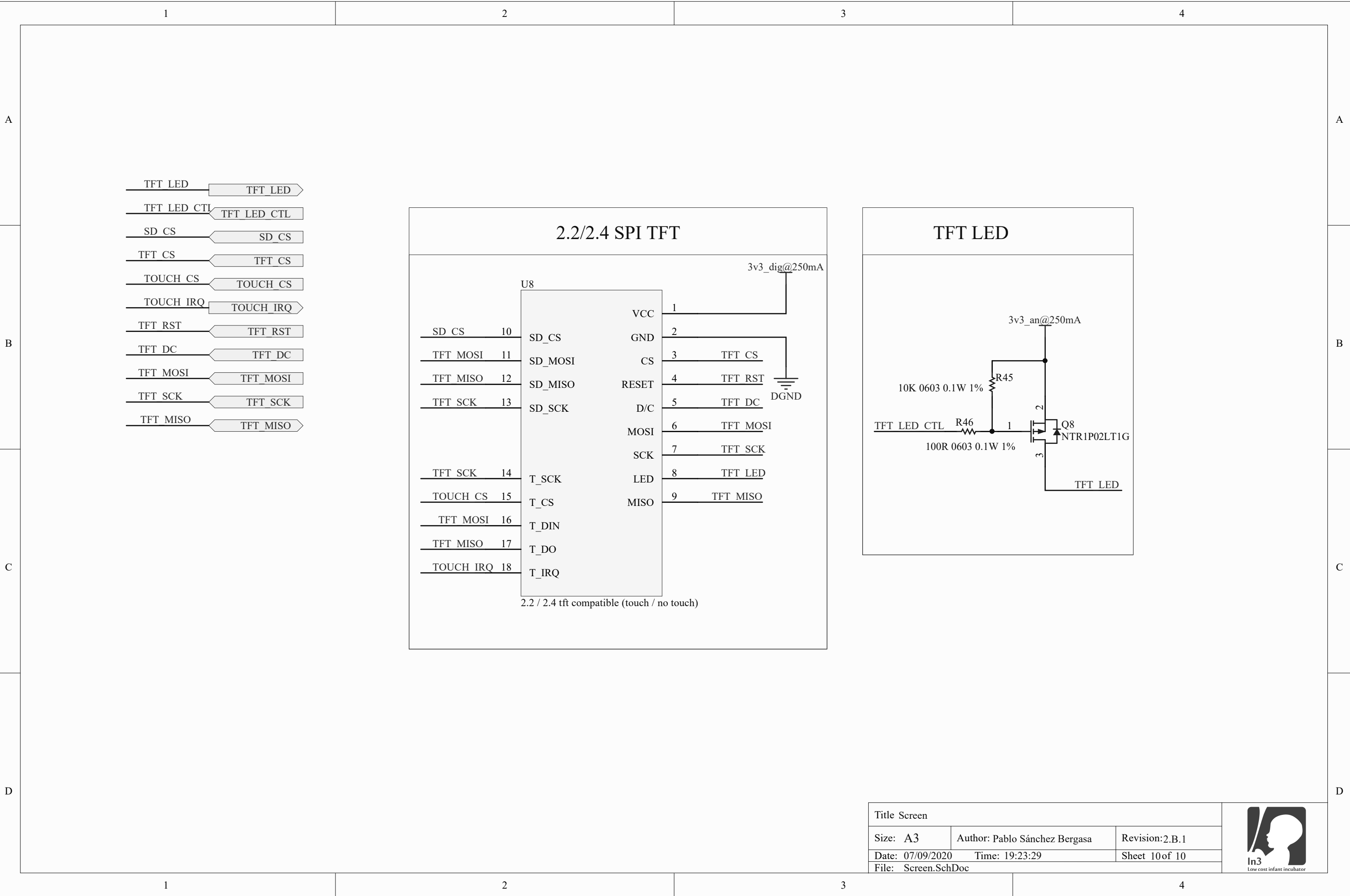
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D

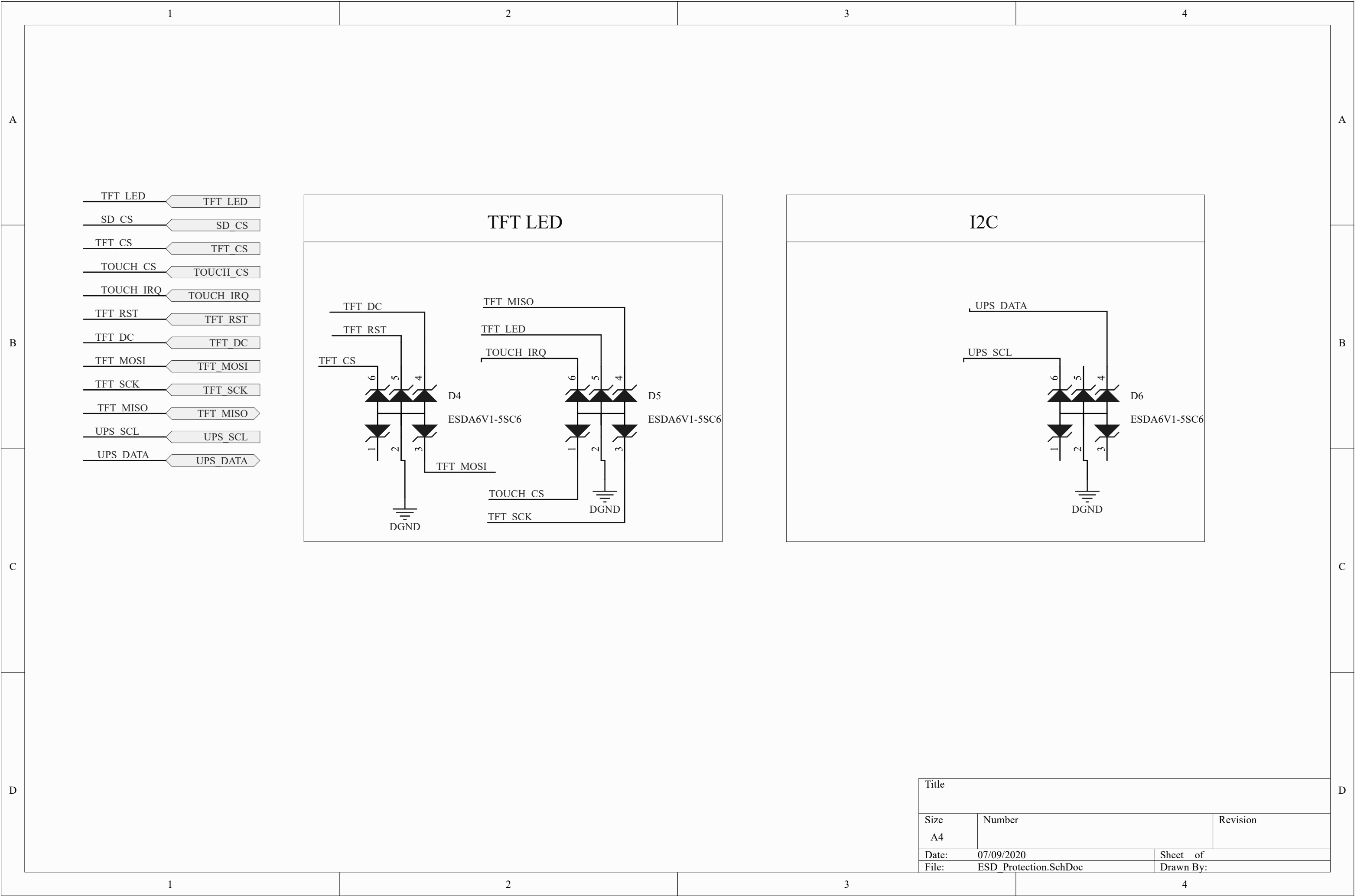
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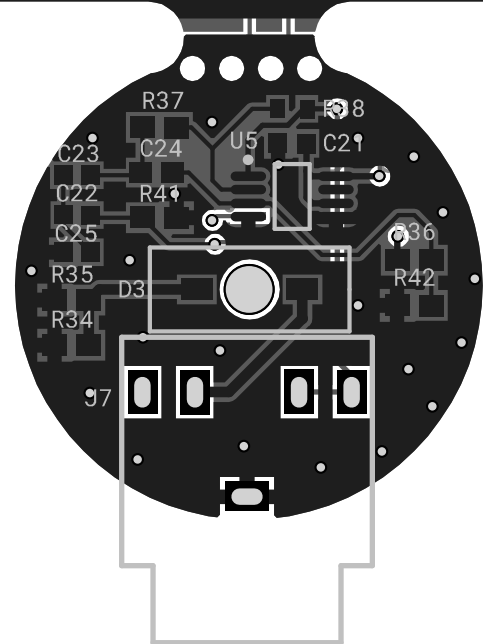
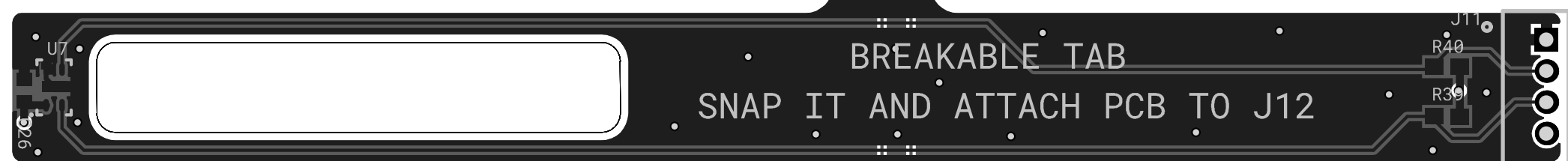
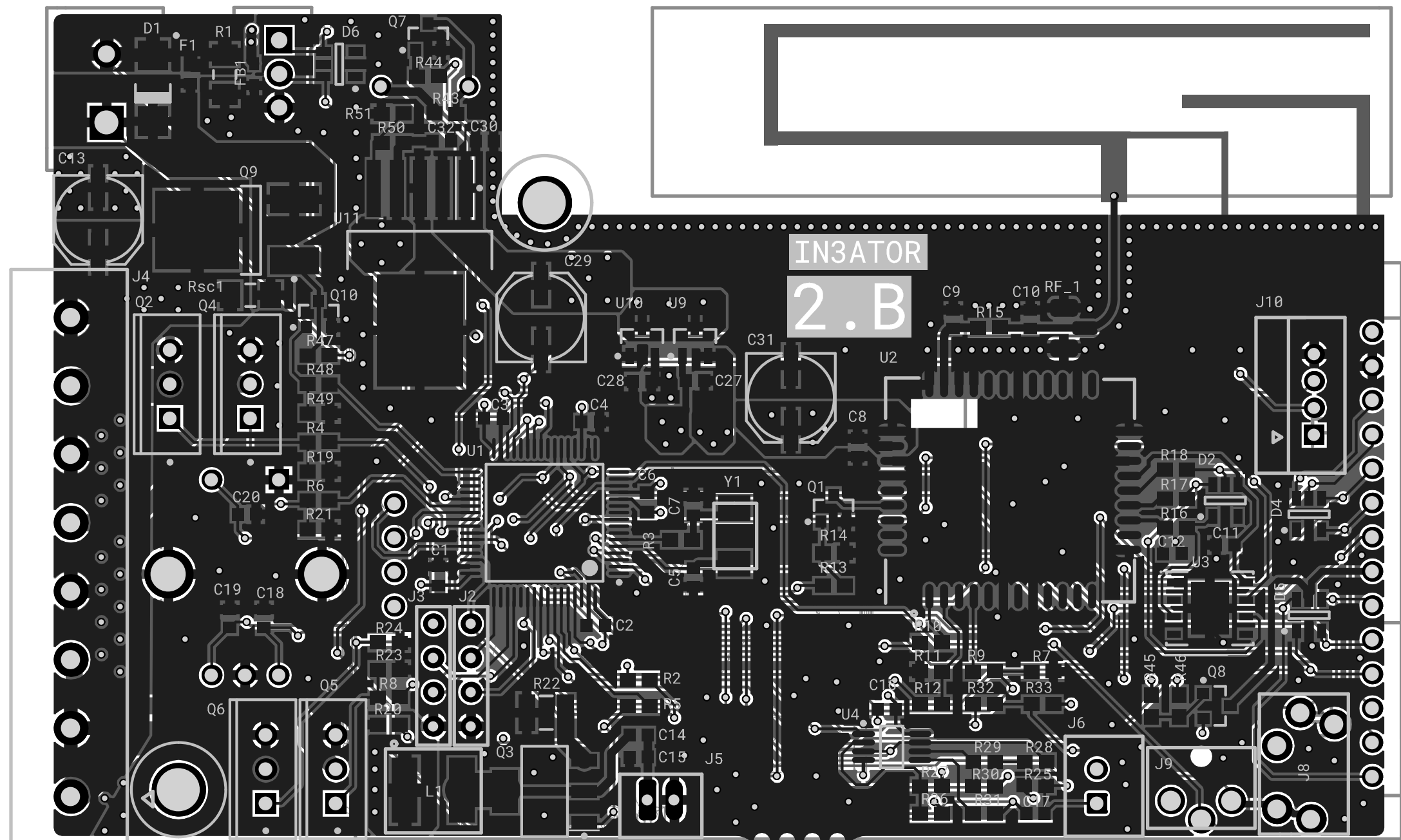


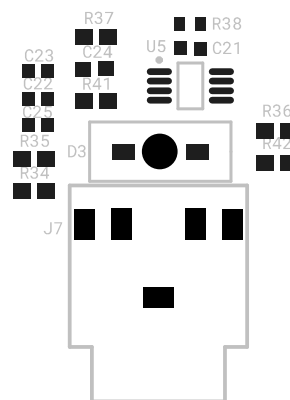
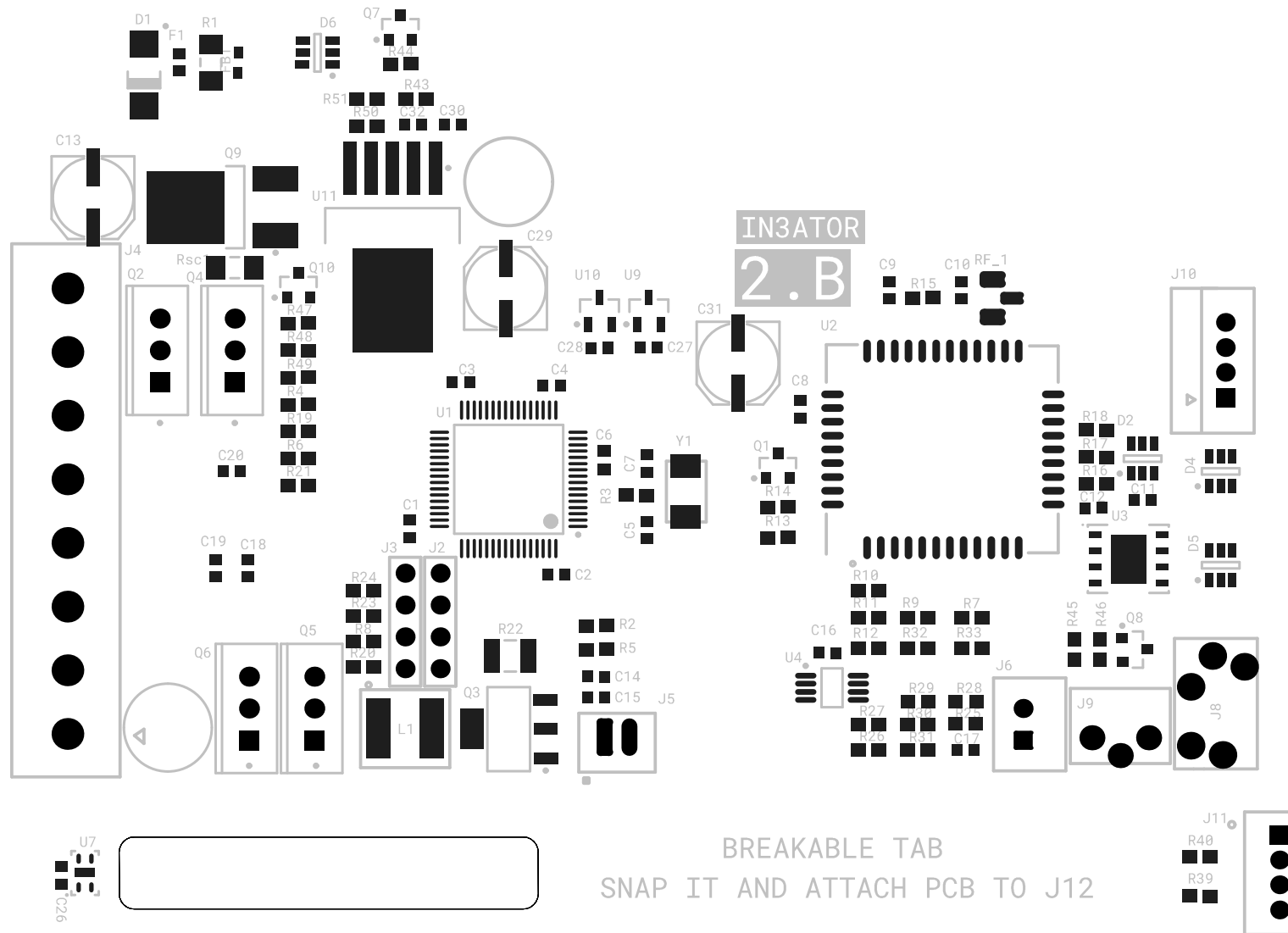
1	2	3	4													
A	<div><div>BUZZER</div></div>			A												
B				B												
C				C												
D	<div><table><tr><td colspan="3">Title Buzzer</td></tr><tr><td>Size: A3</td><td>Author: Pablo Sánchez Bergasa</td><td>Revision:2.B.1</td></tr><tr><td>Date: 07/09/2020</td><td>Time: 19:23:29</td><td>Sheet 9 of 10</td></tr><tr><td colspan="3">File: Buzzer.SchDoc</td></tr></table></div>			Title Buzzer			Size: A3	Author: Pablo Sánchez Bergasa	Revision:2.B.1	Date: 07/09/2020	Time: 19:23:29	Sheet 9 of 10	File: Buzzer.SchDoc			D
Title Buzzer																
Size: A3	Author: Pablo Sánchez Bergasa	Revision:2.B.1														
Date: 07/09/2020	Time: 19:23:29	Sheet 9 of 10														
File: Buzzer.SchDoc																
1	2	3	4													



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File: Screen.SchDoc			







PLACE ON FINGER



SNAP IT AND ATTACH PCB TO J15
BREAKABLE TAB

