Sheet: teensy41

File: teensy41.sch

Sheet: CypressCntrl

File: CypressCntrl.sch

Sheet: GALIL_MTRDVR

File: GALIL_MTRDVR.sch

Sheet: POWER

File: POWER.sch

Sheet: /
File: GALIL.sch

Title:

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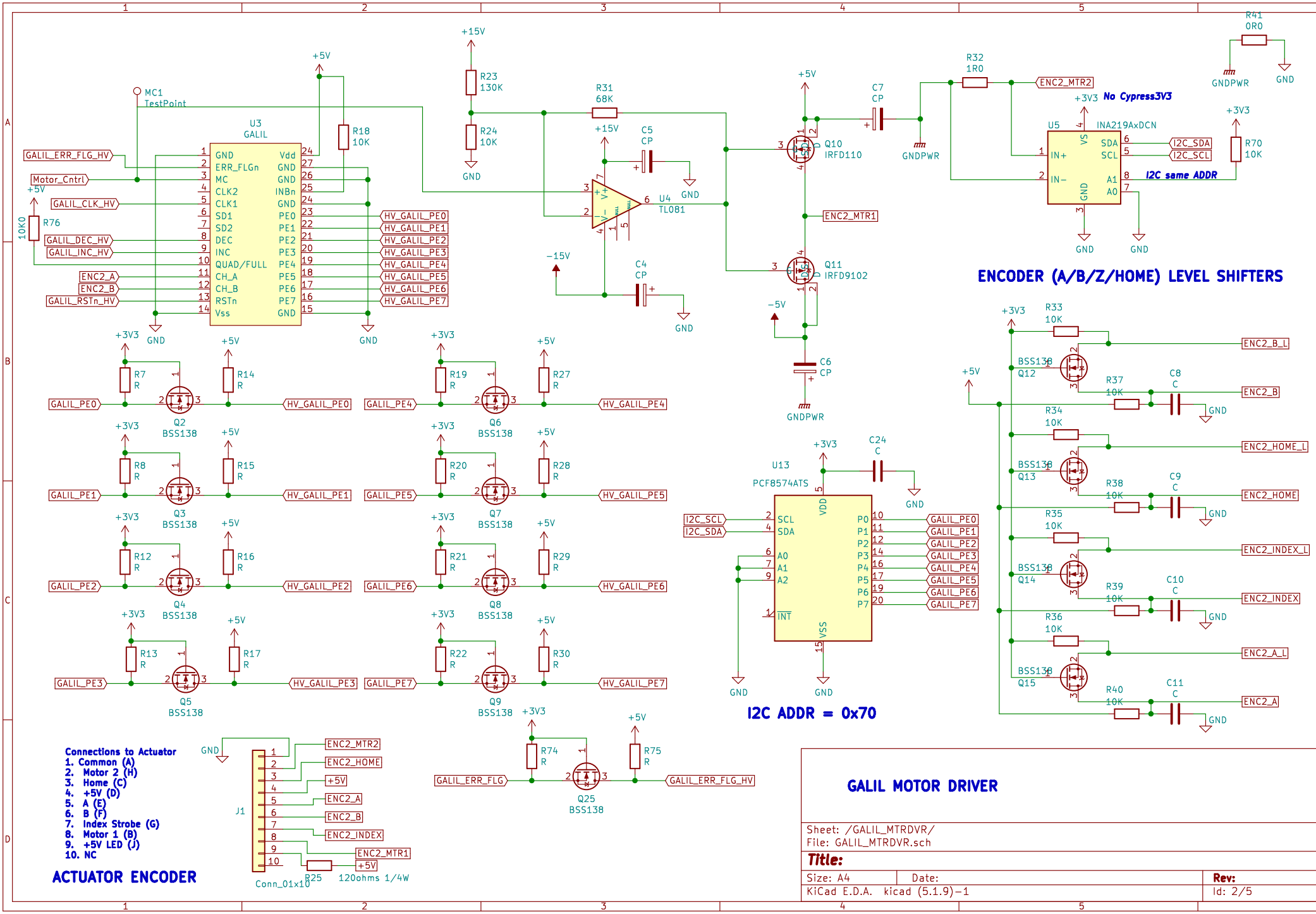
MC1
TestPoint
U3
GALIL
GALIL_ERR_FLG_HV
Motor_Cntrl
GALIL_CLK_HV
GALIL_DEC_HV
GALIL_INC_HV
ENC2_A
ENC2_B
GALIL_RSTn_HV
HV_GALIL_PE0
HV_GALIL_PE1
HV_GALIL_PE2
HV_GALIL_PE3
HV_GALIL_PE4
HV_GALIL_PE5
HV_GALIL_PE6
HV_GALIL_PE7
R18 10K
R76 10K0
R23 130K
R24 10K
R31 68K
U4 TL081
C5 CP
C4 CP
Q10 IRFD110
Q11 IRFD9102
C7 CP
C6 CP
R32 1R0
R41 0R0
ENC2_MTR2
ENC2_MTR1
GNDPWR
U5 INA219AxDCN
No Cypress3V3
I2C same ADDR
I2C_SDA
I2C_SCL
R70 10K
ENCODER (A/B/Z/HOME) LEVEL SHIFTERS
R33 10K
R34 10K
R35 10K
R36 10K
R37 10K
R38 10K
R39 10K
R40 10K
C8 C
C9 C
C10 C
C11 C
Q12 BSS138
Q13 BSS138
Q14 BSS138
Q15 BSS138
ENC2_B_L
ENC2_B
ENC2_HOME_L
ENC2_HOME
ENC2_INDEX_L
ENC2_INDEX
ENC2_A_L
ENC2_A
U13
PCF8574ATS
C24 C
I2C ADDR = 0x70
R7 R
R8 R
R12 R
R13 R
R14 R
R15 R
R16 R
R17 R
R19 R
R20 R
R21 R
R22 R
R27 R
R28 R
R29 R
R30 R
Q2 BSS138
Q3 BSS138
Q4 BSS138
Q5 BSS138
Q6 BSS138
Q7 BSS138
Q8 BSS138
Q9 BSS138
GALIL_PE0
GALIL_PE1
GALIL_PE2
GALIL_PE3
GALIL_PE4
GALIL_PE5
GALIL_PE6
GALIL_PE7
R74 R
R75 R
Q25 BSS138
GALIL_ERR_FLG
GALIL_ERR_FLG_HV
Connections to Actuator
1. Common (A)
2. Motor 2 (H)
3. Home (C)
4. +5V (D)
5. A (E)
6. B (F)
7. Index Strobe (G)
8. Motor 1 (B)
9. +5V LED (J)
10. NC
ACTUATOR ENCODER
J1
Conn_01x10
R25 120ohms 1/4W
GALIL MOTOR DRIVER
Sheet: /GALIL_MTRDVR/
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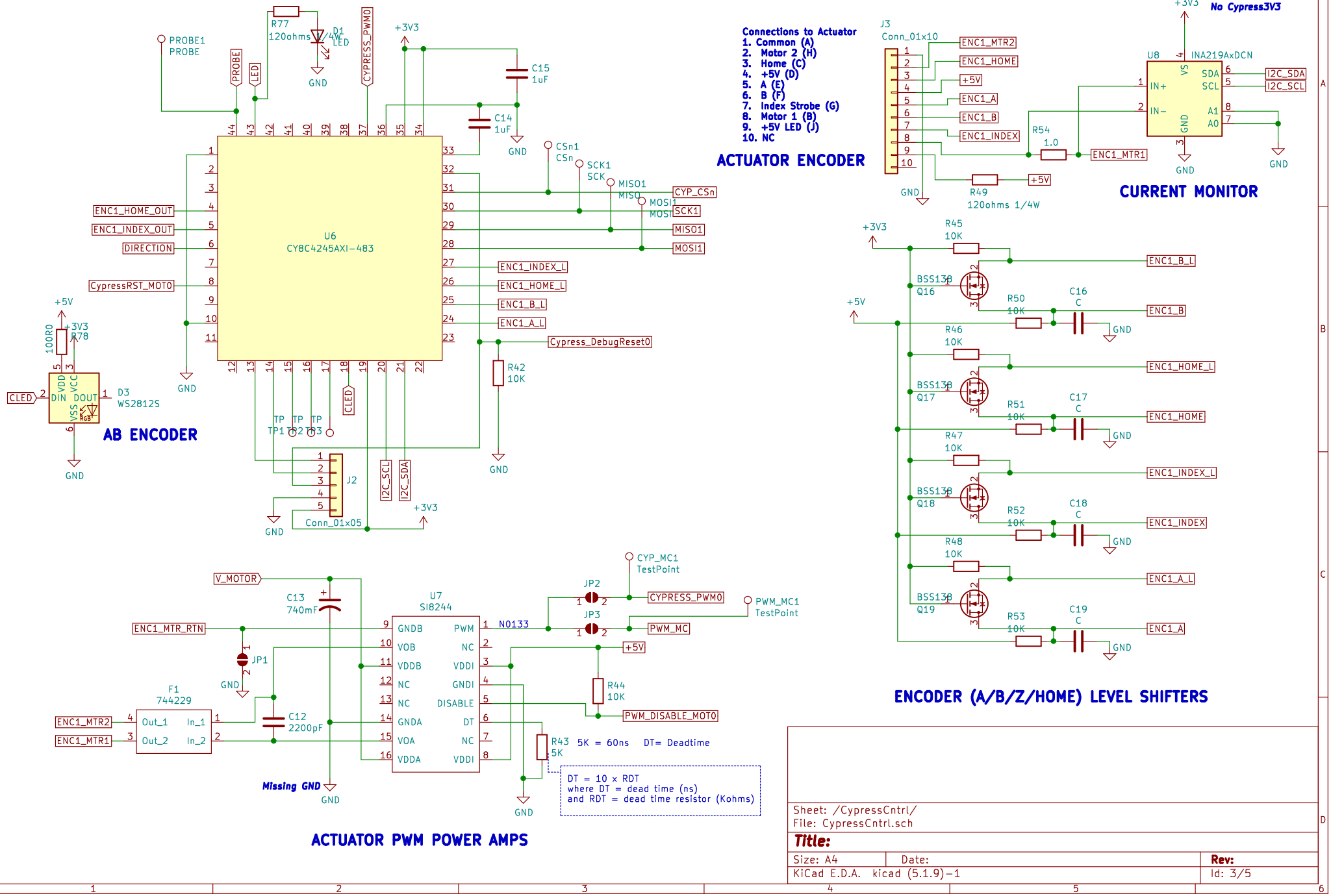

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File: CypressCntrl.sch

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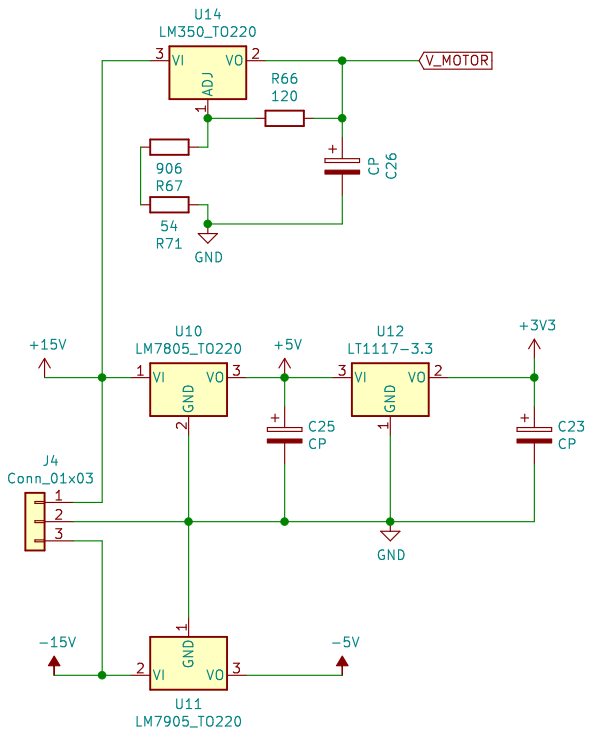

Sheet: /POWER/
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Title:

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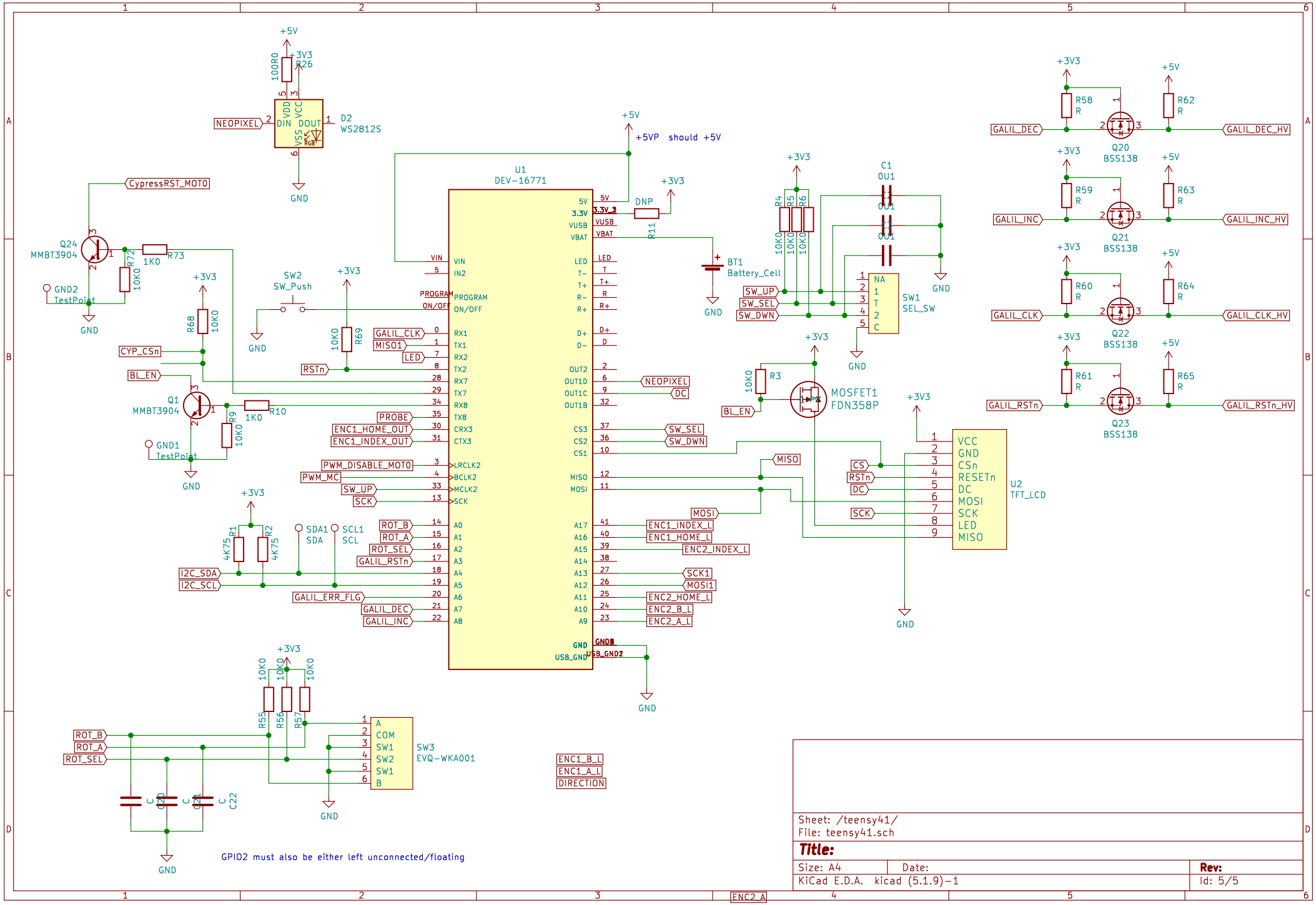
+5V
+3V3
100R0
R26
NEOPIXEL
D2
WS2812S
GND
CypressRST_MOT0
Q24
MMBT3904
R72
1K0
R73
10K0
GND2
TestPoint
GND
+3V3
R68
10K0
CYP_CSn
BL_EN
Q1
MMBT3904
R9
10K0
1K0
R10
GND1
TestPoint
GND
SW2
SW_Push
GND
+3V3
10K0
R69
U1
DEV-16771
+5V
+5VP should +5V
DNP
+3V3
R11
BT1
Battery_Cell
GND
VIN
IN2
PROGRAM
ON/OFF
RX1
TX1
RX2
TX2
RX7
TX7
RX8
TX8
CRX3
CTX3
LRCLK2
BCLK2
MCLK2
SCK
A0
A1
A2
A3
A4
A5
A6
A7
A8
5V
3.3V
VUSB
VBAT
LED
T-
T+
R-
R+
D+
D-
OUT2
OUT1D
OUT1C
OUT1B
CS3
CS2
CS1
MISO
MOSI
A17
A16
A15
A14
A13
A12
A11
A10
A9
GND
USB_GND
GALIL_CLK
MISO1
LED
RSTn
PROBE
ENC1_HOME_OUT
ENC1_INDEX_OUT
PWM_DISABLE_MOT0
PWM_MC
SW_UP
SCK
ROT_B
ROT_A
ROT_SEL
GALIL_RSTn
I2C_SDA
I2C_SCL
GALIL_ERR_FLG
GALIL_DEC
GALIL_INC
NEOPIXEL
DC
SW_SEL
SW_DWN
MISO
MOSI
ENC1_INDEX_L
ENC1_HOME_L
ENC2_INDEX_L
SCK1
MOSI1
ENC2_HOME_L
ENC2_B_L
ENC2_A_L
+3V3
R4
R5
R6
10K0
10K0
10K0
C1
0U1
C2
0U1
C3
0U1
GND
SW_UP
SW_SEL
SW_DWN
SW1
SEL_SW
NA
1
T
2
C
+3V3
10K0
R3
BL_EN
MOSFET1
FDN358P
+3V3
U2
TFT_LCD
VCC
GND
CSn
RESETn
DC
MOSI
SCK
LED
MISO
CS
RSTn
DC
SCK
MISO
MOSI
GND
+3V3
R58
R
Q20
BSS138
R62
R
GALIL_DEC
GALIL_DEC_HV
+3V3
R59
R
Q21
BSS138
R63
R
GALIL_INC
GALIL_INC_HV
+3V3
R60
R
Q22
BSS138
R64
R
GALIL_CLK
GALIL_CLK_HV
+3V3
R61
R
Q23
BSS138
R65
R
GALIL_RSTn
GALIL_RSTn_HV
+3V3
4K75
R1
4K75
R2
SDA1
SDA
SCL1
SCL
+3V3
10K0
10K0
10K0
R55
R56
R57
ROT_B
ROT_A
ROT_SEL
A
COM
SW1
SW2
SW1
B
SW3
EVQ-WKA001
GND
C20
C21
C22
GND
ENC1_B_L
ENC1_A_L
DIRECTION
GPIO2 must also be either left unconnected/floating
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ENC2_A