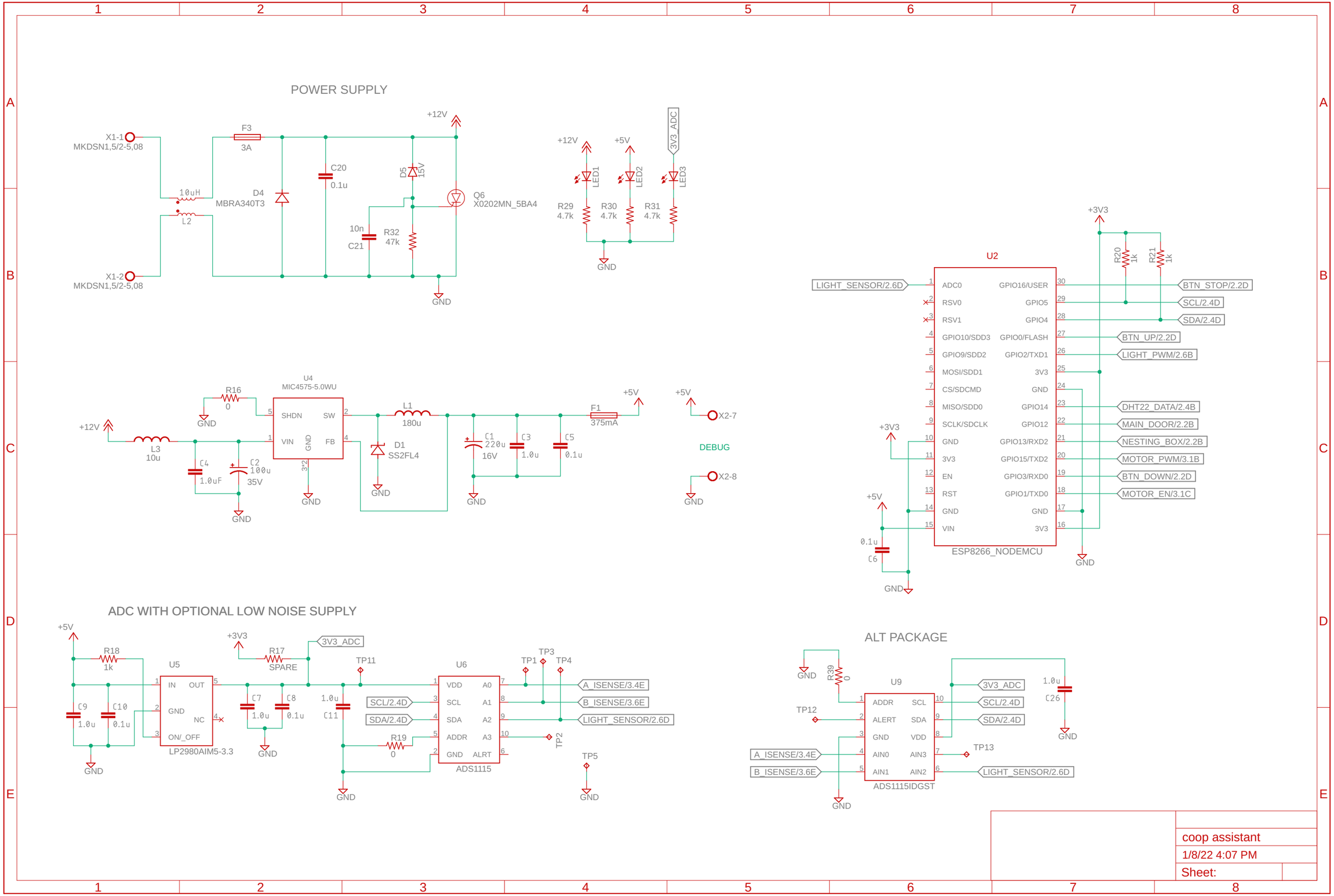
POWER SUPPLY
X1-1
MKDSN1,5/2-5,08
X1-2
MKDSN1,5/2-5,08
F3
3A
10uH
L2
D4
MBRA340T3
C20
0.1u
D5
15V
10n
C21
R32
47k
+12V
Q6
X0202MN_5BA4
GND
+12V
+5V
3V3_ADC
LED1
LED2
LED3
R29
4.7k
R30
4.7k
R31
4.7k
GND
U4
MIC4575-5.0WU
R16
0
GND
+12V
L3
10u
C4
1.0uF
C2
100u
35V
SHDN
VIN
GND
SW
FB
L1
180u
D1
SS2FL4
C1
220u
16V
C3
1.0u
C5
0.1u
F1
375mA
+5V
+5V
X2-7
DEBUG
X2-8
U2
ESP8266_NODEMCU
+3V3
R20
1k
R21
1k
LIGHT_SENSOR/2.6D
ADC0
RSV0
RSV1
GPIO10/SDD3
GPIO9/SDD2
MOSI/SDD1
CS/SDCMD
MISO/SDD0
SCLK/SDCLK
GND
3V3
EN
RST
GND
VIN
GPIO16/USER
GPIO5
GPIO4
GPIO0/FLASH
GPIO2/TXD1
3V3
GND
GPIO14
GPIO12
GPIO13/RXD2
GPIO15/TXD2
GPIO3/RXD0
GPIO1/TXD0
GND
3V3
BTN_STOP/2.2D
SCL/2.4D
SDA/2.4D
BTN_UP/2.2D
LIGHT_PWM/2.6B
DHT22_DATA/2.4B
MAIN_DOOR/2.2B
NESTING_BOX/2.2B
MOTOR_PWM/3.1B
BTN_DOWN/2.2D
MOTOR_EN/3.1C
+5V
0.1u
C6
ADC WITH OPTIONAL LOW NOISE SUPPLY
+5V
R18
1k
C9
1.0u
C10
0.1u
U5
IN
OUT
GND
NC
ON/_OFF
LP2980AIM5-3.3
+3V3
R17
SPARE
3V3_ADC
C7
1.0u
C8
0.1u
TP11
1.0u
C11
U6
ADS1115
VDD
SCL
SDA
ADDR
GND
A0
A1
A2
A3
ALRT
SCL/2.4D
SDA/2.4D
R19
0
TP1
TP3
TP4
TP2
A_ISENSE/3.4E
B_ISENSE/3.6E
LIGHT_SENSOR/2.6D
TP5
ALT PACKAGE
R39
0
U9
ADDR
ALERT
GND
AIN0
AIN1
SCL
SDA
VDD
AIN3
AIN2
TP12
TP13
A_ISENSE/3.4E
B_ISENSE/3.6E
3V3_ADC
SCL/2.4D
SDA/2.4D
LIGHT_SENSOR/2.6D
ADS1115IDGST
1.0u
C26
coop assistant
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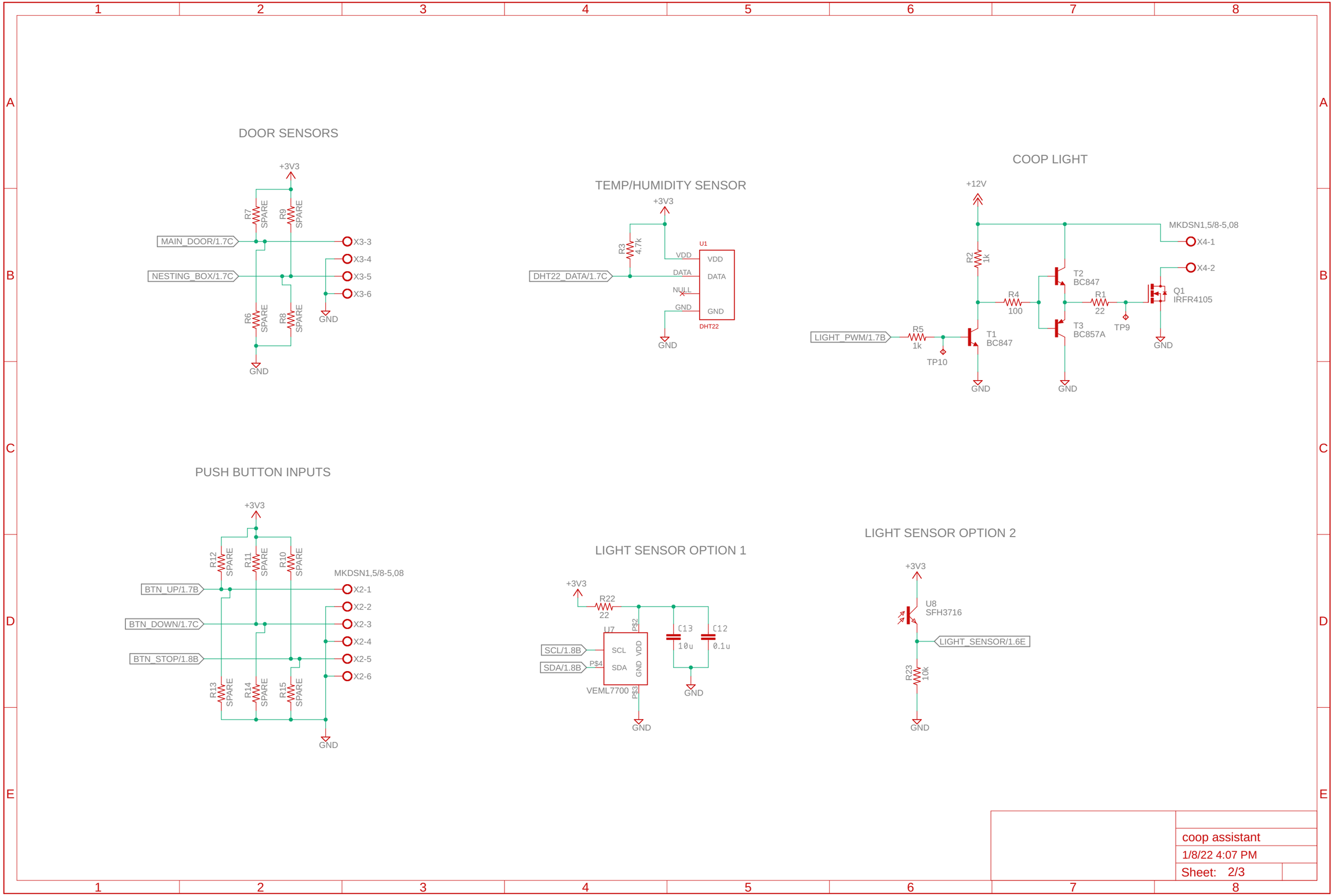
Sheet:


DOOR SENSORS
+3V3
R7 SPARE
R9 SPARE
MAIN_DOOR/1.7C
NESTING_BOX/1.7C
X3-3
X3-4
X3-5
X3-6
R6 SPARE
R8 SPARE
GND
TEMP/HUMIDITY SENSOR
+3V3
R3 4.7k
U1
VDD
DATA
NULL
GND
DHT22
DHT22_DATA/1.7C
COOP LIGHT
+12V
MKDSN1,5/8-5,08
X4-1
X4-2
R2 1k
T2 BC847
R4 100
R1 22
Q1 IRFR4105
T3 BC857A
TP9
LIGHT_PWM/1.7B
R5 1k
TP10
T1 BC847
PUSH BUTTON INPUTS
+3V3
R12 SPARE
R11 SPARE
R10 SPARE
MKDSN1,5/8-5,08
BTN_UP/1.7B
BTN_DOWN/1.7C
BTN_STOP/1.8B
X2-1
X2-2
X2-3
X2-4
X2-5
X2-6
R13 SPARE
R14 SPARE
R15 SPARE
LIGHT SENSOR OPTION 1
+3V3
R22 22
U7
P$2
SCL/1.8B
SDA/1.8B
P$4
SCL
SDA
VDD
GND
P$3
VEML7700
C13 10u
C12 0.1u
LIGHT SENSOR OPTION 2
+3V3
U8 SFH3716
LIGHT_SENSOR/1.6E
R23 10k
coop assistant
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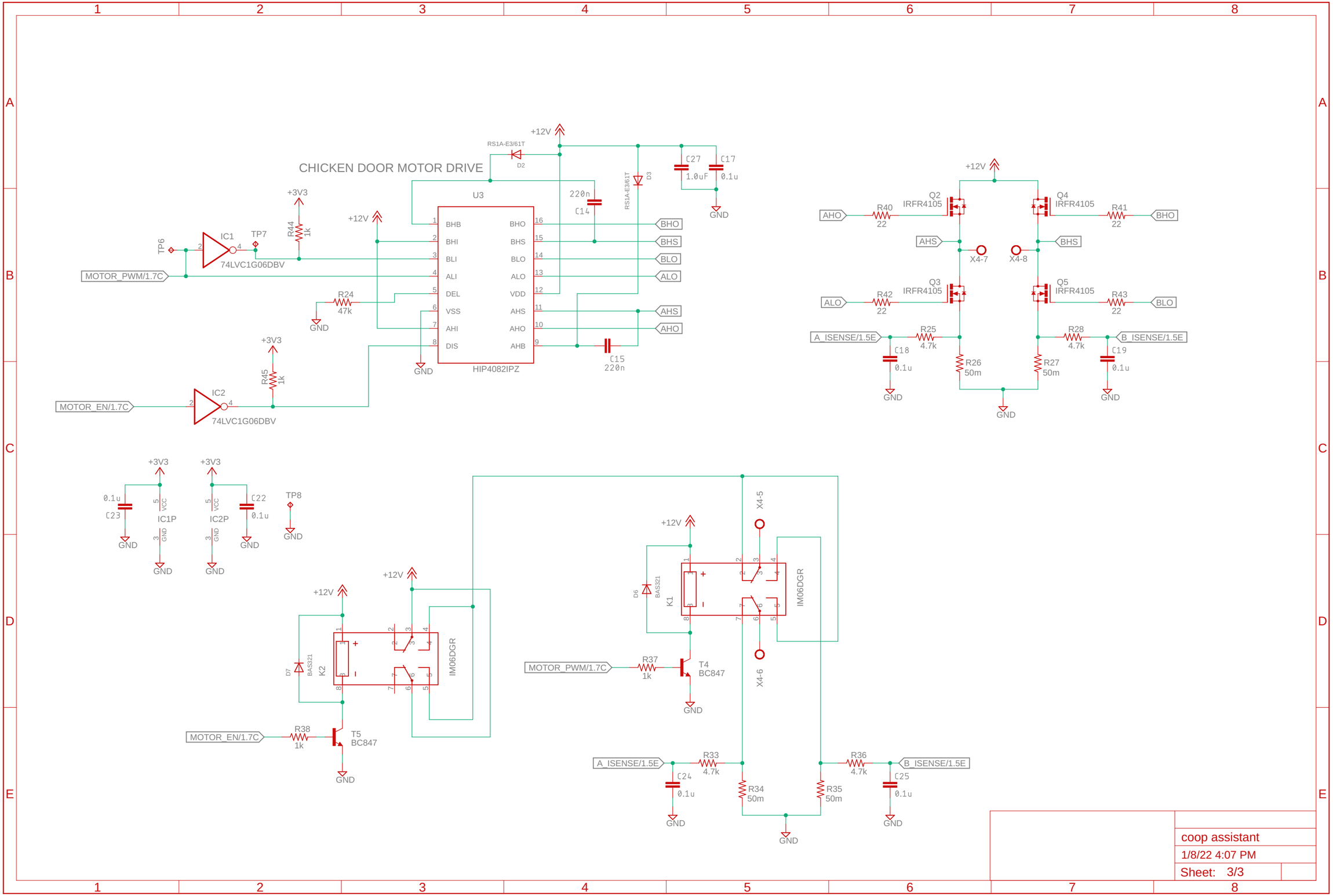
CHICKEN DOOR MOTOR DRIVE
+12V
RS1A-E3/61T
D2
C27
1.0uF
C17
0.1u
GND
U3
220n
C14
RS1A-E3/61T
D3
+3V3
R44
1k
+12V
TP6
IC1
TP7
74LVC1G06DBV
MOTOR_PWM/1.7C
R24
47k
GND
BHB
BHI
BLI
ALI
DEL
VSS
AHI
DIS
BHO
BHS
BLO
ALO
VDD
AHS
AHO
AHB
BHO
BHS
BLO
ALO
AHS
AHO
C15
220n
HIP4082IPZ
+3V3
R45
1k
IC2
MOTOR_EN/1.7C
74LVC1G06DBV
+12V
AHO
R40
22
Q2
IRFR4105
Q4
IRFR4105
R41
22
BHO
AHS
X4-7
X4-8
BHS
ALO
R42
22
Q3
IRFR4105
Q5
IRFR4105
R43
22
BLO
A_ISENSE/1.5E
R25
4.7k
C18
0.1u
R26
50m
R27
50m
R28
4.7k
C19
0.1u
B_ISENSE/1.5E
GND
+3V3
0.1u
C23
IC1P
VCC
GND
+3V3
IC2P
C22
0.1u
TP8
GND
+12V
D7
BAS321
K2
IM06DGR
MOTOR_EN/1.7C
R38
1k
T5
BC847
GND
+12V
D6
BAS321
K1
IM06DGR
X4-5
X4-6
MOTOR_PWM/1.7C
R37
1k
T4
BC847
A_ISENSE/1.5E
R33
4.7k
C24
0.1u
R34
50m
R35
50m
R36
4.7k
C25
0.1u
B_ISENSE/1.5E
coop assistant
1/8/22 4:07 PM
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