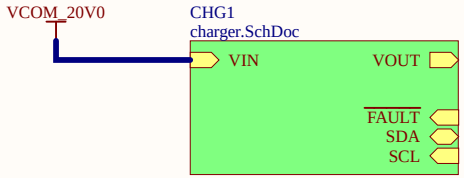
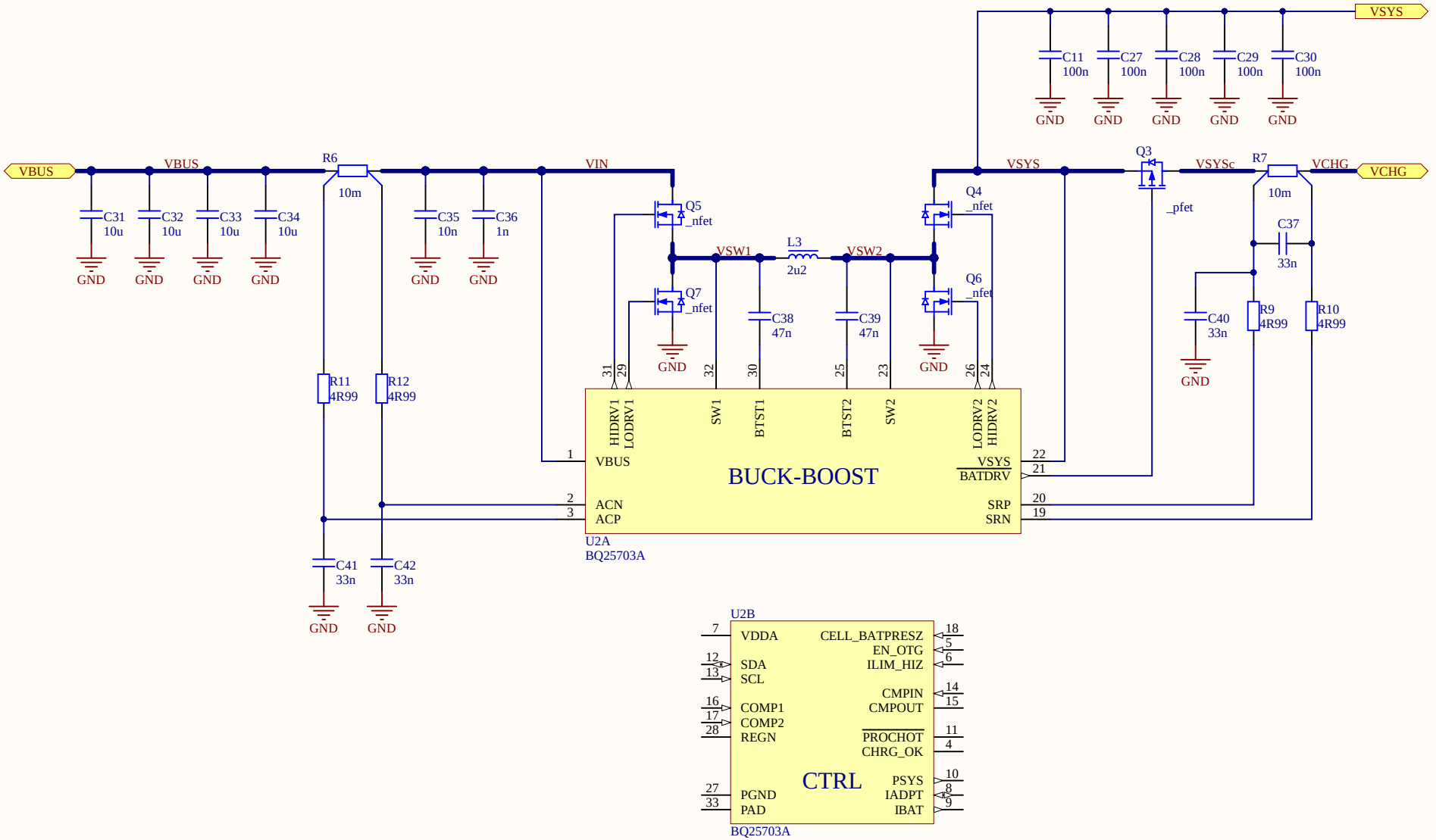
ASH Power

Variant: [No Variations]

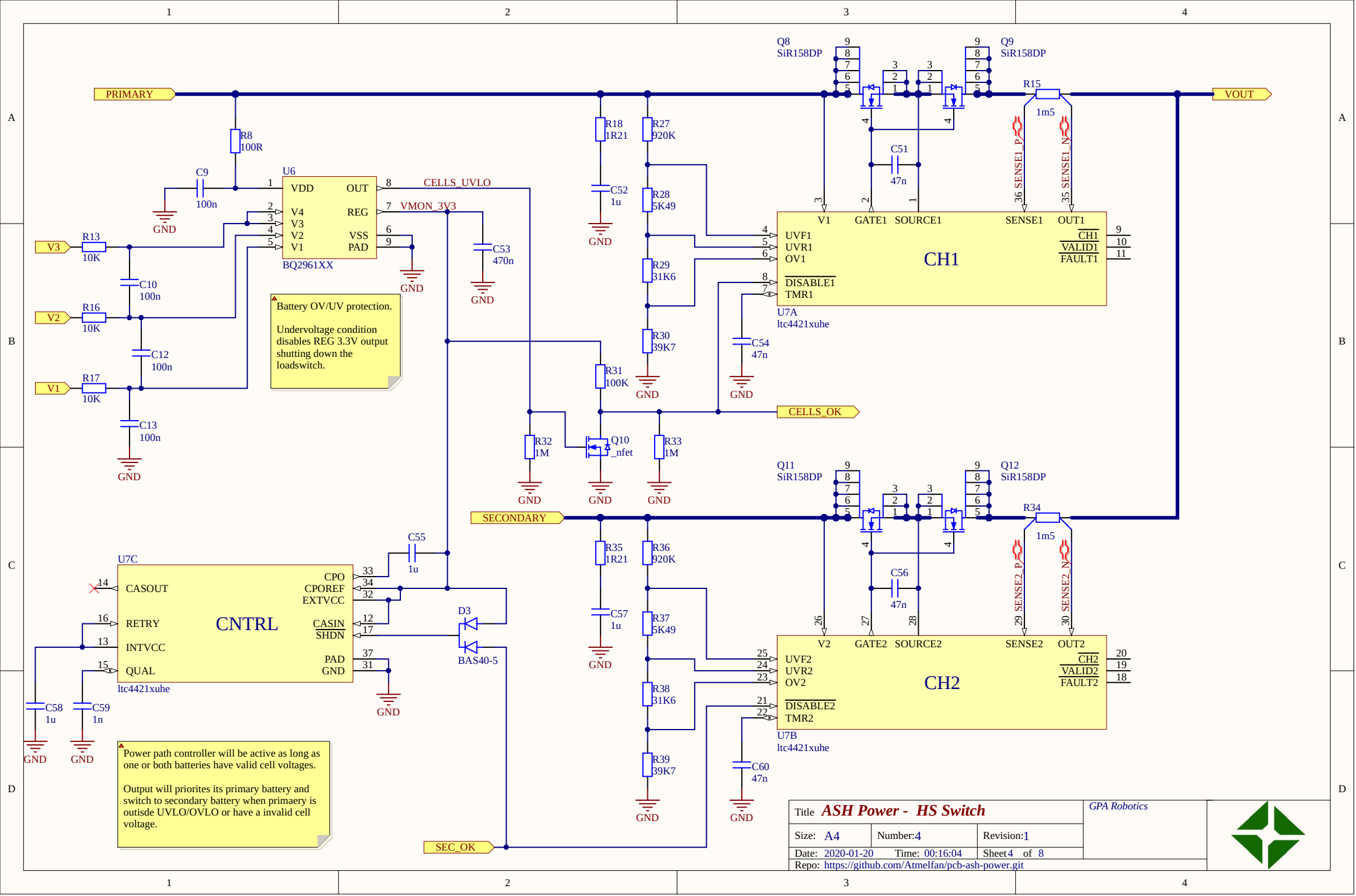
Title *ASH Power - Cover*			*GPA Robotics*
Size: A4	Number: 1	Revision: 1	
Date: 2020-01-20	Time: 00:16:04	Sheet 1 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			



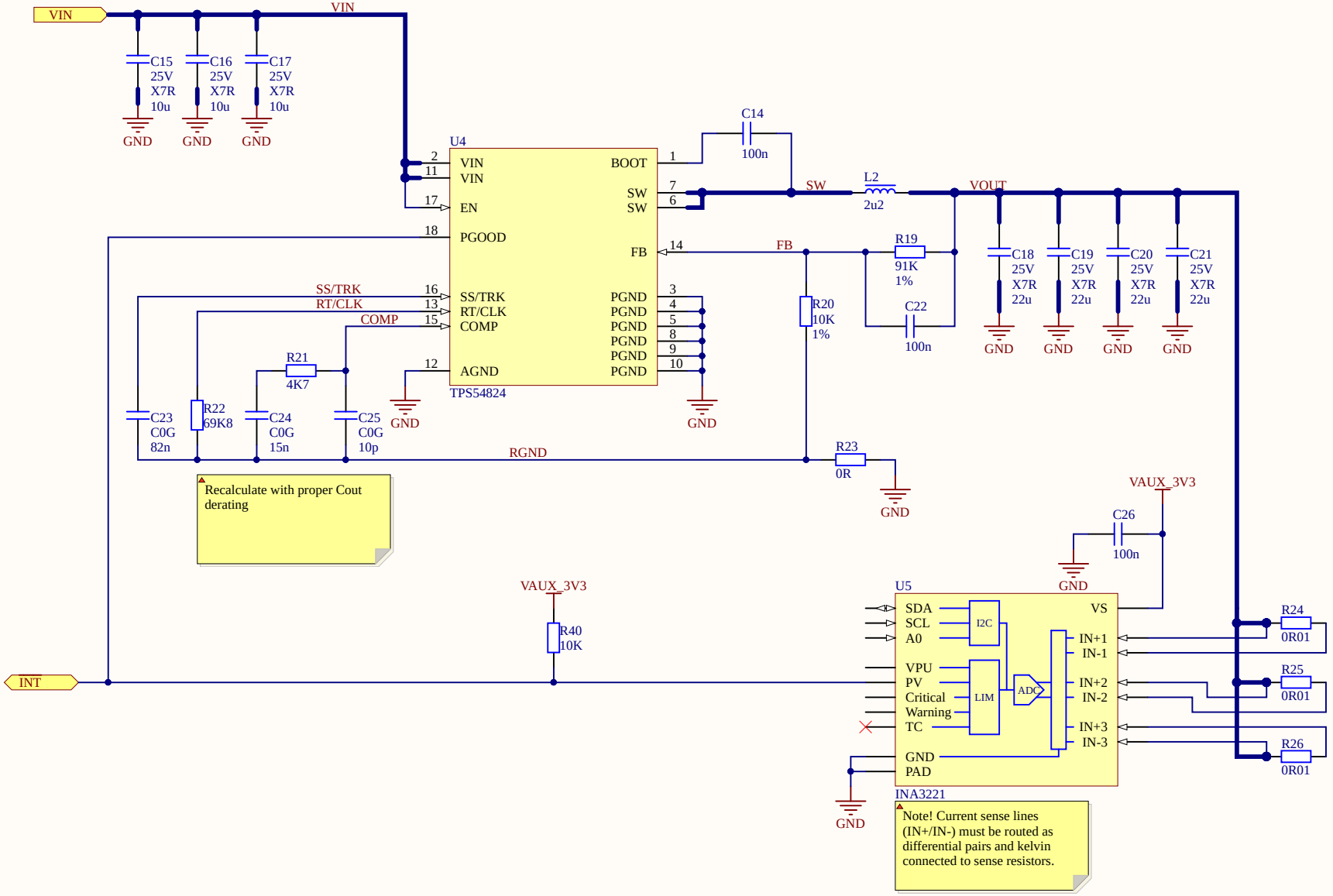
Title	***ASH Power - Power***		*GPA Robotics*
Size: A4	Number:2	Revision:1	
Date: 2020-01-20	Time: 00:16:04	Sheet 2 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			



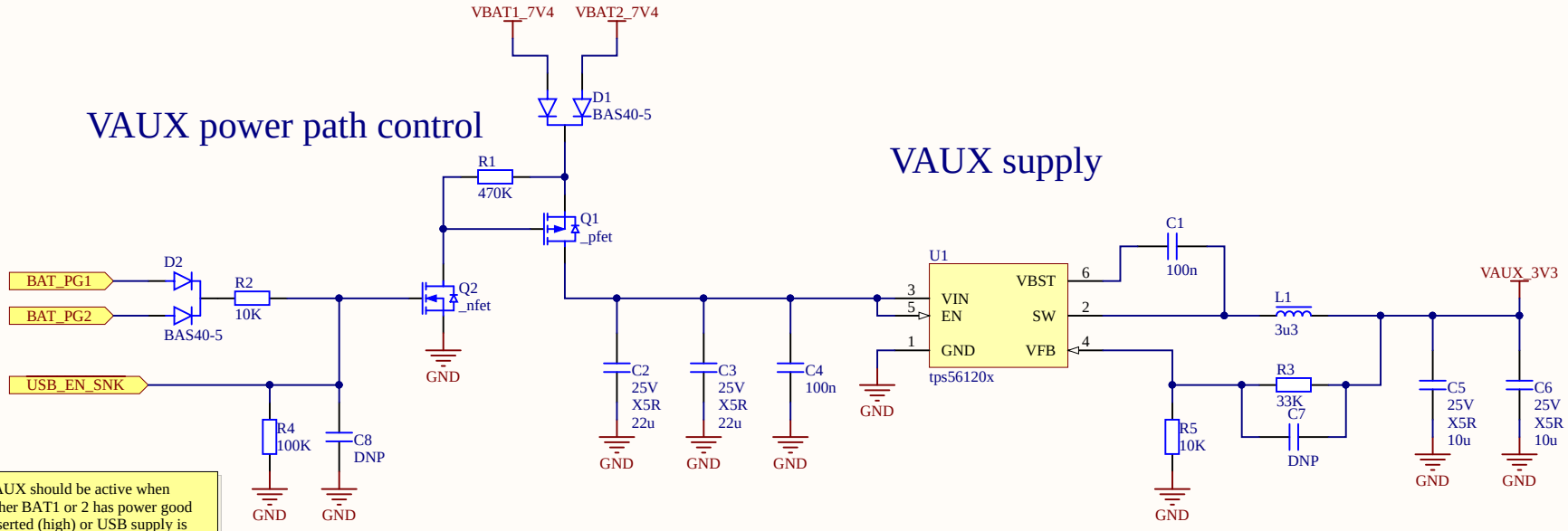
Title	ASH Power - Charger		GPA Robotics
Size: A4	Number:3	Revision:1	
Date: 2020-01-20	Time: 00:16:04	Sheet 3 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			



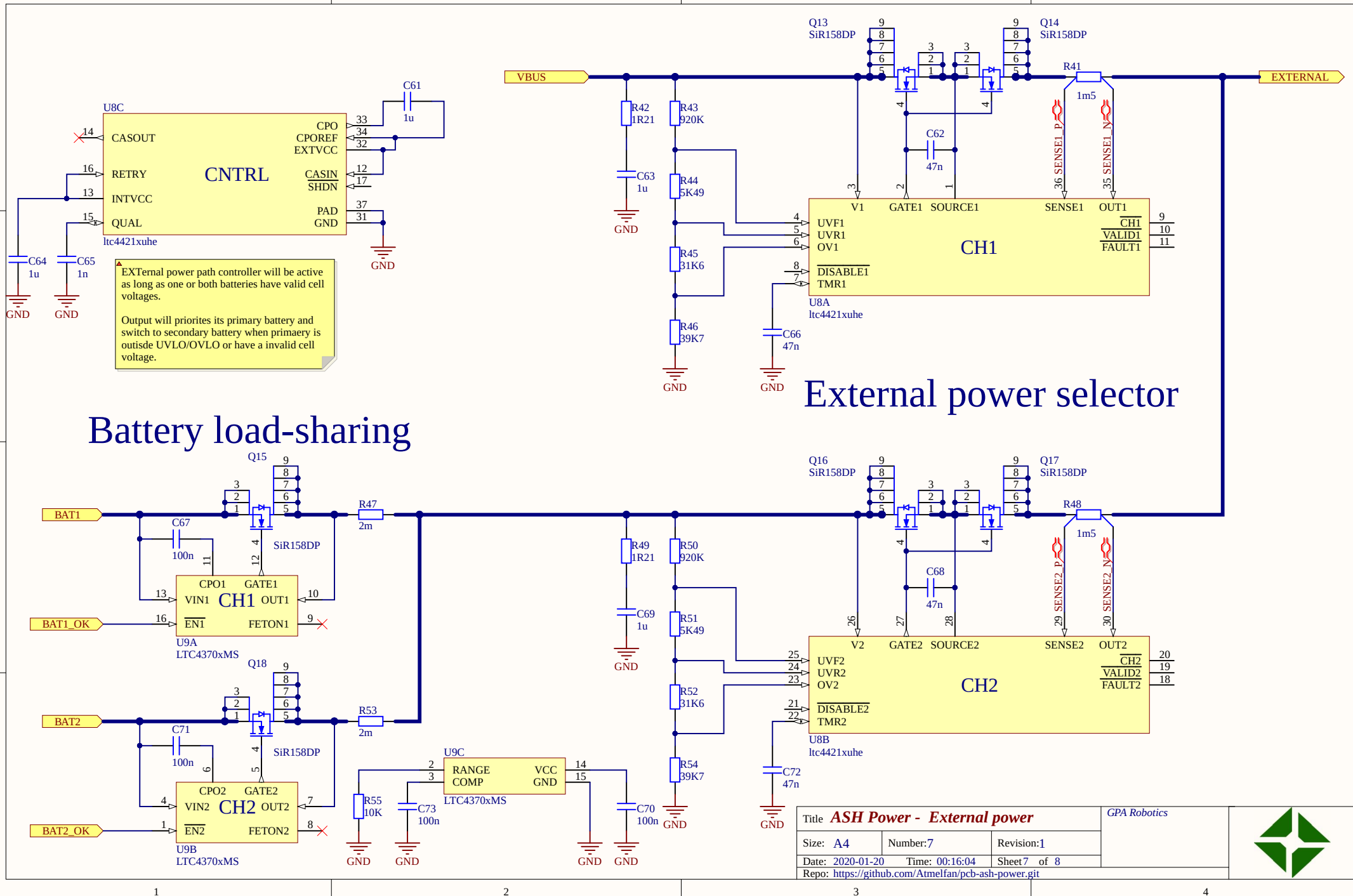
Title	ASH Power - HS Switch		GPA Robotics
Size: A4	Number:4	Revision:1	
Date: 2020-01-20	Time: 00:16:04	Sheet 4 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			

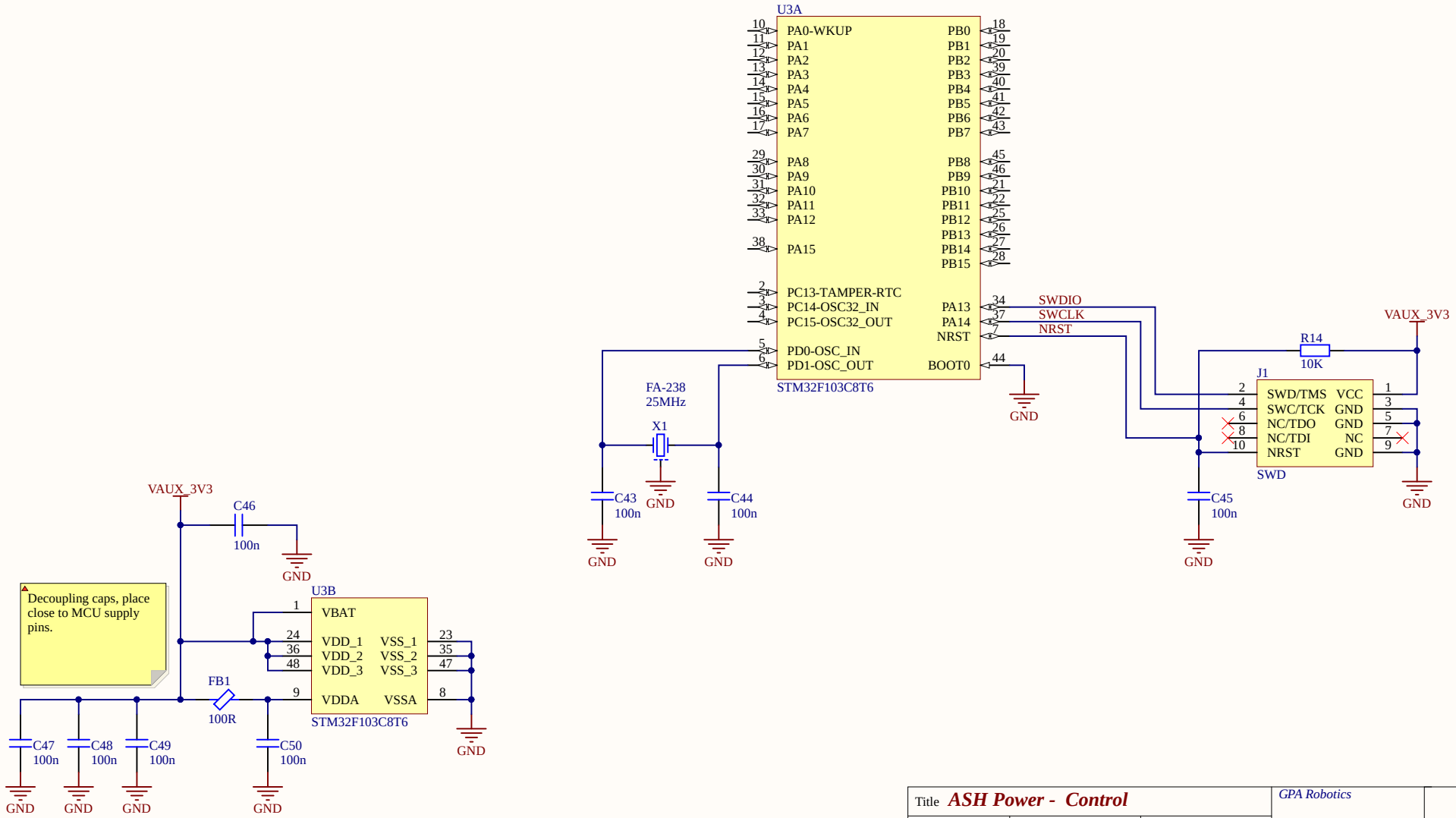


Title	***ASH Power - Leg module***		*GPA Robotics*
Size: A4	Number:5	Revision:1	
Date: 2020-01-20	Time: 00:16:04	Sheet 5 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			



Title	ASH Power - AUX supply		GPA Robotics
Size: A4	Number:6	Revision:1	
Date: 2020-01-20	Time: 00:16:04	Sheet 6 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			


Battery load-sharing
External power selector
U8C
ltc4421xuhe
CNTRL
CASOUT
RETRY
INTVCC
QUAL
CPO
CPOREF
EXTVCC
CASIN
SHDN
PAD
GND
C61
1u
C64
1u
C65
1n
EXTernal power path controller will be active as long as one or both batteries have valid cell voltages.
Output will priorites its primary battery and switch to secondary battery when primaery is outisde UVLO/OVLO or have a invalid cell voltage.
VBUS
EXTERNAL
Q13
SiR158DP
Q14
SiR158DP
R41
1m5
R42
1R21
R43
920K
R44
5K49
R45
31K6
R46
39K7
C62
47n
C63
1u
C66
47n
U8A
ltc4421xuhe
CH1
V1
GATE1
SOURCE1
SENSE1
OUT1
UVF1
UVR1
OV1
DISABLE1
TMR1
CH1
VALID1
FAULT1
SENSE1_P
SENSE1_N
Q15
SiR158DP
R47
2m
C67
100n
U9A
LTC4370xMS
CH1
CPO1
GATE1
VIN1
OUT1
EN1
FETON1
BAT1
BAT1_OK
Q18
SiR158DP
R53
2m
C71
100n
U9B
LTC4370xMS
CH2
CPO2
GATE2
VIN2
OUT2
EN2
FETON2
BAT2
BAT2_OK
U9C
LTC4370xMS
RANGE
COMP
VCC
GND
R55
10K
C73
100n
C70
100n
Q16
SiR158DP
Q17
SiR158DP
R48
1m5
R49
1R21
R50
920K
R51
5K49
R52
31K6
R54
39K7
C68
47n
C69
1u
C72
47n
U8B
ltc4421xuhe
CH2
V2
GATE2
SOURCE2
SENSE2
OUT2
UVF2
UVR2
OV2
DISABLE2
TMR2
CH2
VALID2
FAULT2
SENSE2_P
SENSE2_N
GND
Title ASH Power - External power
GPA Robotics
Size: A4
Number:7
Revision:1
Date: 2020-01-20
Time: 00:16:04
Sheet 7 of 8
Repo: https://github.com/Atmelfan/pcb-ash-power.git



Title	***ASH Power - Control***		*GPA Robotics*
Size: A4	Number:8	Revision:1	
Date: 2020-01-20	Time: 00:16:04	Sheet 8 of 8	
Repo: https://github.com/Atmelfan/pcb-ash-power.git			