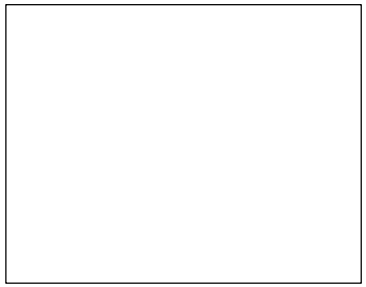
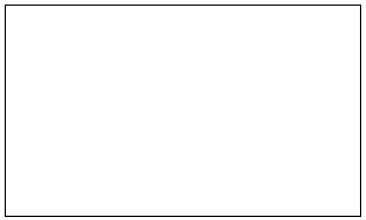
Power and USB



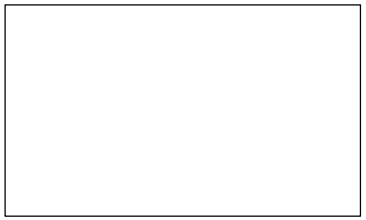
File: PUSB.kicad_sch

MCU



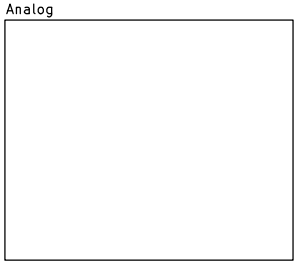
File: MCU.kicad_sch

IO



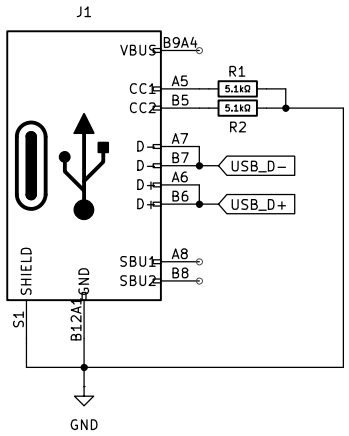
File: IO.kicad_sch

Analog

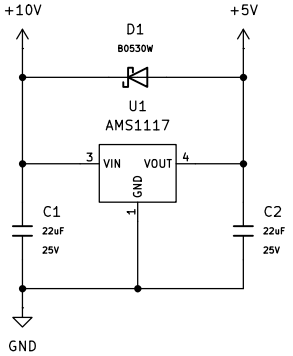


File: Analog.kicad_sch

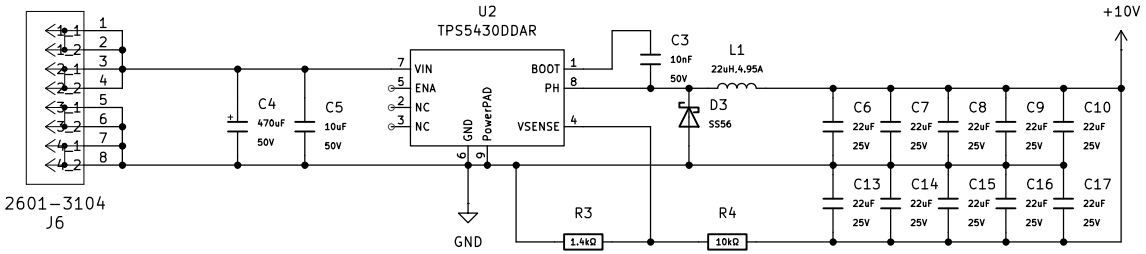
USB

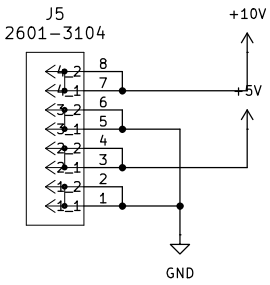

J1
VBUS
B9A4
CC1
A5
CC2
B5
R1
5.1kΩ
R2
5.1kΩ
D-
A7
B7
USB_D-
D+
A6
B6
USB_D+
SBU1
A8
SBU2
B8
SHIELD
GND
S1
B12A1
GND

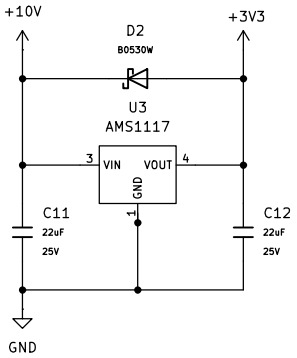
LDO

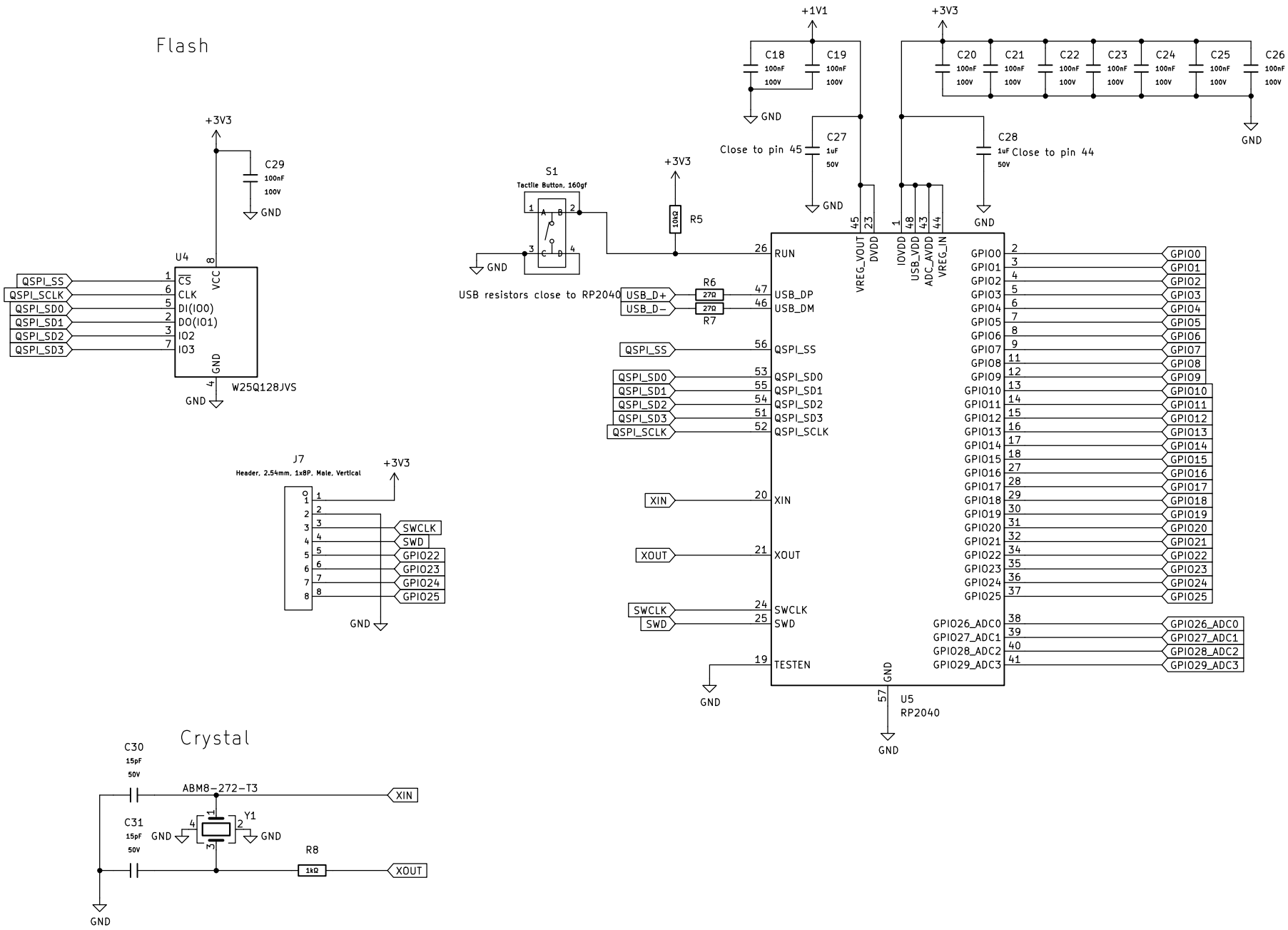

+10V
+5V
D1
B0530W
U1
AMS1117
3
VIN
VOUT
4
GND
1
C1
22uF
25V
C2
22uF
25V
GND

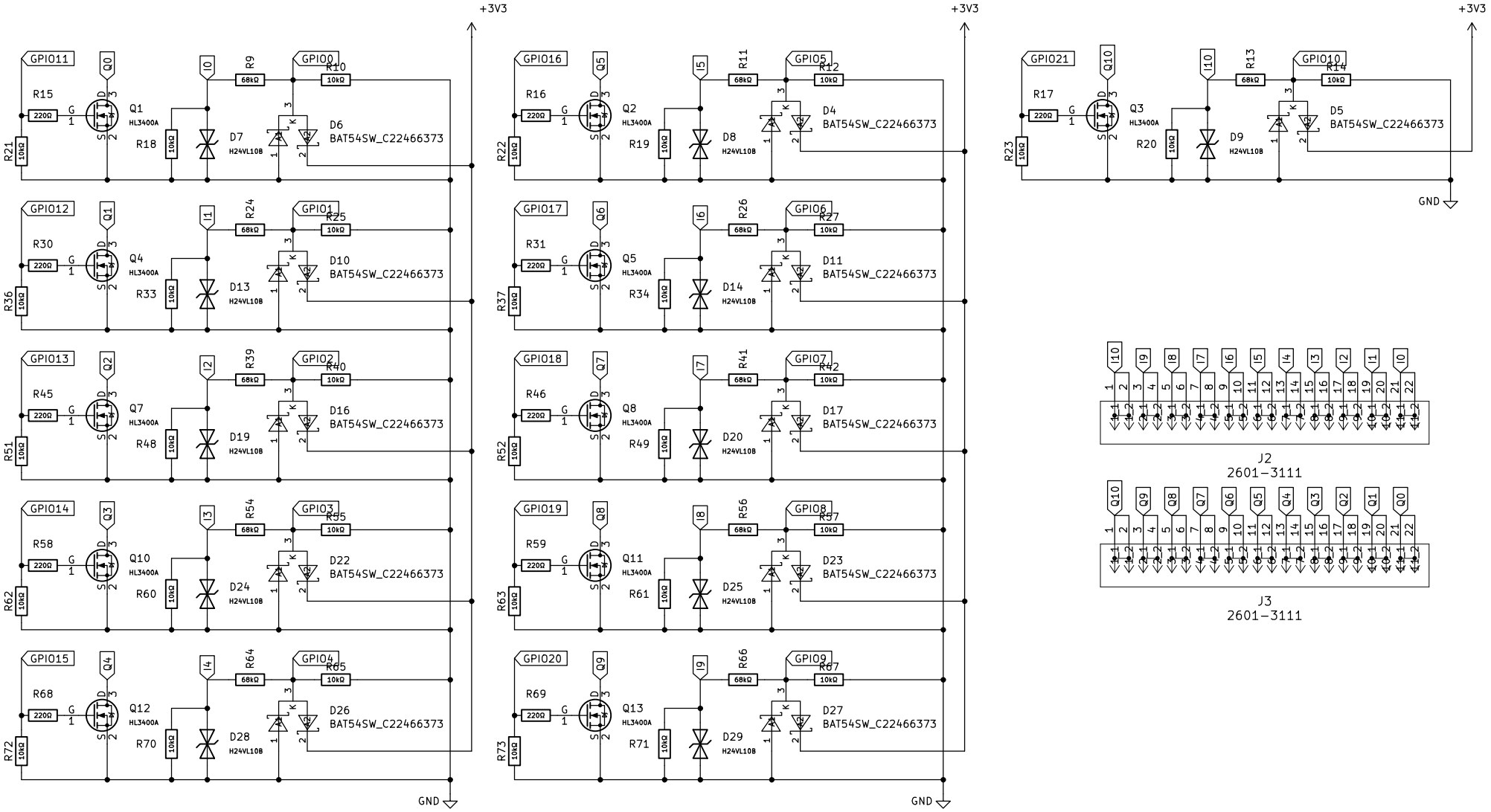
DC In

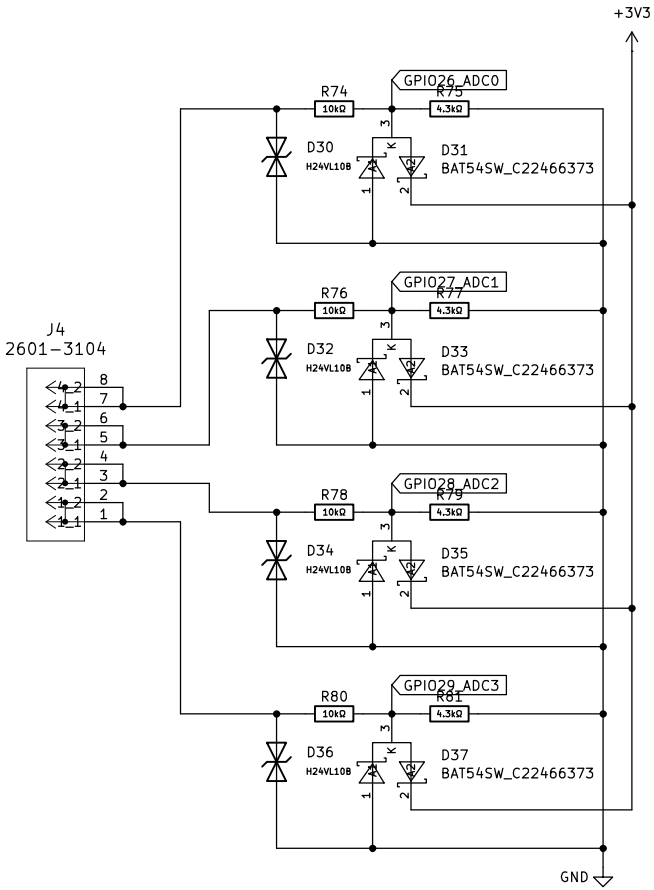

U2
TPS5430DDAR
+10V
C3
10nF
50V
L1
22uH,4.95A
VIN
ENA
NC
NC
GND
PowerPAD
BOOT
PH
VSENSE
D3
SS56
C4
470uF
50V
C5
10uF
50V
C6
22uF
25V
C7
22uF
25V
C8
22uF
25V
C9
22uF
25V
C10
22uF
25V
C13
22uF
25V
C14
22uF
25V
C15
22uF
25V
C16
22uF
25V
C17
22uF
25V
R3
1.4kΩ
R4
10kΩ
GND
2601-3104
J6


J5
2601-3104
+10V
+5V
GND


+10V
+3V3
D2
B0530W
U3
AMS1117
3
VIN
VOUT
4
GND
1
C11
22uF
25V
C12
22uF
25V
GND


Flash
+3V3
C29
100nF
100V
GND
U4
QSPI_SS
QSPI_SCLK
QSPI_SD0
QSPI_SD1
QSPI_SD2
QSPI_SD3
CS
CLK
DI(IO0)
DO(IO1)
IO2
IO3
VCC
GND
W25Q128JVS
J7
Header, 2.54mm, 1x8P, Male, Vertical
SWCLK
SWD
GPIO22
GPIO23
GPIO24
GPIO25
Crystal
C30
15pF
50V
ABM8-272-T3
XIN
C31
Y1
R8
1kΩ
XOUT
+1V1
C18
C19
C20
C21
C22
C23
C24
C25
C26
C27
1uF
Close to pin 45
C28
Close to pin 44
S1
Tactile Button, 160gf
R5
10kΩ
R6
R7
27Ω
USB resistors close to RP2040
USB_D+
USB_D-
RUN
USB_DP
USB_DM
QSPI_SS
QSPI_SD0
QSPI_SD1
QSPI_SD2
QSPI_SD3
QSPI_SCLK
XIN
XOUT
SWCLK
SWD
TESTEN
VREG_VOUT
DVDD
IOVDD
USB_VDD
ADC_AVDD
VREG_IN
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
GPIO15
GPIO16
GPIO17
GPIO18
GPIO19
GPIO20
GPIO21
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26_ADC0
GPIO27_ADC1
GPIO28_ADC2
GPIO29_ADC3
U5
RP2040


+3V3
GPIO11
Q0
R15
220Ω
Q1
HL3400A
R21
10kΩ
I0
R9
68kΩ
R18
D7
H24VL10B
GPIO00
R10
10kΩ
D6
BAT54SW_C22466373
GPIO12
Q1
R30
Q4
R36
R24
R33
D13
GPIO01
R25
D10
GPIO13
Q2
R45
Q7
R51
I2
R39
R48
D19
GPIO02
R40
D16
GPIO14
Q3
R58
Q10
R62
I3
R54
R60
D24
GPIO03
R55
D22
GPIO15
Q4
R68
Q12
R72
I4
R64
R70
D28
GPIO04
R65
D26
GND
GPIO016
Q5
R16
Q2
R22
I5
R11
R19
D8
GPIO05
R12
D4
GPIO017
Q6
R31
Q5
R37
I6
R26
R34
D14
GPIO06
R27
D11
GPIO018
Q7
R46
Q8
R52
I7
R41
R49
D20
GPIO07
R42
D17
GPIO019
Q8
R59
Q11
R63
I8
R56
R61
D25
GPIO08
R57
D23
GPIO020
Q9
R69
Q13
R73
I9
R66
R71
D29
GPIO09
R67
D27
GPIO021
Q10
R17
Q3
R23
I10
R13
R20
D9
GPIO010
R14
D5
J2
2601-3111
J3
2601-3111


+3V3
GPIO26_ADC0
R74
10kΩ
R75
4.3kΩ
D30
H24VL10B
D31
BAT54SW_C22466373
GPIO27_ADC1
R76
10kΩ
R77
4.3kΩ
D32
H24VL10B
D33
BAT54SW_C22466373
J4
2601-3104
GPIO28_ADC2
R78
10kΩ
R79
4.3kΩ
D34
H24VL10B
D35
BAT54SW_C22466373
GPIO29_ADC3
R80
10kΩ
R81
4.3kΩ
D36
H24VL10B
D37
BAT54SW_C22466373
GND