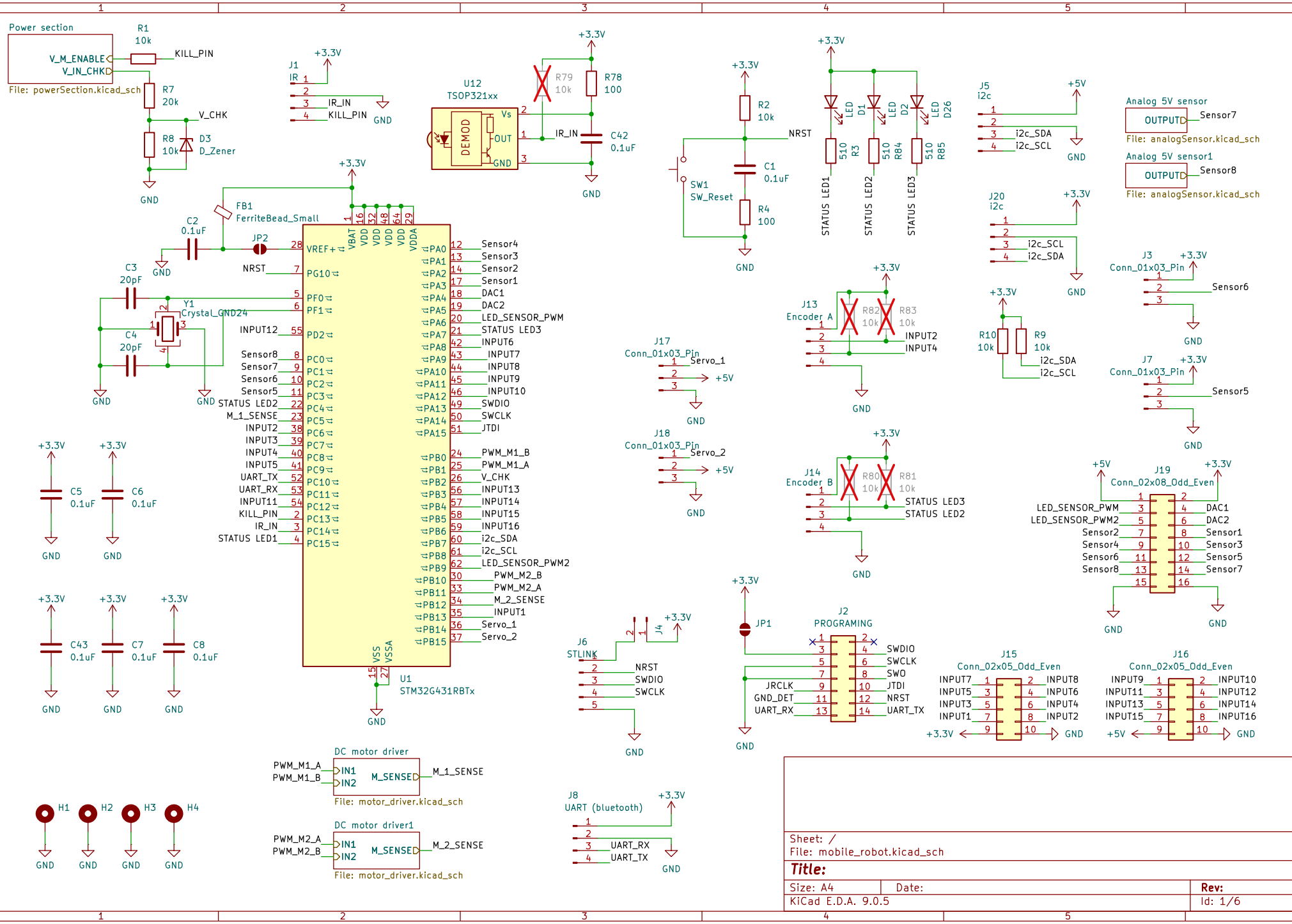
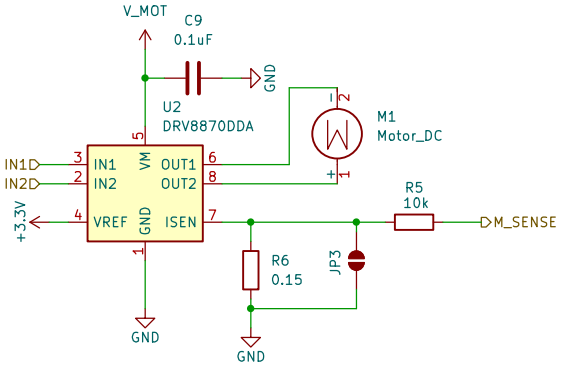

Power section
V_M_ENABLE
V_IN_CHK
File: powerSection.kicad_sch
R1 10k
KILL_PIN
R7 20k
V_CHK
R8 10k
D3 D_Zener
GND
J1
IR
IR_IN
KILL_PIN
+3.3V
U12
TSOP321xx
DEMOD
Vs
OUT
GND
R79 10k
R78 100
IR_IN
C42 0.1uF
R2 10k
NRST
C1 0.1uF
SW1
SW_Reset
R4 100
LED D1
LED D2
LED D26
510 R3
510 R84
510 R85
STATUS LED1
STATUS LED2
STATUS LED3
J5
i2c
i2c_SDA
i2c_SCL
+5V
Analog 5V sensor
OUTPUT
Sensor7
File: analogSensor.kicad_sch
Analog 5V sensor1
Sensor8
J20
J3
Conn_01x03_Pin
Sensor6
J7
Sensor5
FB1
FerriteBead_Small
C2 0.1uF
JP2
C3 20pF
Y1
Crystal_GND24
C4 20pF
U1
STM32G431RBTx
VREF+
VBAT
VDD
VSS
VSSA
PG10
PF0
PF1
PD2
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
PC8
PC9
PC10
PC11
PC12
PC13
PC14
PC15
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11
PA12
PA13
PA14
PA15
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PB8
PB9
PB10
PB11
PB12
PB13
PB14
PB15
Sensor4
Sensor3
Sensor2
Sensor1
DAC1
DAC2
LED_SENSOR_PWM
STATUS LED3
INPUT6
INPUT7
INPUT8
INPUT9
INPUT10
SWDIO
SWCLK
JTDI
PWM_M1_B
PWM_M1_A
V_CHK
INPUT13
INPUT14
INPUT15
INPUT16
i2c_SDA
i2c_SCL
LED_SENSOR_PWM2
PWM_M2_B
PWM_M2_A
M_2_SENSE
INPUT1
Servo_1
Servo_2
J13
Encoder A
R82 10k
R83 10k
INPUT2
INPUT4
R10 10k
R9 10k
J17
Conn_01x03_Pin
Servo_1
J18
Servo_2
J14
Encoder B
R80 10k
R81 10k
J19
Conn_02x08_Odd_Even
LED_SENSOR_PWM
LED_SENSOR_PWM2
Sensor2
Sensor4
Sensor6
Sensor8
DAC1
DAC2
Sensor1
Sensor3
Sensor5
Sensor7
C5 0.1uF
C6 0.1uF
C43 0.1uF
C7 0.1uF
C8 0.1uF
J6
STLINK
J4
NRST
SWDIO
SWCLK
JP1
J2
PROGRAMING
SWO
JTDI
JRCLK
GND_DET
NRST
UART_RX
UART_TX
J15
Conn_02x05_Odd_Even
INPUT7
INPUT5
INPUT3
INPUT1
INPUT8
INPUT6
INPUT4
INPUT2
J16
Conn_02x05_Odd_Even
INPUT9
INPUT11
INPUT13
INPUT15
INPUT10
INPUT12
INPUT14
INPUT16
H1
H2
H3
H4
DC motor driver
PWM_M1_A
PWM_M1_B
IN1
IN2
M_SENSED
M_1_SENSE
File: motor_driver.kicad_sch
DC motor driver1
PWM_M2_A
PWM_M2_B
M_2_SENSE
J8
UART (bluetooth)
Sheet: /
File: mobile_robot.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 9.0.5
Id: 1/6



Sheet: /DC motor driver1/ File: motor_driver.kicad_sch		
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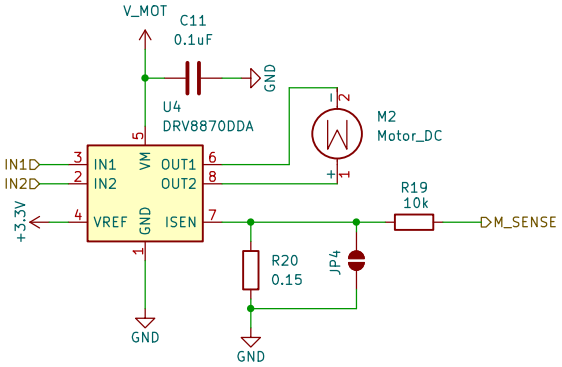
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.5		Id: 2/6



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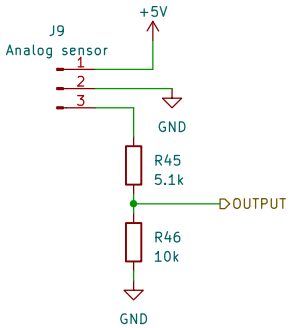
File: motor_driver.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.5		Id: 7/6



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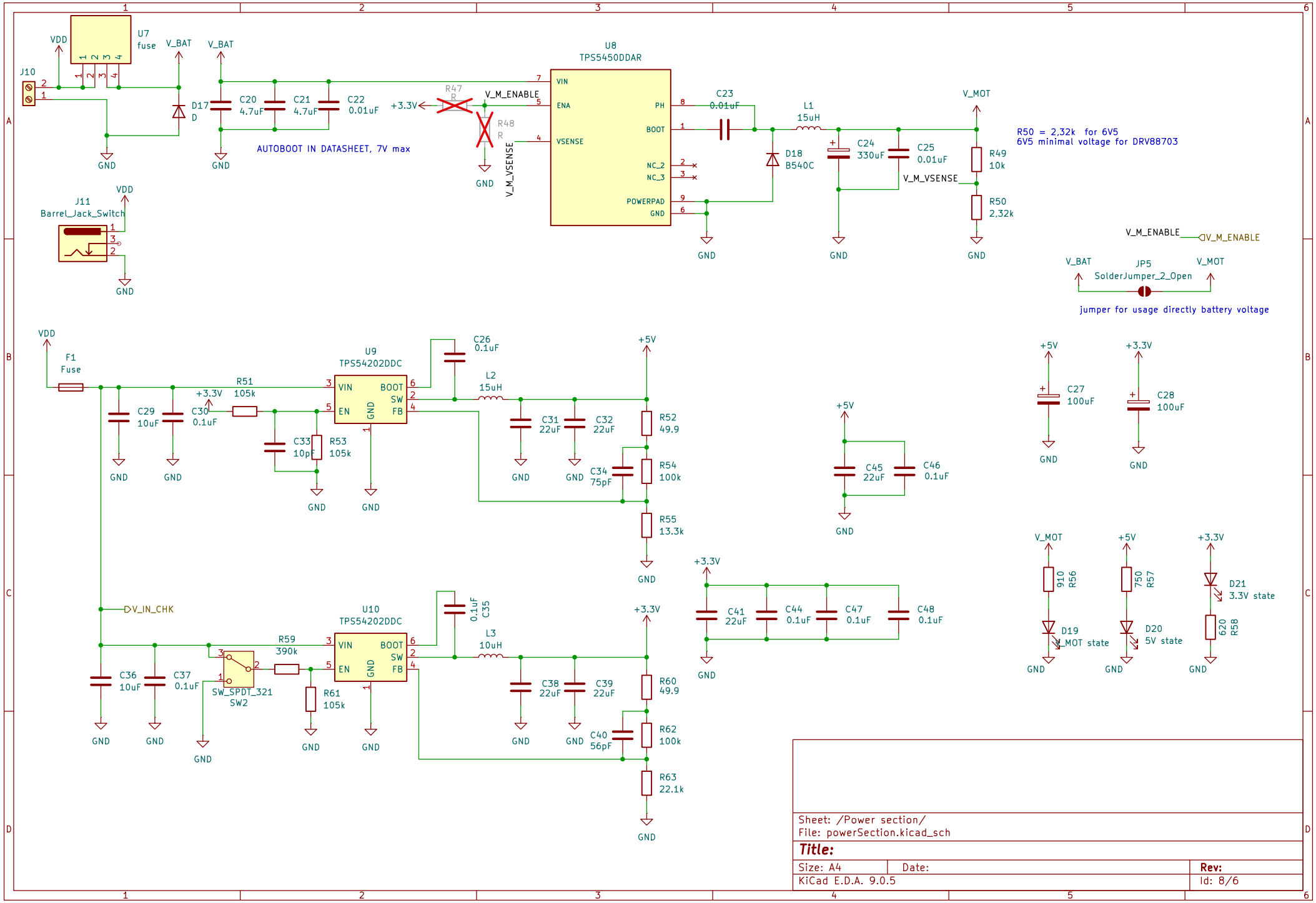
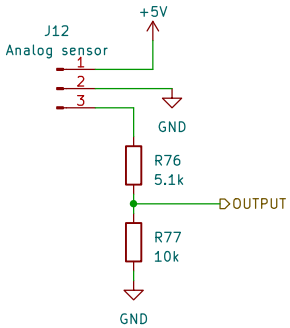
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.5		Id: 7/6


U7
fuse
J10
VDD
V_BAT
D17
D
C20
4.7uF
C21
4.7uF
C22
0.01uF
GND
AUTOBOOT IN DATASHEET, 7V max
+3.3V
R47
R
R48
R
V_M_ENABLE
V_M_VSENSE
U8
TPS5450DDAR
VIN
ENA
VSENSE
PH
BOOT
NC_2
NC_3
POWERPAD
GND
C23
0.01uF
L1
15uH
D18
B540C
C24
330uF
C25
0.01uF
V_MOT
R49
10k
R50
2,32k
R50 = 2,32k for 6V5
6V5 minimal voltage for DRV88703
J11
Barrel_Jack_Switch
JP5
SolderJumper_2_Open
jumper for usage directly battery voltage
F1
Fuse
U9
TPS54202DDC
R51
105k
C26
0.1uF
L2
15uH
C29
10uF
C30
0.1uF
C33
10pF
R53
105k
C31
22uF
C32
22uF
C34
75pF
R52
49.9
R54
100k
R55
13.3k
+5V
C45
22uF
C46
0.1uF
C27
100uF
C28
100uF
V_IN_CHK
U10
TPS54202DDC
R59
390k
C35
0.1uF
L3
10uH
C36
10uF
C37
0.1uF
SW_SPDT_321
SW2
R61
105k
C38
22uF
C39
22uF
C40
56pF
R60
49.9
R62
100k
R63
22.1k
C41
22uF
C44
0.1uF
C47
0.1uF
C48
0.1uF
V_MOT
910
R56
D19
V_MOT state
750
R57
D20
5V state
D21
3.3V state
620
R58
Sheet: /Power section/
File: powerSection.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 9.0.5
Id: 8/6



Sheet: /Analog 5V sensor1/		
File: analogSensor.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.5		Id: 9/6