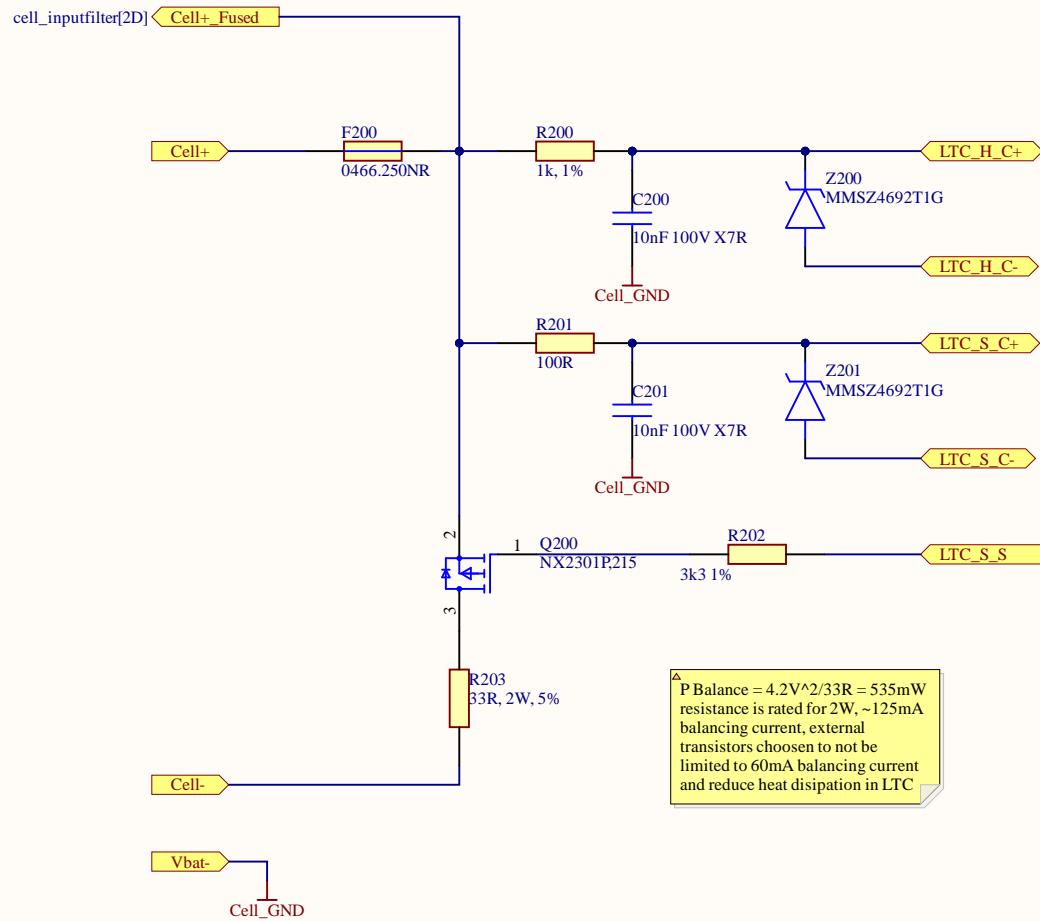


A



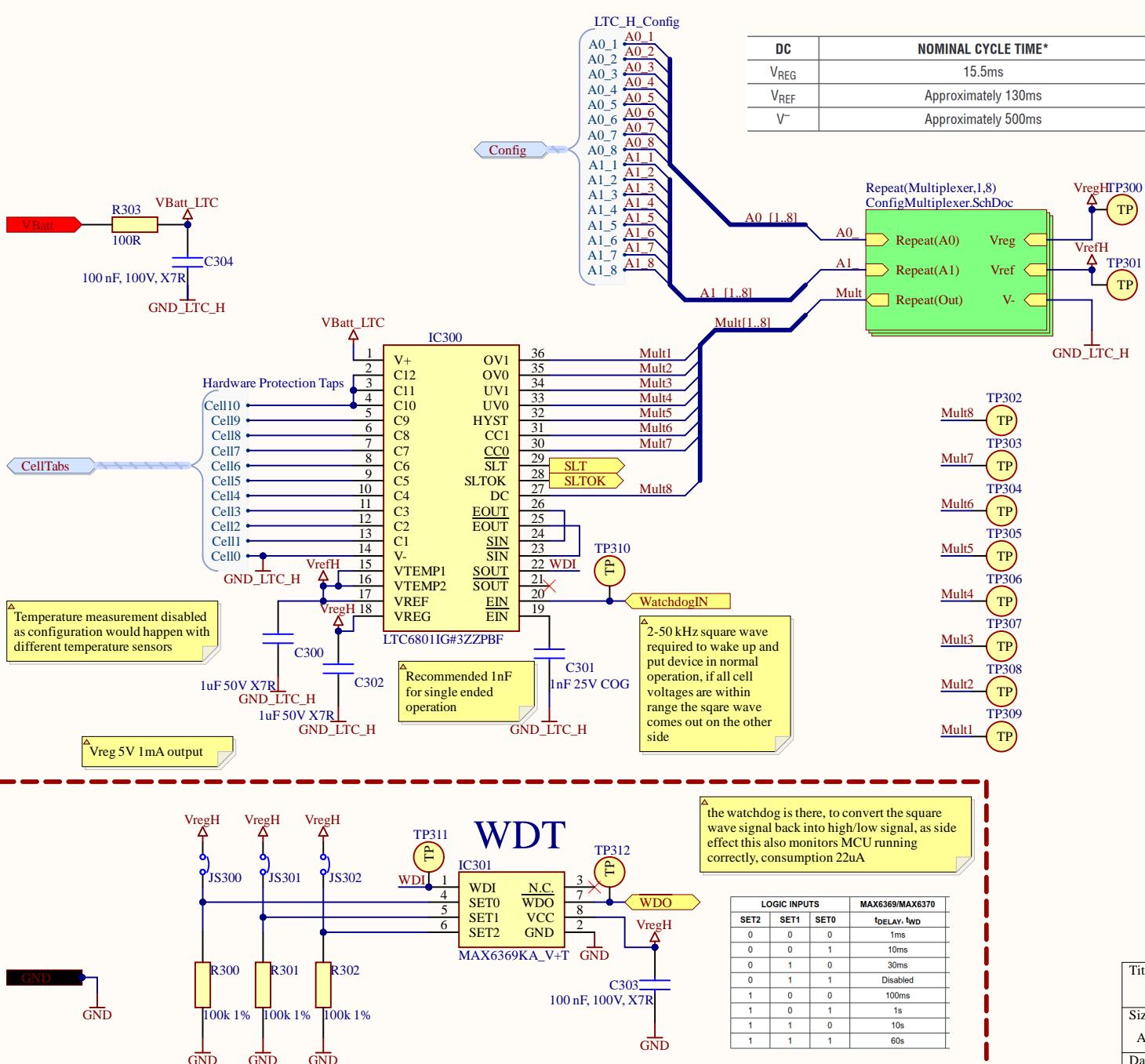
recommended filtering from LTC 6801 datasheet: 1kOhm 10nF to GND

recommended filter components for maximum measurement accuracy from LTC 6811 datasheet: 100R 10nF, the zeners are there to reduce stress on internal protection circuit

C

D

Title singlefilter.SchDoc		
Size A4	Number 1	Revision A3
Date: 4/22/2025	Sheet 3 of 10	
File: C:\Users\..\singlefilter.SchDoc	Drawn By: Otto Riha	



DC	NOMINAL CYCLE TIME*
V _{REG}	15.5ms
V _{REF}	Approximately 130ms
V ⁻	Approximately 500ms

OV1	OV0	OVERVOLTAGE THRESHOLD (V)
V _{REG}	V _{REG}	4.498
V _{REG}	V _{REF}	4.403
V _{REG}	V ⁻	4.307
V _{REF}	V _{REG}	4.211
V _{REF}	V _{REF}	4.116
V _{REF}	V ⁻	4.020
V ⁻	V _{REG}	3.924
V ⁻	V _{REF}	3.828
V ⁻	V ⁻	3.733

UV1	UV0	UNDERVOLTAGE THRESHOLD (V)
V _{REG}	V _{REG}	2.871
V _{REG}	V _{REF}	2.680
V _{REG}	V ⁻	2.489
V _{REF}	V _{REG}	2.297
V _{REF}	V _{REF}	2.106
V _{REF}	V ⁻	1.914
V ⁻	V _{REG}	1.723
V ⁻	V _{REF}	1.531
V ⁻	V ⁻	0.766

CC1	CC0	CELL COUNT
V _{REG}	V _{REG}	12
V _{REG}	V _{REF}	11
V _{REG}	V ⁻	10
V _{REF}	V _{REG}	9
V _{REF}	V _{REF}	8
V _{REF}	V ⁻	7
V ⁻	V _{REG}	6
V ⁻	V _{REF}	5
V ⁻	V ⁻	4

HYST	UV HYSTERESIS*	OV HYSTERESIS
V _{REG}	500mV	200mV
V _{REF}	250mV	100mV
V ⁻	0mV	0mV

LOGIC INPUTS			MAX6369/MAX6370
SET2	SET1	SET0	t _{DELAY} , t _{WD}
0	0	0	1ms
0	0	1	10ms
0	1	0	30ms
0	1	1	Disabled
1	0	0	100ms
1	0	1	1s
1	1	0	10s
1	1	1	60s

Title LTC_Hardware.SchDoc		
Size	Number	Revision
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Date:	4/22/2025	Sheet 4 of 10
File:	C:\Users\...\LTC_Hardware.SchDoc	Drawn By: Otto Riha

A

A

B

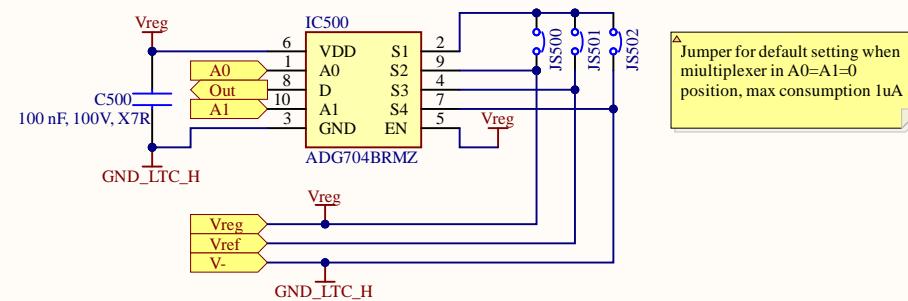
B

C

C

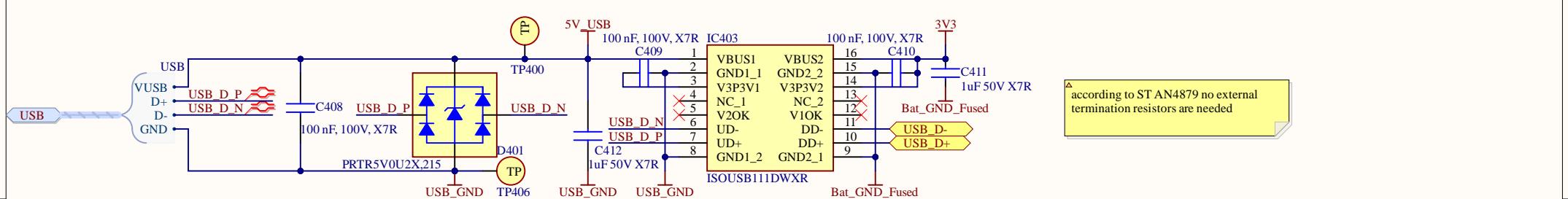
D

D

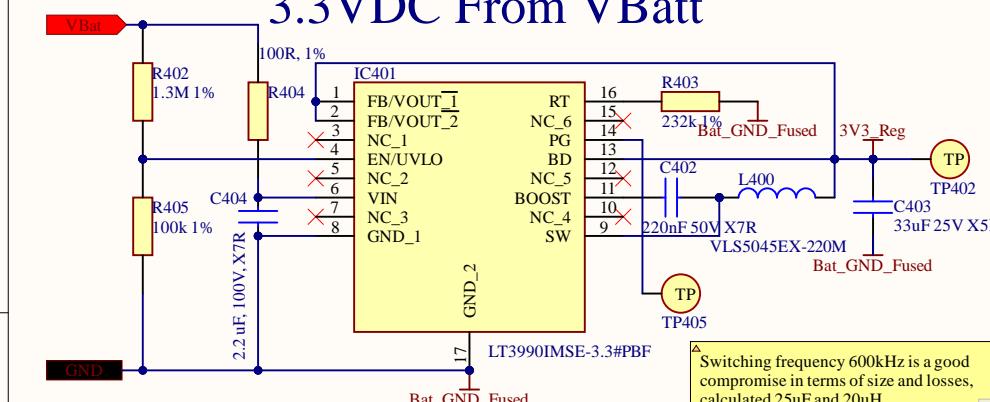


Title		
ConfigMultiplexer.SchDoc		
Size A4	Number 1	Revision A1
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File: C:\Users\..\ConfigMultiplexer.SchDoc		Drawn By: Otto Riha

USB INPUT Protection and Isolation



3.3VDC From VBatt

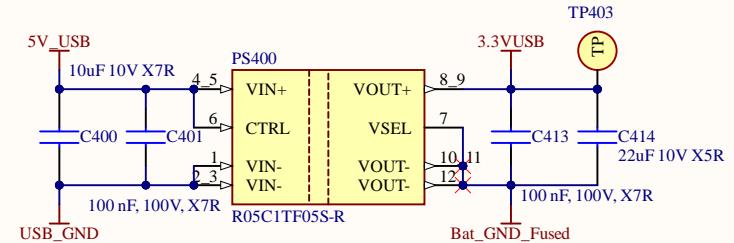


△ Undervoltage Lockup configured for 16.7V which corresponds to 2.4V / cell on 7s and is an additional measure against deep discharge

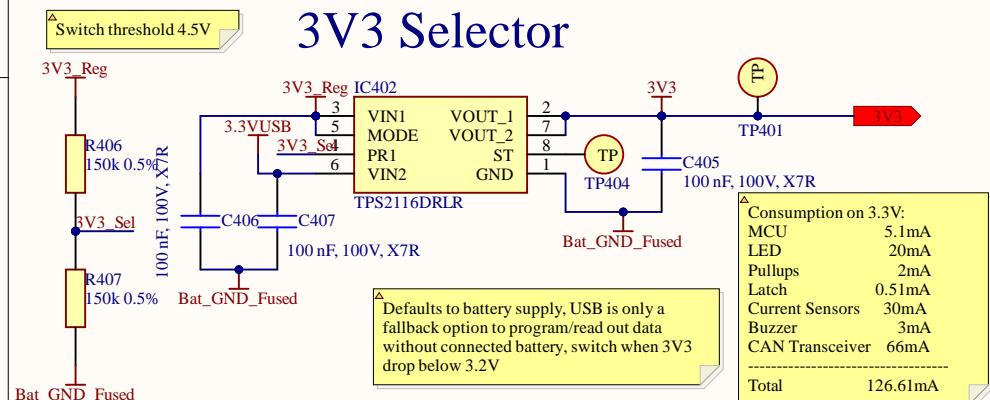
$$L = 3 \frac{V_{OUT} + V_D}{f_{SW}}$$

$$C_{OUT} = \frac{50}{V_{OUT} \cdot f_{SW}}$$

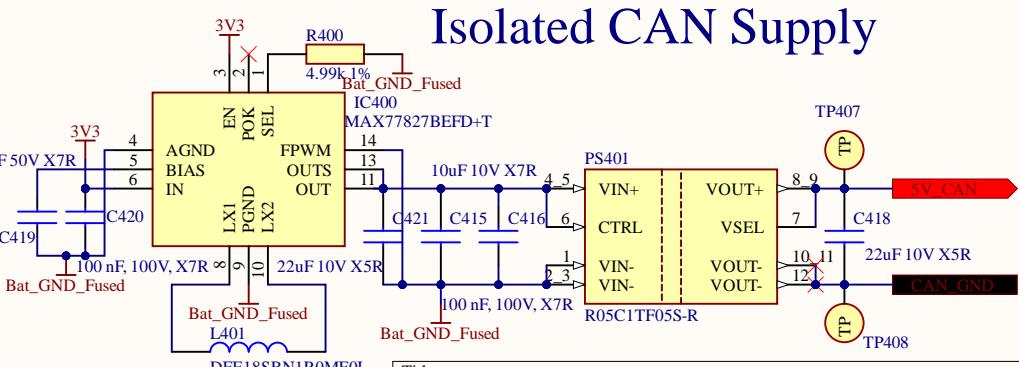
USB Supply isolation



3V3 Selector



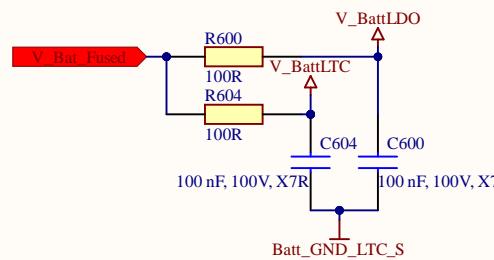
Isolated CAN Supply



AuxSupply_USB.SchDoc

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A4	1	A2
Date:	4/22/2025	Sheet 6 of 10
File:	C:\Users\...\AuxSupply_USB.SchDoc	Drawn By: Otto Riha

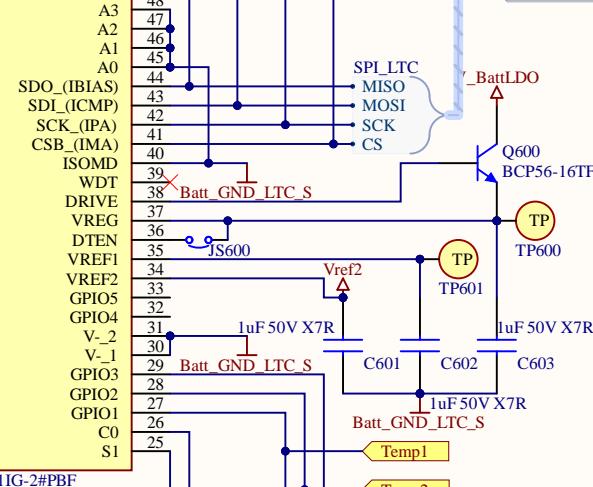
A



V_BattLTC

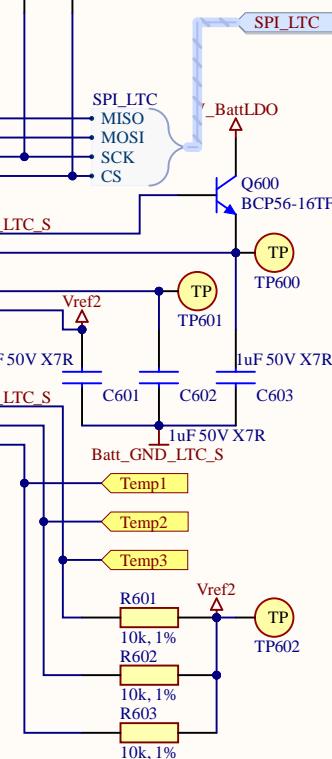
TP603 TP604 TP605 TP606

IC600



Cells Filtered

Transistor can handle 1W which is 28mA at 42V input, enough for the LTC6811-2 consuming 12.3mA in worstcase



Title

LTC_Soft.SchDoc

Size

A4

Number

1

Revision

A1

Date:

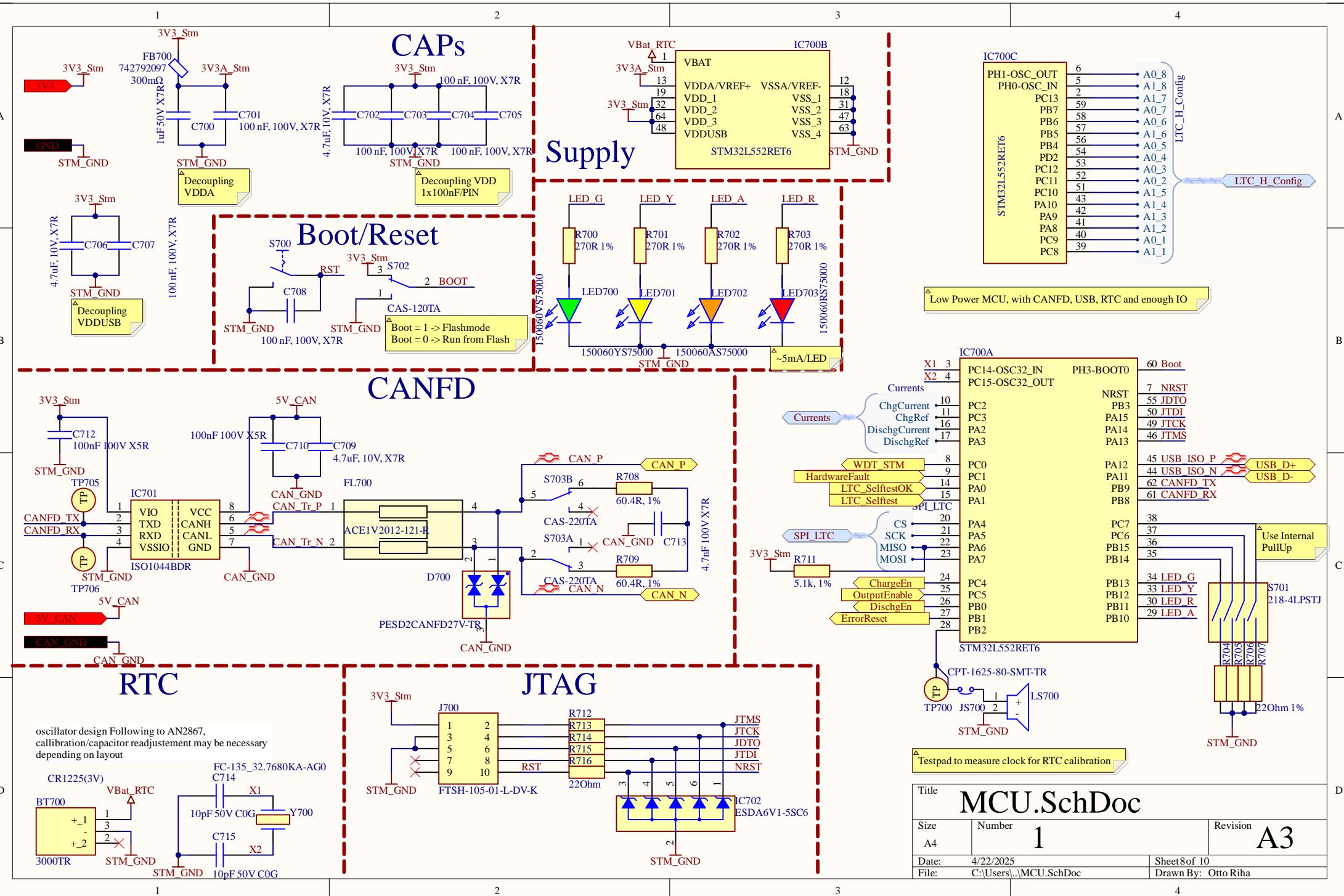
4/22/2025

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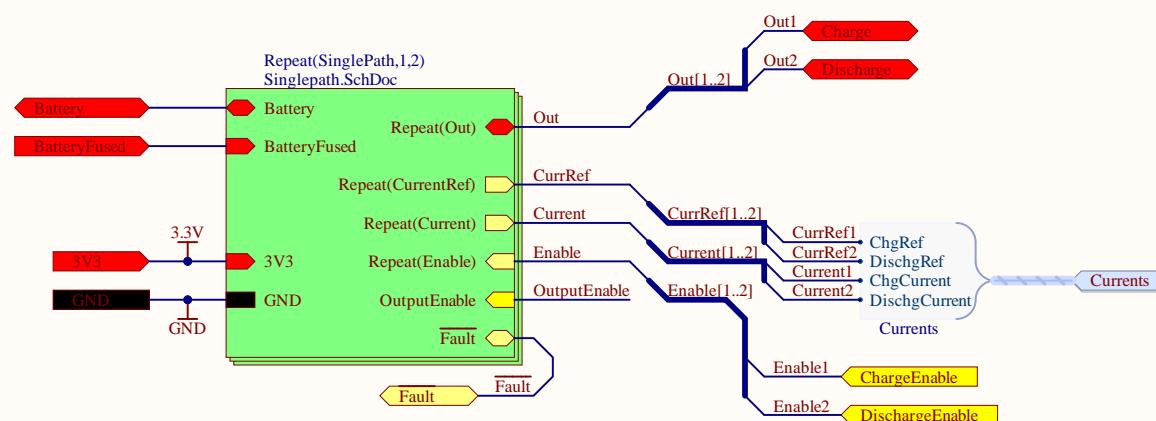
File:

C:\Users\..\LTC_Soft.SchDoc

Drawn By: Otto Riha



A



B

C

D

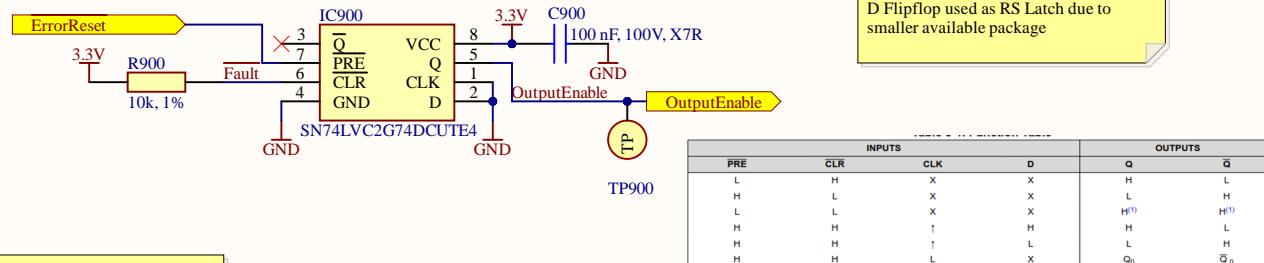
A

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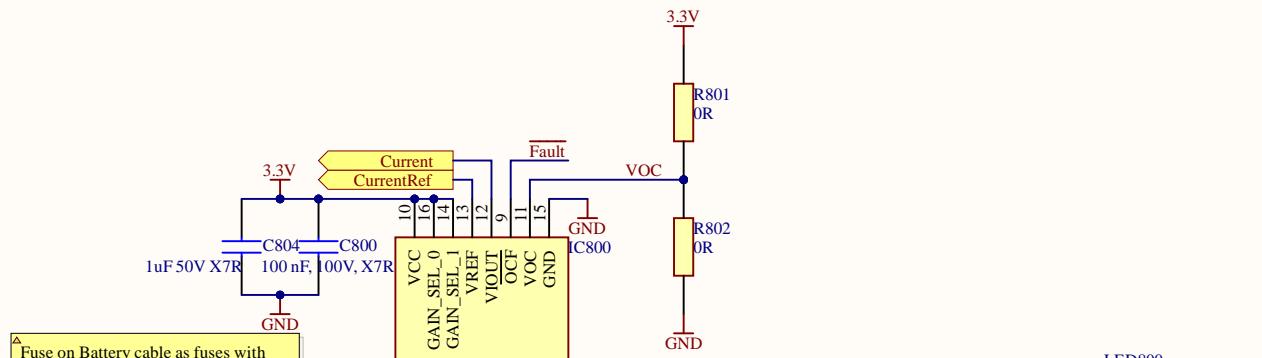
Error latch



Title PowerPath.SchDoc		
Size A4	Number 1	Revision A2
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File: C:\Users\..\PowerPath.SchDoc	Drawn By: Otto Riha	

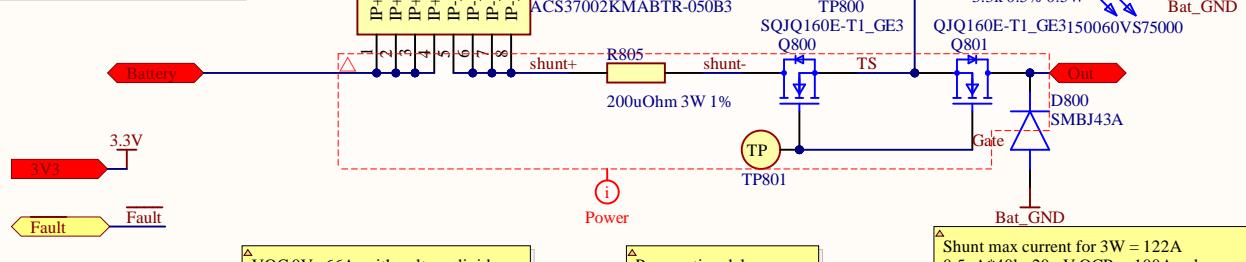
A

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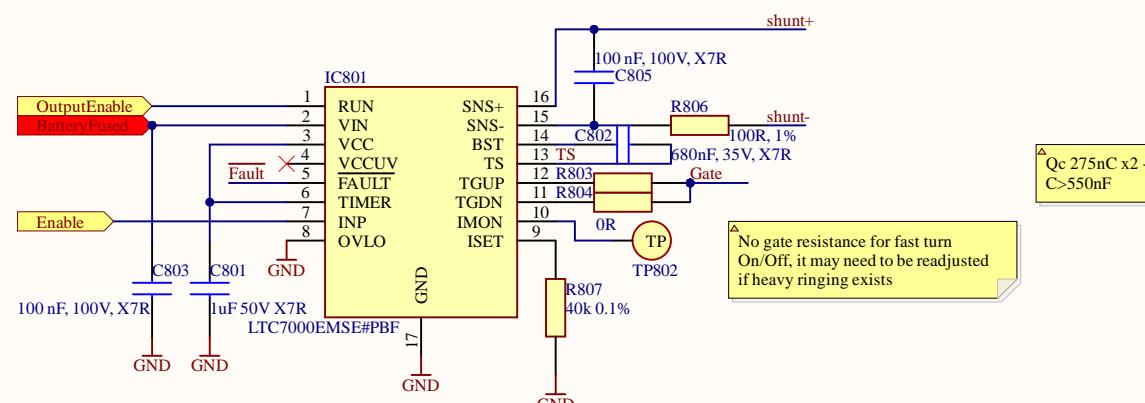
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10



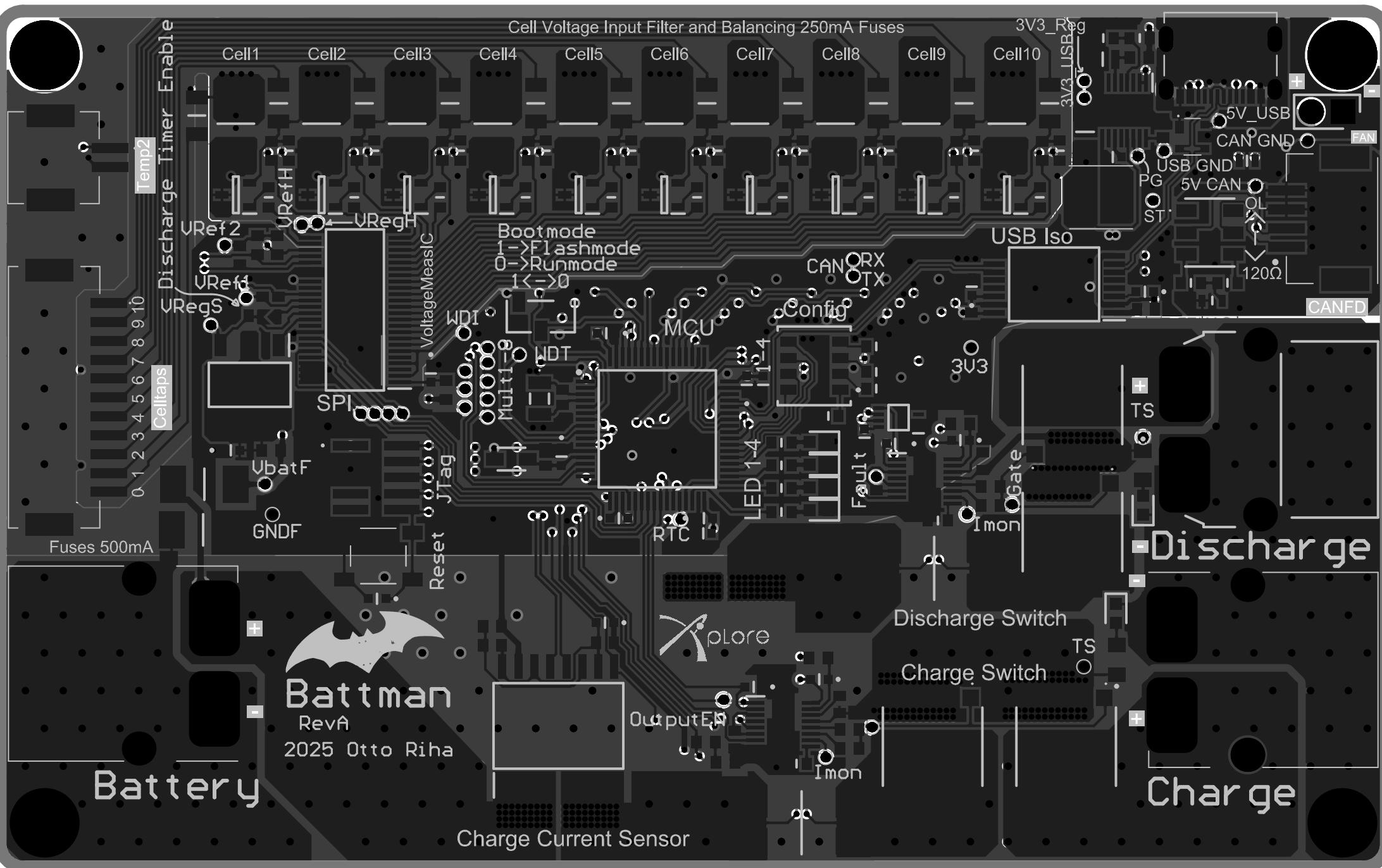
8

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Title	Singlepath.SchDoc		
Size A4	Number 1	Revision	A3
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5	Conclusion	5	5	5	5
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9	Appendix C	9	9	9	9
10	Appendix D	10	10	10	10
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12	Appendix F	12	12	12	12
13	Appendix G	13	13	13	13
14	Appendix H	14	14	14	14
15	Appendix I	15	15	15	15
16	Appendix J	16	16	16	16
17	Appendix K	17	17	17	17
18	Appendix L	18	18	18	18
19	Appendix M	19	19	19	19
20	Appendix N	20	20	20	20
21	Appendix O	21	21	21	21
22	Appendix P	22	22	22	22
23	Appendix Q	23	23	23	23
24	Appendix R	24	24	24	24
25	Appendix S	25	25	25	25
26	Appendix T	26	26	26	26
27	Appendix U	27	27	27	27
28	Appendix V	28	28	28	28
29	Appendix W	29	29	29	29
30	Appendix X	30	30	30	30
31	Appendix Y	31	31	31	31
32	Appendix Z	32	32	32	32
33	Appendix AA	33	33	33	33
34	Appendix BB	34	34	34	34
35	Appendix CC	35	35	35	35
36	Appendix DD	36	36	36	36
37	Appendix EE	37	37	37	37
38	Appendix FF	38	38	38	38
39	Appendix GG	39	39	39	39
40	Appendix HH	40	40	40	40
41	Appendix II	41	41	41	41
42	Appendix JJ	42	42	42	42
43	Appendix KK	43	43	43	43
44	Appendix LL	44	44	44	44
45	Appendix MM	45	45	45	45
46	Appendix NN	46	46	46	46
47	Appendix OO	47	47	47	47
48	Appendix PP	48	48	48	48
49	Appendix QQ	49	49	49	49
50	Appendix RR	50	50	50	50
51	Appendix SS	51	51	51	51
52	Appendix TT	52	52	52	52
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54	Appendix VV	54	54	54	54
55	Appendix WW	55	55	55	55
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58	Appendix ZZ	58	58	58	58
59	Appendix AAA	59	59	59	59
60	Appendix BBB	60	60	60	60
61	Appendix CCC	61	61	61	61
62	Appendix DDD	62	62	62	62
63	Appendix EEE	63	63	63	63
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65	Appendix GGG	65	65	65	65
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67	Appendix III	67	67	67	67
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70	Appendix LL	70	70	70	70
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72	Appendix NN	72	72	72	72
73	Appendix OO	73	73	73	73
74	Appendix PP	74	74	74	74
75	Appendix QQ	75	75	75	75
76	Appendix RR	76	76	76	76
77	Appendix SS	77	77	77	77
78	Appendix TT	78	78	78	78
79	Appendix UU	79	79	79	79
80	Appendix VV	80	80	80	80
81	Appendix WW	81	81	81	81
82	Appendix XX	82	82	82	82
83	Appendix YY	83	83	83	83
84	Appendix ZZ	84	84	84	84
85	Appendix AAAA	85	85	85	85
86	Appendix BBBB	86	86	86	86
87	Appendix CCCC	87	87	87	87
88	Appendix DDDD	88	88	88	88
89	Appendix EEEE	89	89	89	89
90	Appendix FFFF	90	90	90	90
91	Appendix GGGG	91	91	91	91
92	Appendix HHHH	92	92	92	92
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95	Appendix KKKK	95	95	95	95
96	Appendix LLLL	96	96	96	96
97	Appendix MLLL	97	97	97	97
98	Appendix NLLL	98	98	98	98
99	Appendix OLLL	99	99	99	99
100	Appendix PLLL	100	100	100	100
101	Appendix QLLL	101	101	101	101
102	Appendix RLLL	102	102	102	102
103	Appendix SLLL	103	103	103	103
104	Appendix TLLL	104	104	104	104
105	Appendix ULLL	105	105	105	105
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107	Appendix WLLL	107	107	107	107
108	Appendix XLLL	108	108	108	108
109	Appendix YLLL	109	109	109	109
110	Appendix ZLLL	110	110	110	110
111	Appendix AAAAA	111	111	111	111
112	Appendix BBBBB	112	112	112	112
113	Appendix CCCCC	113	113	113	113
114	Appendix DDDDD	114	114	114	114
115	Appendix EEEEE	115	115	115	115
116	Appendix FFFFF	116	116	116	116
117	Appendix GGGGG	117	117	117	117
118	Appendix HHHHH	118	118	118	118
119	Appendix IIIII	119	119	119	119
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121	Appendix KKKKK	121	121	121	121
122	Appendix LLLLL	122	122	122	122
123	Appendix MLLLL	123	123	123	123
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125	Appendix OLLLL	125	125	125	125
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164	Appendix BBBBBB	164	164	164	164
165	Appendix CCCCCC	165	165	165	165
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168	Appendix FFFFFFF	168	168	168	168
169	Appendix GGGGGGG	169	169	169	169
170	Appendix HHHHHHH	170	170	170	170
171	Appendix IIIIIII	171	171	171	171
172	Appendix JJJJJJ	172	172	172	172
173	Appendix KKKKKKK	173	173	173	173
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191	Appendix CCCCCC	191	191	191	191
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215	Appendix AAAAAA	215	215	215	215
216	Appendix BBBBBB	216</			