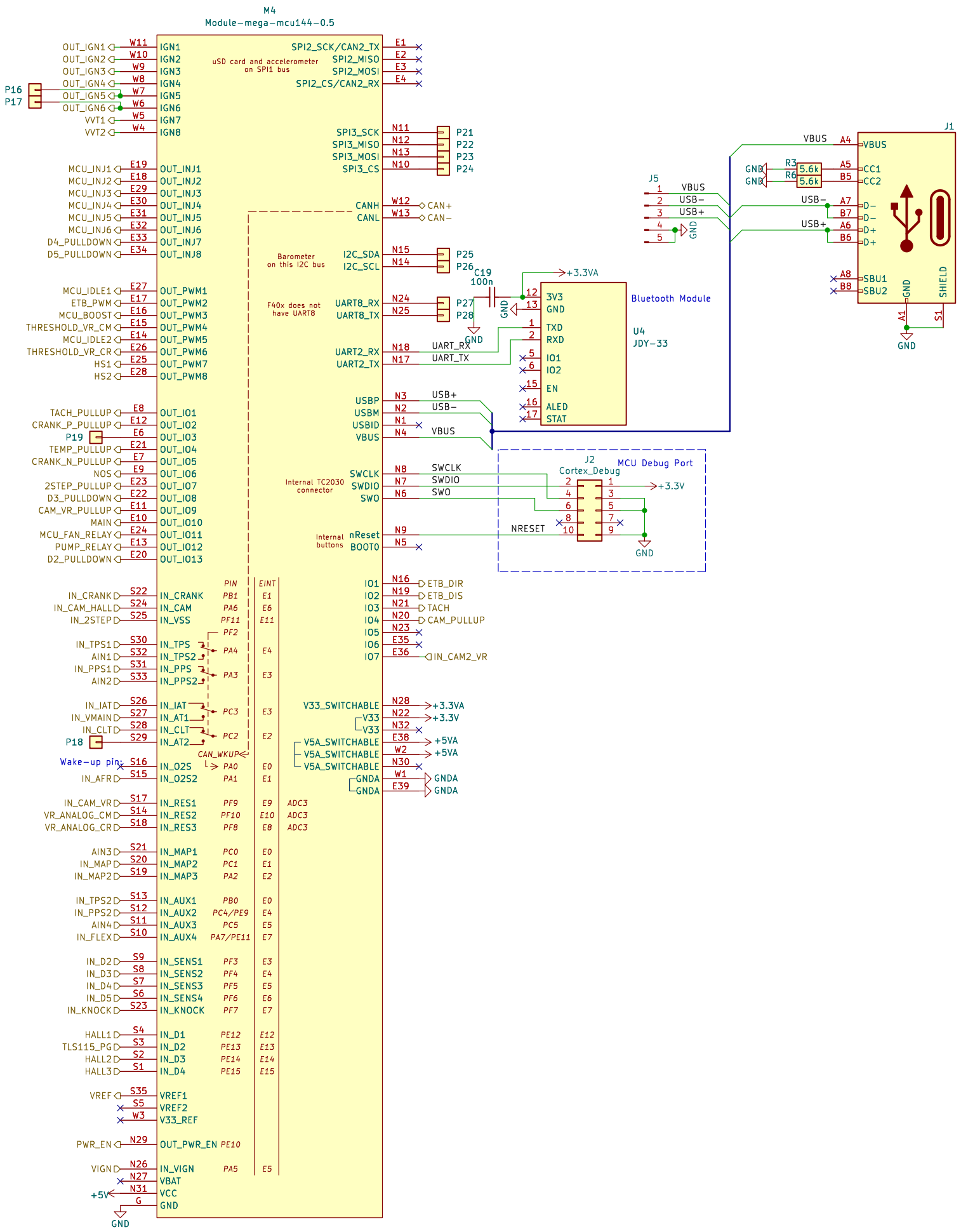
Bus types
General purpose bus
Ignition
Injection & LS-outputs
Analog inputs (sensors)
Discrete inputs

P1 BLACK
HCCPHPE24BKA90F
P2 GREY
HCCPHPE24BGYB90F
AUX
J6
430451012
Power
M1
Module-power_12and5V-0.2
Install R40 0 Ohm if you dont use TLS115
Test note: remove 1nf for VR
Test note: IN_CRANK+ line HALL: remove R753_2 VR: remove R1126, R22
GND test pads
MCU
M2
Module-ign8-0.2
M6
Module-ign8-0.2
INJ
12A Low-side (VND14)
LS1
LS2
HS
3A High-side
TACH_PULLUP
5V 750 Ohm (default)/12V 970 Ohm
LS_weak
5A Low-side
ETB
TLE9201 motor driver
HALL_OPT_PU
Float (default)/4.47k UP
M8
Module-vr-discrete-0.4
M3
Module-vr-discrete-0.4
OPT_PULLDOWNS1
4.5k UP (default)/3.3k DOWN
vr9924
M9
Module-knock-0.2
OPT_PULLUPS
Float (default)/2.7k UP
File: DOUBLE_PU.kicad_sch
Configurable AUX pulls
MAP
Internal MAP sensor
File: MCU.kicad_sch
LEDs
Board info
FOR OFF ROAD PURPOSES ONLY
This is not for applications with emissions or safety regulations (AKA not for street use). This is for closed stages, track and equipment.
http://www.alphaxpr.com/
Hellen-One-PCB-logo

rusEFI	
Sheet: /	
File: alphax_4ch.kicad_sch	
Title: AlphaECU 4chan powered by rusEFI	
Size: A2	Date: 2023-12-08
KiCad E.D.A. 8.0.1	Rev: 1
	Id: 1/14



Sheet: /MCU/		
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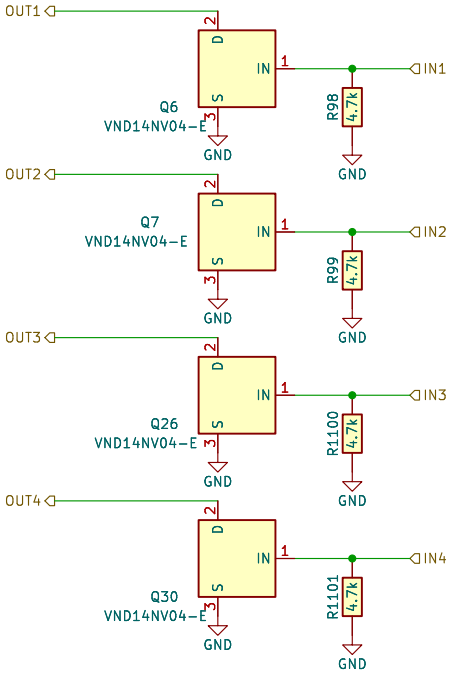
Size: A3	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 2/14



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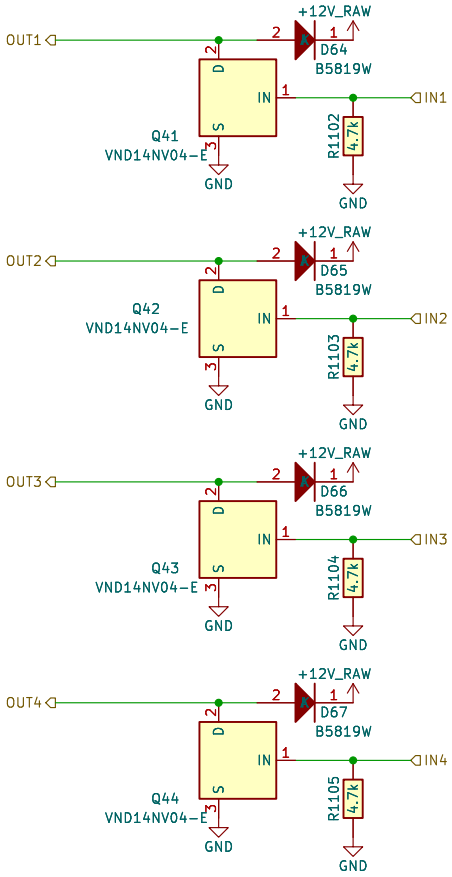
KiCad E.D.A. 8.0.1		Id: 3/14



Sheet: /LS1/		
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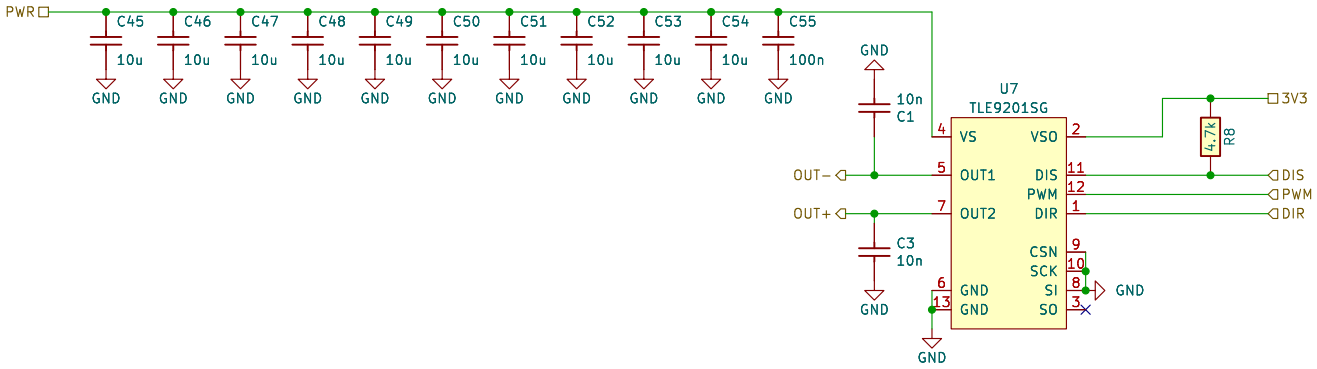
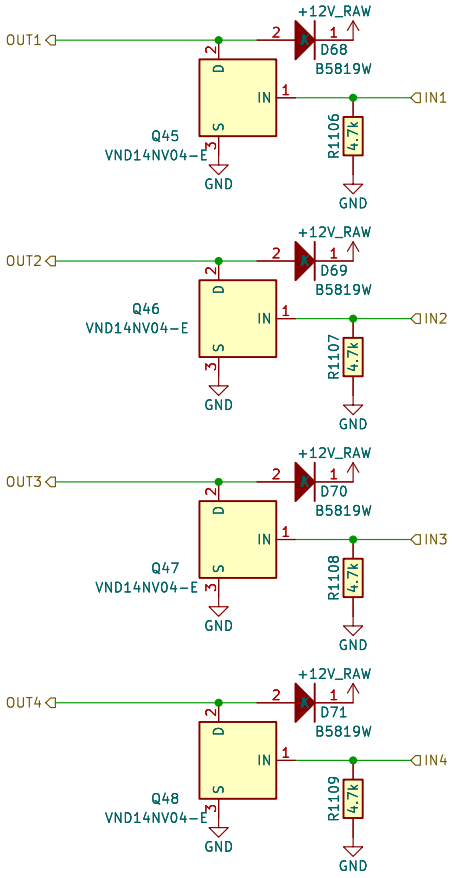
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 4/14



Sheet: /ETB/		
File: DC_MOTOR_0.1.kicad_sch		
Title: Hellen-One DC motor driver		
Size: A4	Date: 2023-09-04	**Rev: 0.1**
KiCad E.D.A. 8.0.1		Id: 5/14



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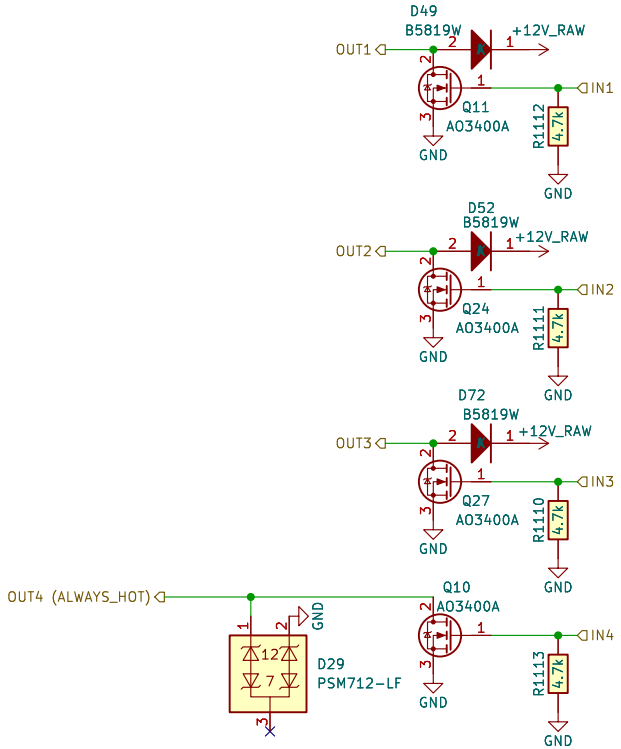
KiCad E.D.A. 8.0.1		Id: 6/14



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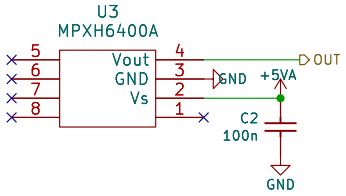
KiCad E.D.A. 8.0.1		Id: 7/14



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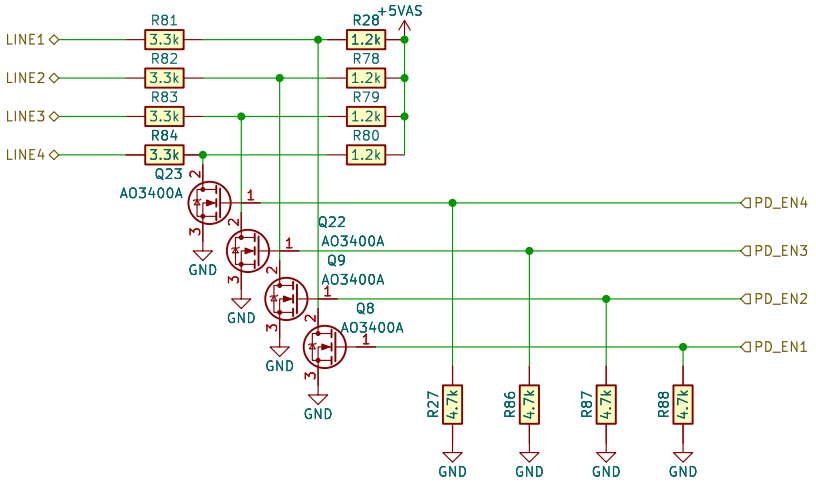
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 8/14



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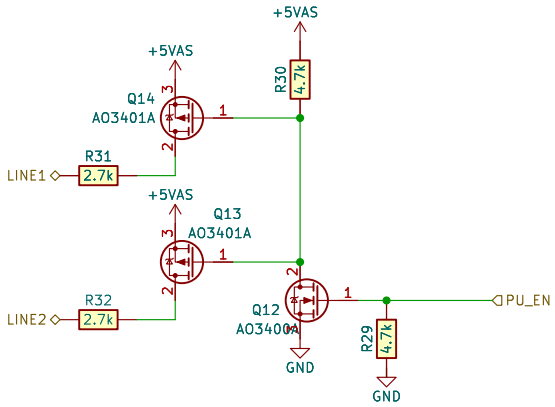
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 9/14



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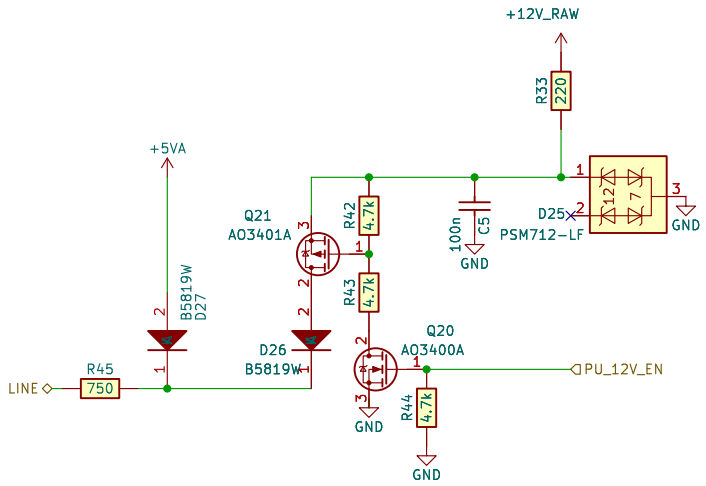
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 11/14



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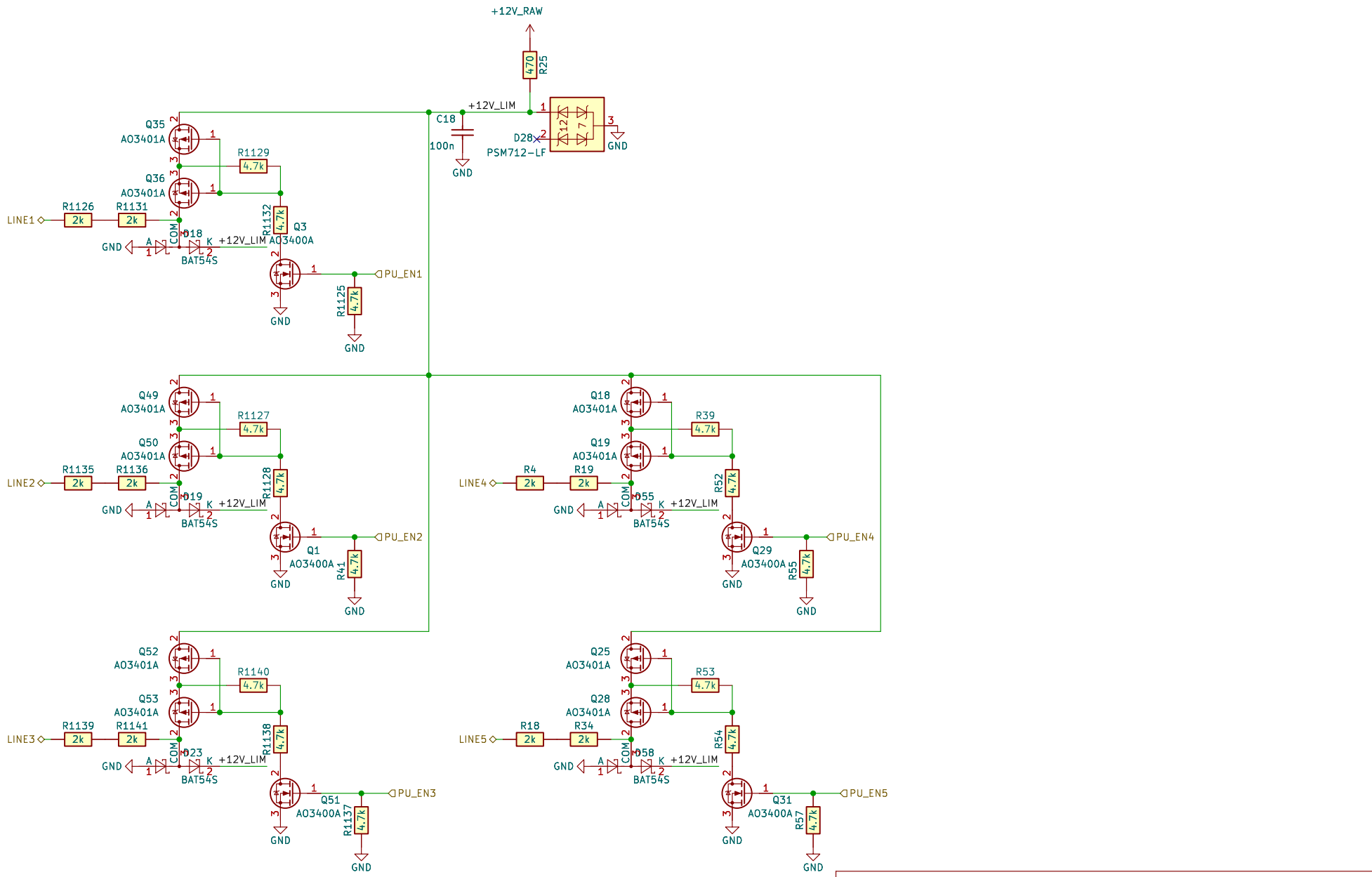
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 12/14


+12V_RAW
470
R25
+12V_LIM
C18
100n
GND
D28
PSM712-LF
12
7
3
GND
Q35
AO3401A
Q36
AO3401A
R1129
4.7k
R1126
2k
R1131
2k
LINE1
COM
D18
A
K
+12V_LIM
BAT54S
R1132
4.7k
Q3
AO3400A
PU_EN1
R1125
4.7k
GND
Q49
AO3401A
Q50
AO3401A
R1127
4.7k
R1135
2k
R1136
2k
LINE2
D19
R1128
4.7k
Q1
AO3400A
PU_EN2
R41
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AO3401A
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4.7k
R4
2k
R19
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LINE4
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D23
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Q28
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R53
4.7k
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R57
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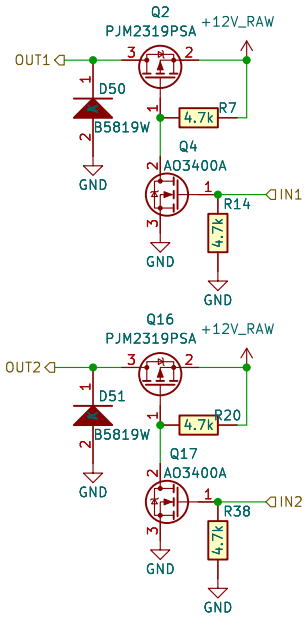
File: HALL_PU3.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.1
Id: 13/14



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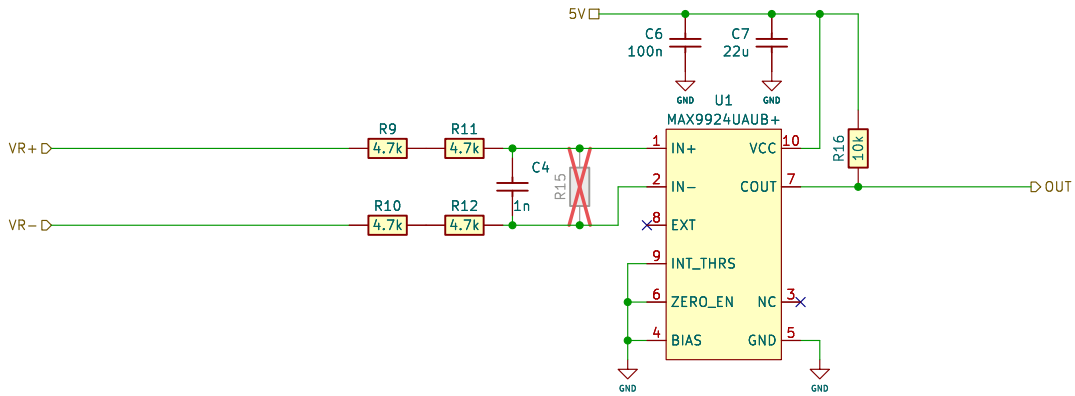
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 14/14



Sheet: /vr9924/		
File: vr9924.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.1		Id: 15/14