

Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\ElectroPlantoE.SchDoc	Drawn By:

LCD 2x16 chars

- Protocol: Parallele

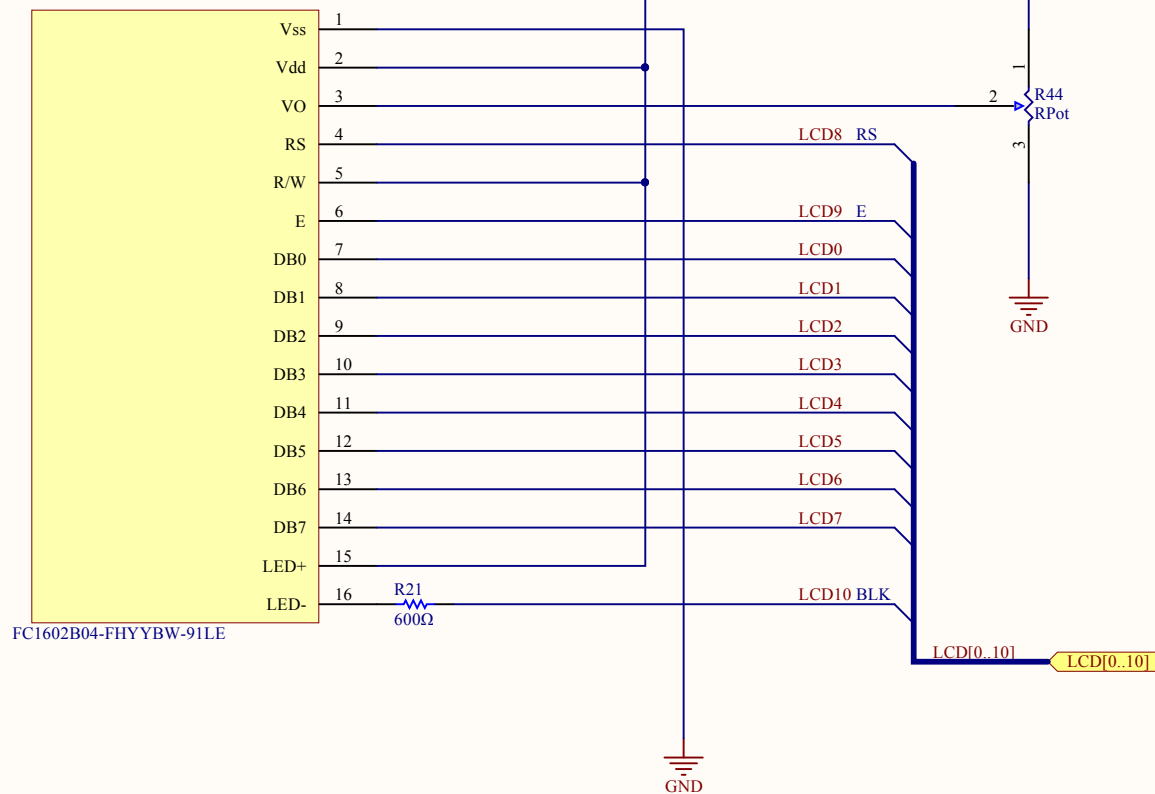
- Supply current

LED = 5mA

Electronic = 1.5mA

- Standby current = 1.5mA

U5



Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\LCD.SchDoc	Drawn By:

LED RGB

- Protocol: Parallele

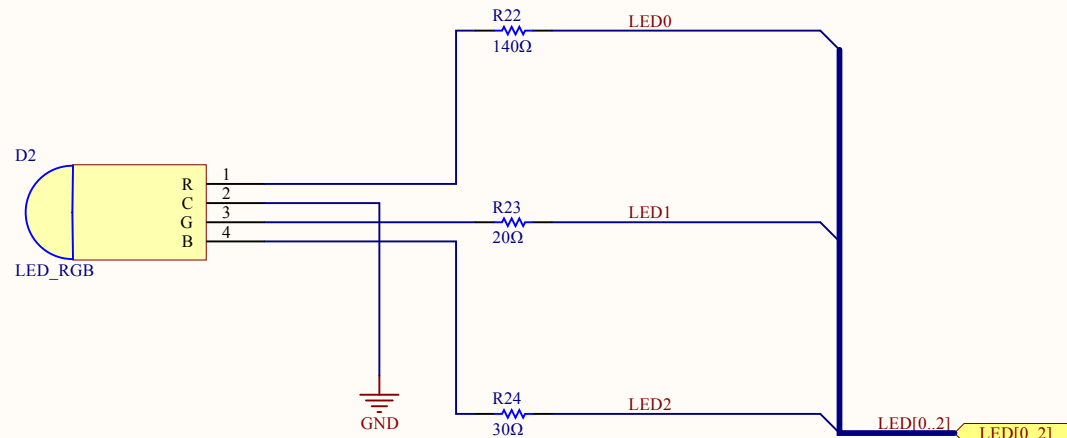
- Supply current

RED = 10mA

GREEN = 10mA

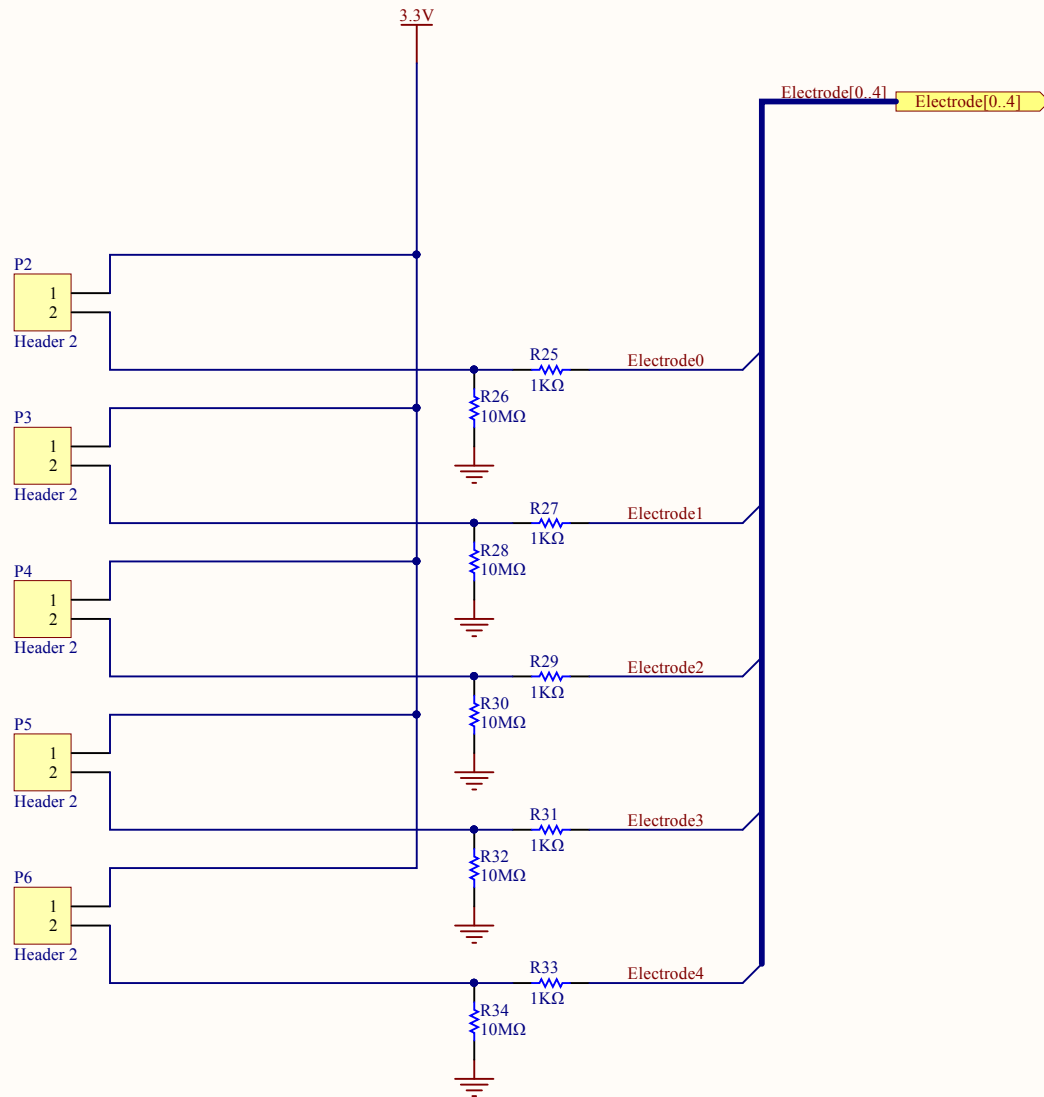
BLUE = 10mA

- Standby current = 0A



Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\LedAlert.SchDoc	Drawn By:

Bargraph
- Protocol: Parallele
- Supply current (per electrode)
Water = 0.3uA
Air = 0A



Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\Level Sensor.SchDoc	Drawn By:

1

2

3

4

A

A

B

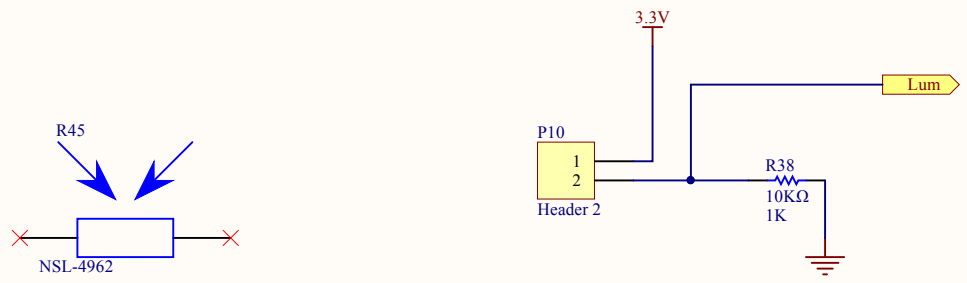
B

C

C

D

D



Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\LumSensor.SchDoc	Drawn By:

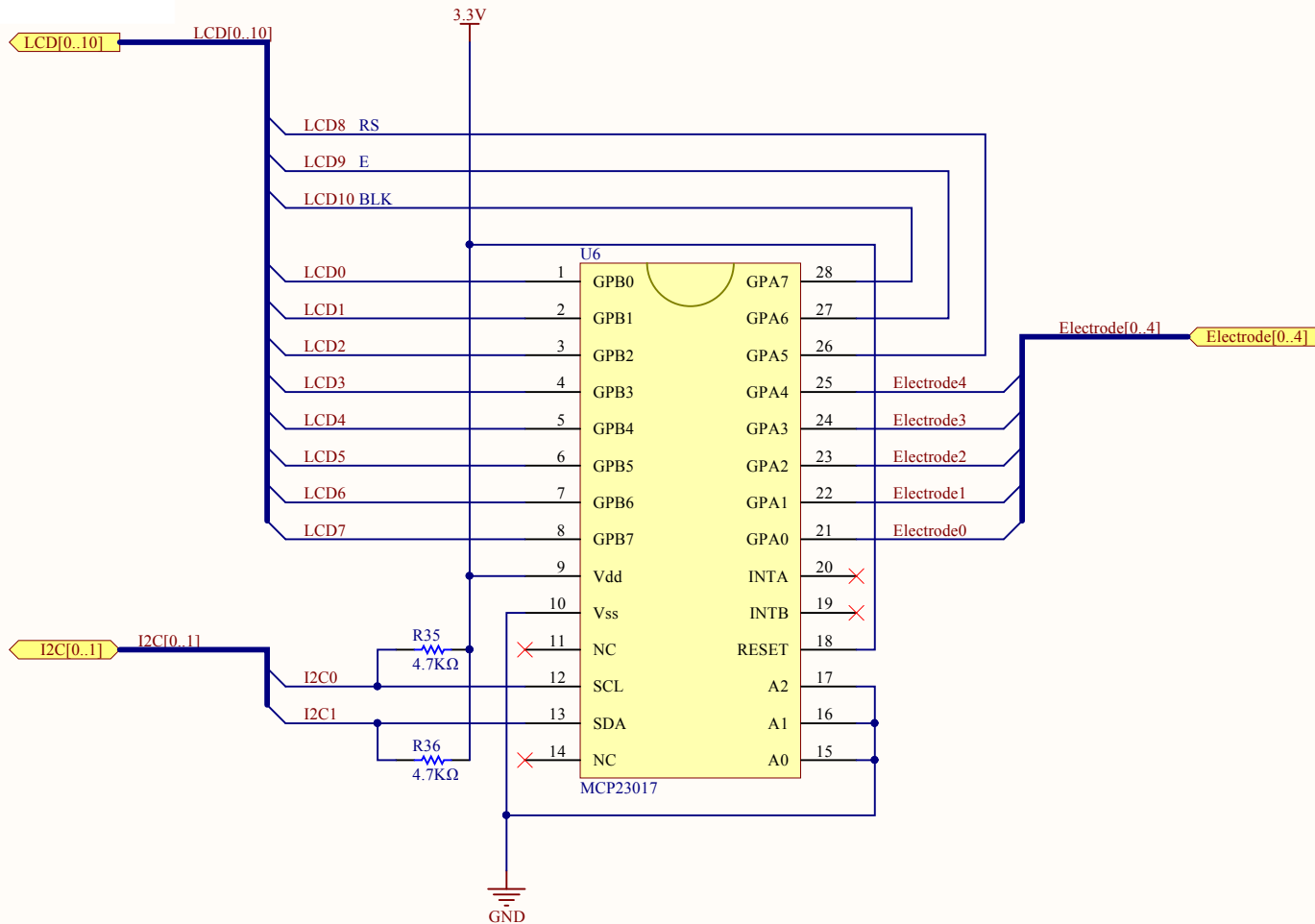
1

2

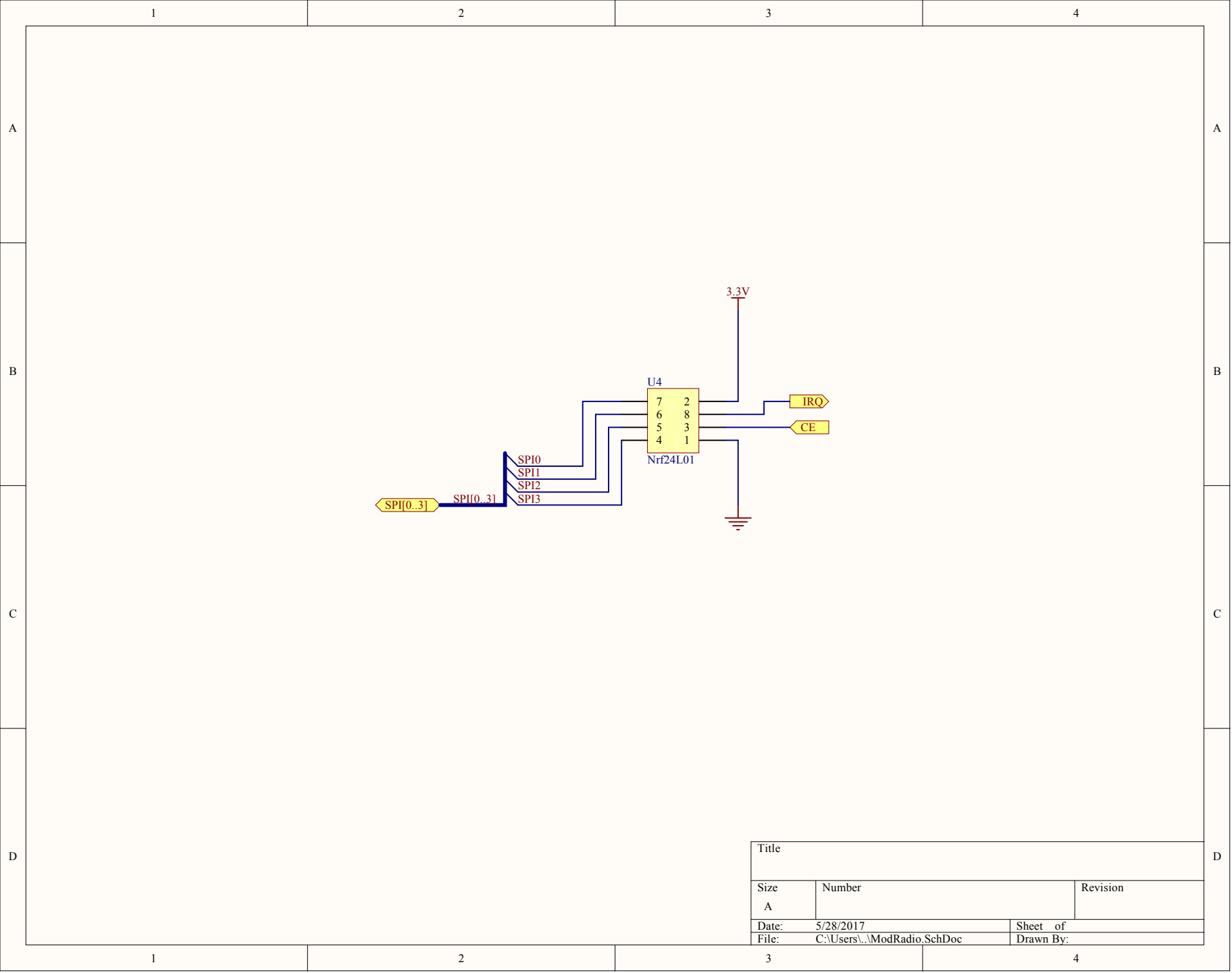
3

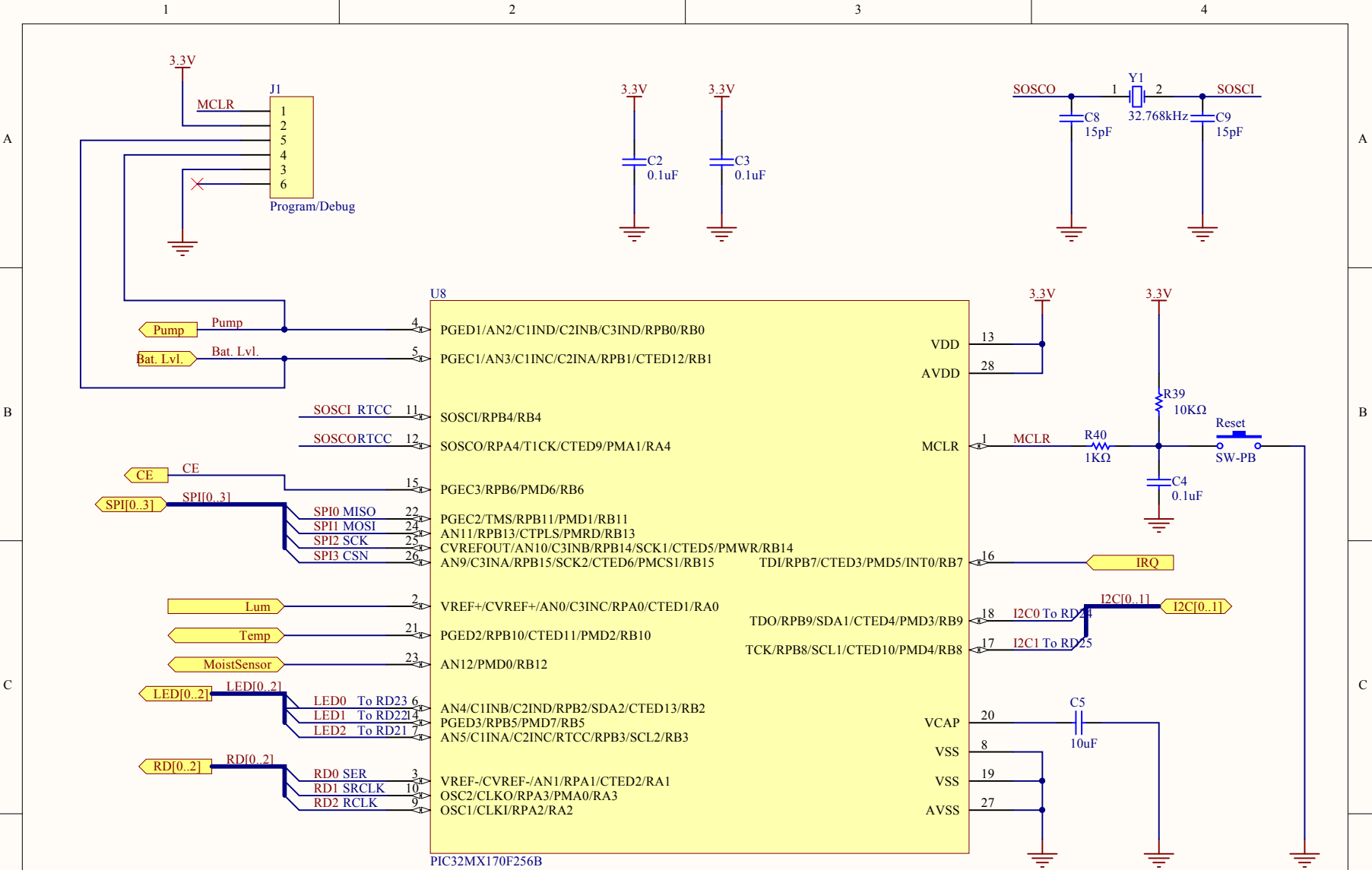
4

GPIO Extension
- Protocol: I2C
- Supply current = 1mA
- Standby current = 1uA

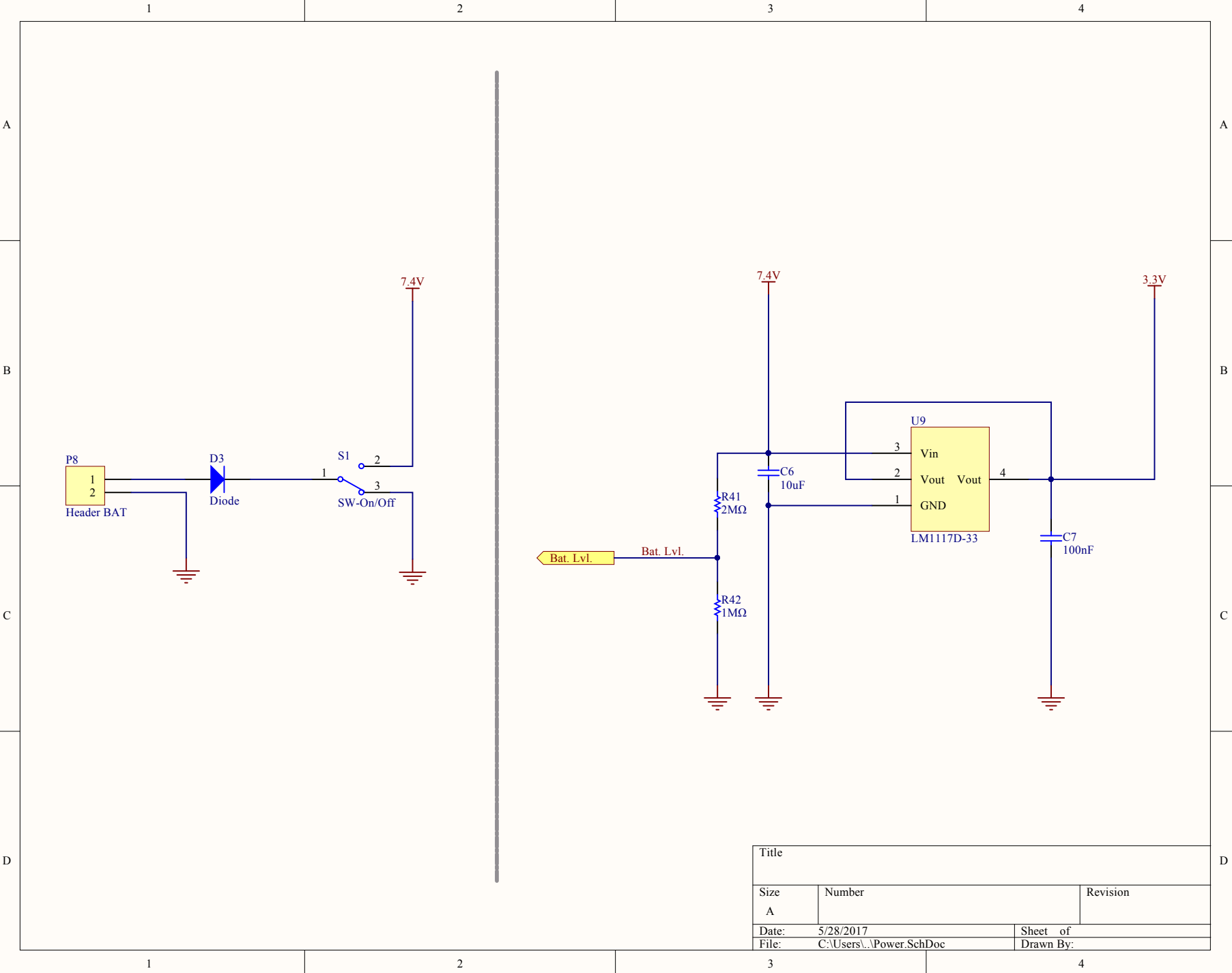


Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\MCP23017.SchDoc	Drawn By:

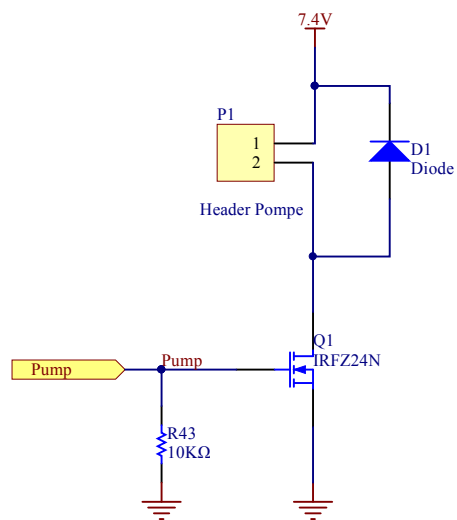
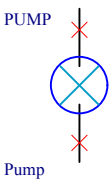




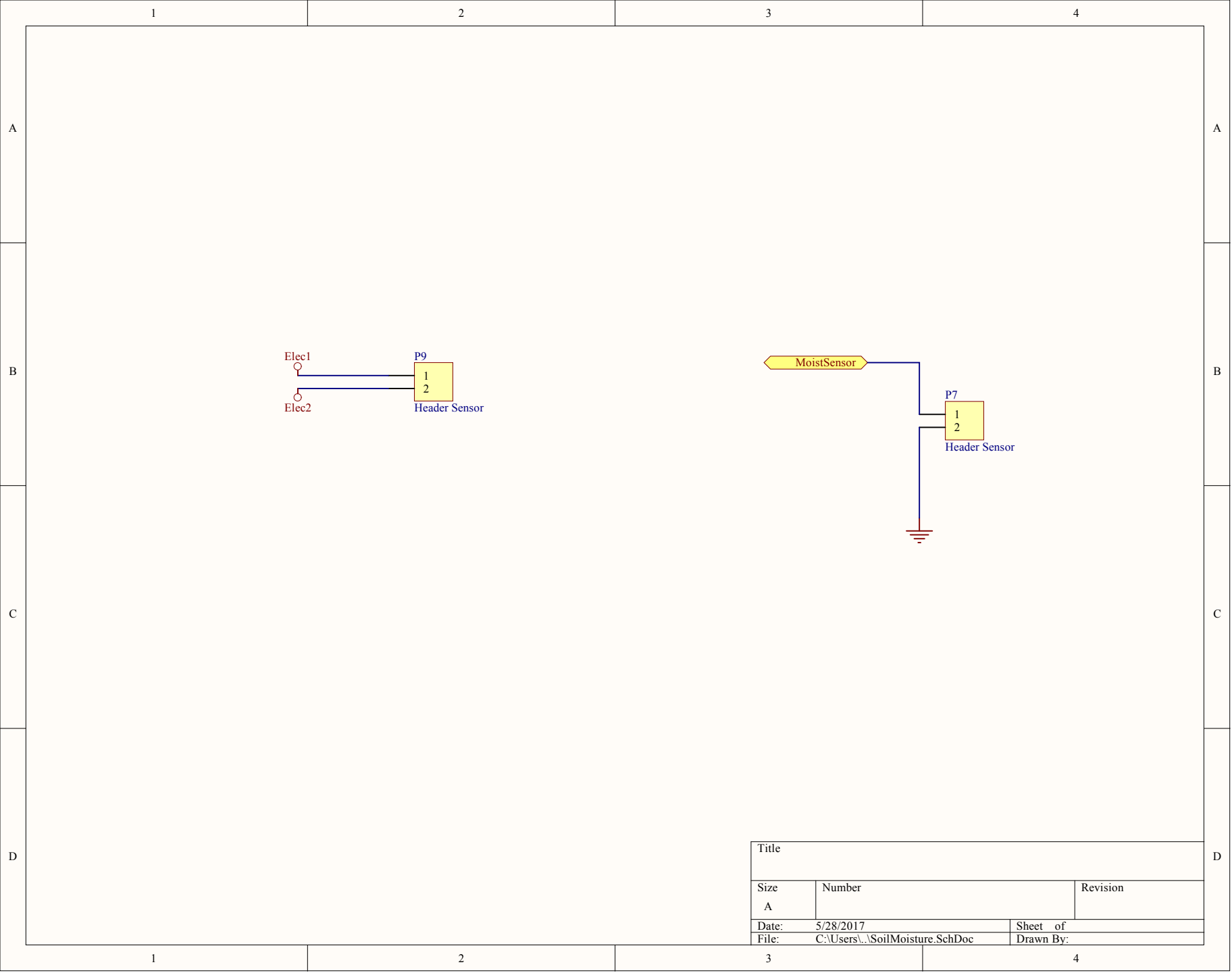
Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\PIC.SchDoc	Drawn By:

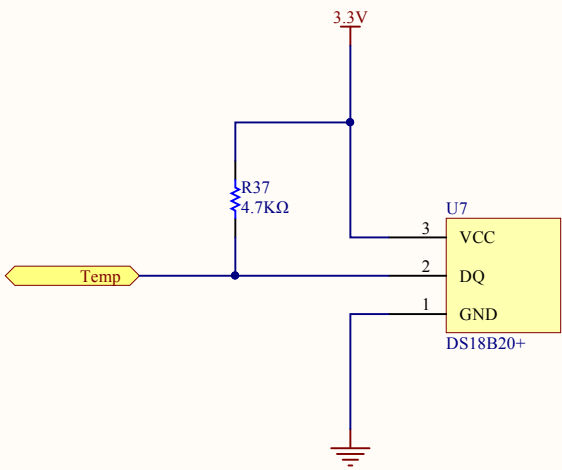


Title		
Size	Number	Revision
A		
Date:	5/28/2017	Sheet of
File:	C:\Users\...\Power.SchDoc	Drawn By:

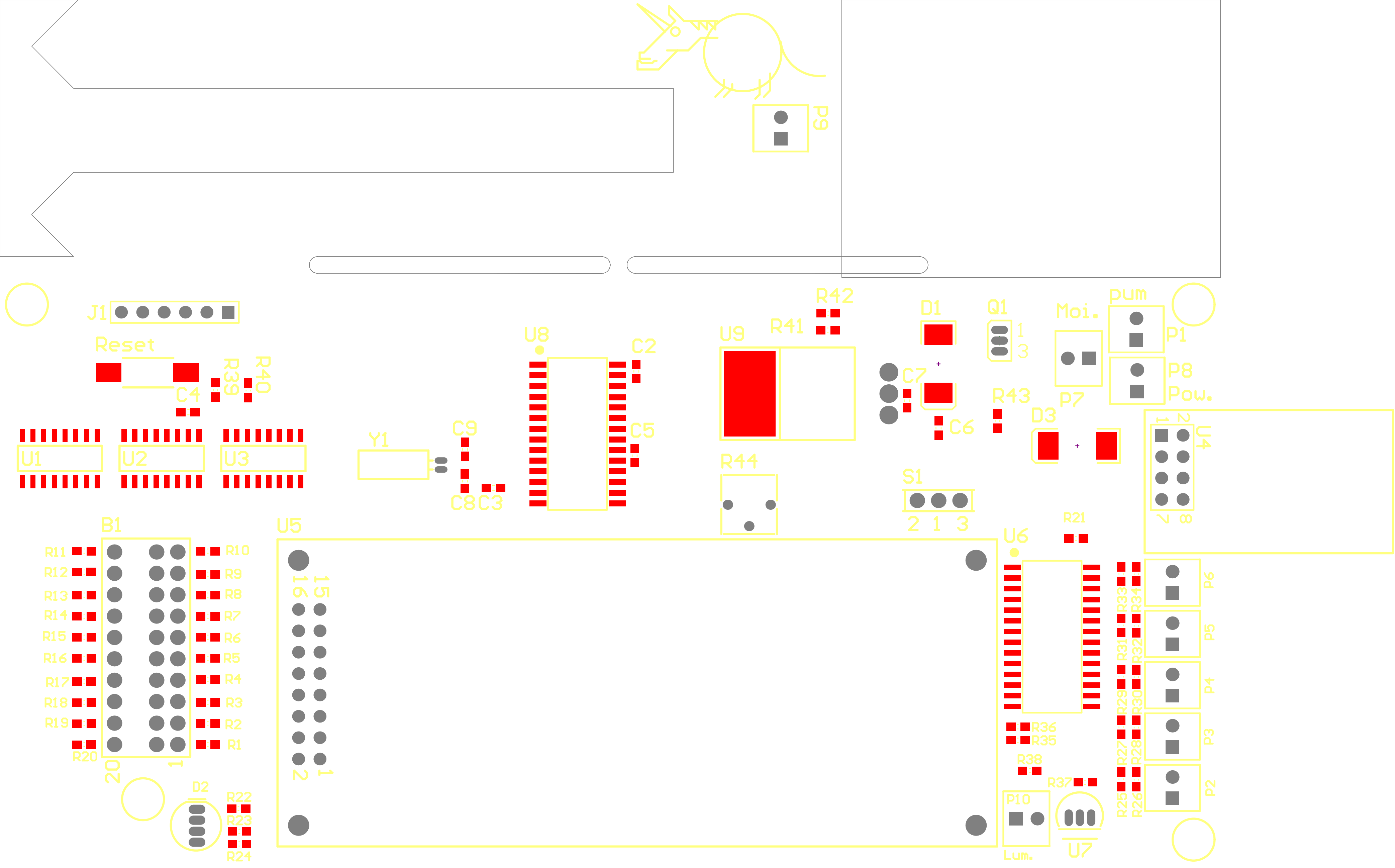


Title		
Size A	Number	Revision
Date:	5/28/2017	Sheet of
File:	C:\Users\...\Pump.SchDoc	Drawn By:

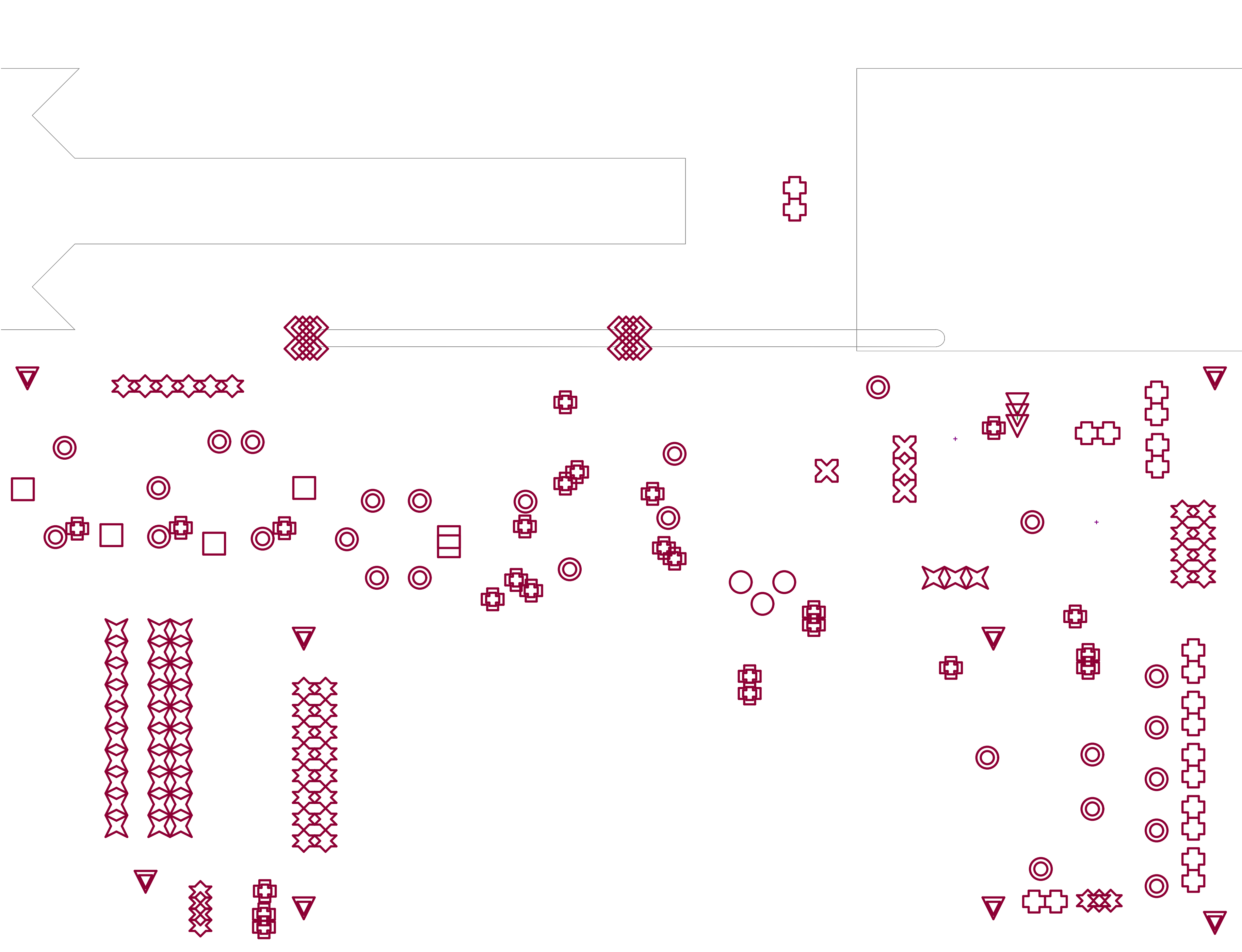




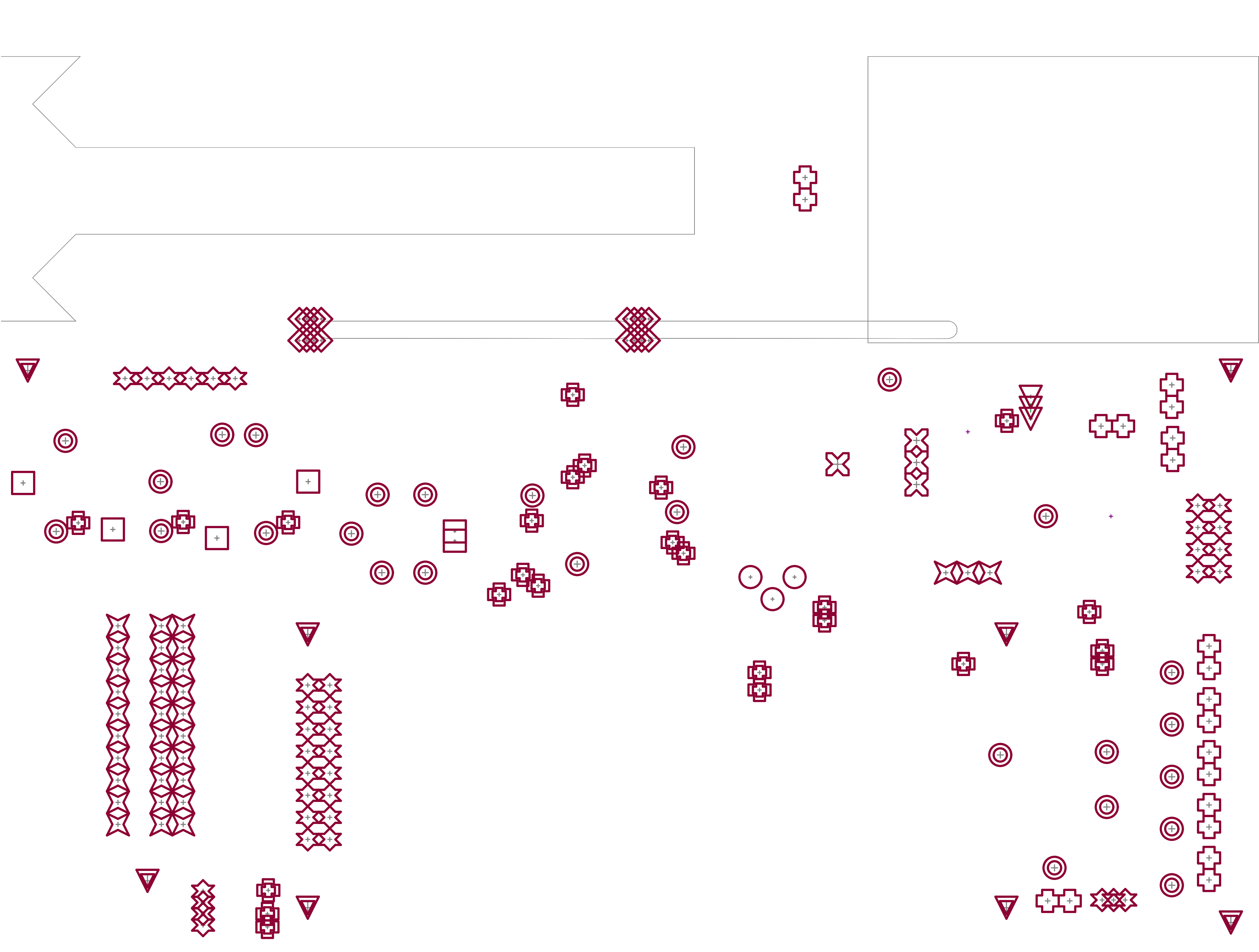
Title		
Size A	Number	Revision
Date:	5/28/2017	Sheet of
File:	C:\Users\...\Temperature.SchDoc	Drawn By:







Symbol	Hit Count	Finished Hole Size	Plated	Hole Type
○	3	0.700mm (27.56mil)	PTH	Round
▽	3	0.800mm (31.50mil)	PTH	Round
⊗	4	1.400mm (55.12mil)	PTH	Round
□	6	0.500mm (19.69mil)	PTH	Round
▼	8	2.500mm (98.43mil)	NPTH	Round
◇	16	0.500mm (19.69mil)	NPTH	Round
⊕	20	1.100mm (43.31mil)	PTH	Round
⊕	25	0.400mm (15.75mil)	PTH	Round
●	27	0.711mm (28.00mil)	PTH	Round
⊗	33	1.000mm (39.37mil)	PTH	Round
✱	37	0.900mm (35.43mil)	PTH	Round
	182 Total			



Symbol	Hit Count	Finished Hole Size	Plated	Hole Type
○	3	0.700mm (27.56mil)	PTH	Round
▽	3	0.800mm (31.50mil)	PTH	Round
⊗	4	1.400mm (55.12mil)	PTH	Round
□	6	0.500mm (19.69mil)	PTH	Round
▼	8	2.500mm (98.43mil)	NPTH	Round
◇	16	0.500mm (19.69mil)	NPTH	Round
⊕	20	1.100mm (43.31mil)	PTH	Round
⊕	25	0.400mm (15.75mil)	PTH	Round
●	27	0.711mm (28.00mil)	PTH	Round
⊗	33	1.000mm (39.37mil)	PTH	Round
⊗	37	0.900mm (35.43mil)	PTH	Round
	182 Total			

Comment	Description	Designator	Footprint	LibRef	Quantity	Manufacturer	Ref.Farnell	Ref.Manufacturer	Supplier
BargraphRG	Bargraph	B1	BargraphRG	BargraphRG	1	KINGBRIGHT	2290326	DC-10EGWA	Farnell
0.1uF	Capacitor	C2, C3, C4	C0603	Cap	3	MURATA	8820023	GRM188R71H104KA93	Farnell
10uF	Capacitor	C5, C6	C0603	Cap	2	MURATA	2611920	GRM188D71A106MA73	Farnell
100nF	Capacitor	C7	C0603	Cap	1	MURATA	7/8820023	7/GRM188R71H104KA93	Farnell
15pF	Capacitor	C8, C9	C0603	Cap	2	MURATA	8819823	GRM188SC1H150JA01	Farnell
Diode	Diode	D1, D3	SMC	Diode	2				Farnell
LED_RGB	LedRGB	D2	LED1	LED_RGB	1	KINGBRIGHT	2290374	L-154A45SURKQBDZGW	Farnell
Program/Debug	Header, 6-Pin	J1	HDR1X6	Header 6	1				Farnell
Header Pompe	Header, 2-Pin	P1	BORNIER	Header 2	1	BUCHANAN - TE CONNECTIVITY	2112482	282834-2	Farnell
Header 2	Header, 2-Pin	P2, P3, P4, P5, P6, P10	BORNIER	Header 2	6	BUCHANAN - TE CONNECTIVITY	2112482	282834-2	Farnell
Header Sensor	Header, 2-Pin	P7, P9	BORNIER	Header 2	2	BUCHANAN - TE CONNECTIVITY	2112482	282834-2	Farnell
Header BAT	Header, 2-Pin	P8	BORNIER	Header 2	1	BUCHANAN - TE CONNECTIVITY	2112482	282834-2	Farnell
Pump	Pump	PUMP		Pump	1	/	/	/	/
IRFZ24N	N-Channel MOSFET	Q1	E3	MOSFET-N	1	INFINEON	8650160	IRFZ24NPBF	Farnell
220O	Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	R0603	Res1	10	MULTICOMP	9330801	MC0063W06031220R	Farnell
160O	Resistor	R11, R12, R13, R14, R15, R16, R17, R18, R19, R20	R0603	Res1	10	MULTICOMP	9330658	MC0063W06031160R	Farnell
600O	Resistor	R21	R0603	Res1	1	MULTICOMP	?		Farnell
140O	Resistor	R22	R0603	Res1	1	MULTICOMP	?		Farnell
20O	Resistor	R23	R0603	Res1	1	MULTICOMP	9330798	MC0063W0603120R	Farnell
30O	Resistor	R24	R0603	Res1	1	MULTICOMP	9331000	MC0063W0603130R	Farnell
1KO	Resistor	R25, R27, R29, R31, R33, R40	R0603	Res1	6	MULTICOMP	9330380	MC0063W060311K	Farnell
10MO	Resistor	R26, R28, R30, R32, R34	R0603	Res1	5	MULTICOMP	?		Farnell
4.7KO	Resistor	R35, R36, R37	R0603	Res1	3	MULTICOMP	9331247	MC0063W060314K7	Farnell
10KO	Resistor	R38, R39, R43	R0603	Res1	3	MULTICOMP	9330399	MC0063W0603110K	Farnell
2MO	Resistor	R41	R0603	Res1	1	MULTICOMP	?		Farnell
1MO	Resistor	R42	R0603	Res1	1	MULTICOMP	9330410	MC0063W060311M	Farnell
RPot	Varistor	R44	POTARD	Potard	1	VISHAY ADVANCED	2550676	T73YE103KT20	Farnell
NSL-4962	Ldr	R45	NSL-4962	NSL-4962	1	PHOTONIX	3168359	NSL 4962	Farnell
SW-PB	Switch	Reset	Reset	SW-PB	1	ALCOSWITCH CONNECTIVITY	2468741	1437566-3	Farnell
SW-On/Off	SPDT Subminiature Toggle Switch, Right Angle Mounting, Vertical Actuation	S1	Switch on/off	SW-SPDT	1	EOZ	1608080	09.03201.02	Farnell
74HC595-0	ShiftRegister	U1	SN74HC595D	74HC595	1	TEXAS INSTRUMENTS	1607849	SN74HC595DR	Farnell
74HC595-1	ShiftRegister	U2	SN74HC595D	74HC595	1	TEXAS INSTRUMENTS	1607849	SN74HC595DR	Farnell
74HC595-2	ShiftRegister	U3	SN74HC595D	74HC595	1	TEXAS INSTRUMENTS	1607849	SN74HC595DR	Farnell
Nrf24L01	Header, 4-Pin, Dual row	U4	NRF24L01	Header 4X2	1	/	/	/	/
FC1602B04-FHYBW-91LE	LCD	U5	FC1602B04-FHYBW-91LE	FC1602B04-FHYBW-91LE	1	FORDATA	2674137	FC1602B04-FHYBW-91LE	Farnell
MCP23017	GPIOExpander	U6	MCP23017	MPC23017	1	MICROCHIP MAXIM INTEGRATED PRODUCTS	1332087	MCP23017-E/SO	Farnell
DS18B20+	Temp	U7	DS18B20+	DS18B20+	1		2515553	DS18B20+	Farnell
PIC32MX170F256B	Pic	U8	PIC32MX170F256B	PIC32MX170F256B	1	MICROCHIP	2449077	PIC32MX170F256B-I/SO	Farnell
LM1117D-33	Battery	U9	VoltReg3.3V	LM1117D-33	1	TEXAS INSTRUMENTS	1469056	LM1117T-3.3/NOPB	Farnell
32.768kHz	Crystal Oscilla	Y1	XTAL	XTAL	1	ABRACON	1611828	AB38T-32.768K	Farnell