NEED TO PICK NEW USB C CONNECTOR

J4
2171790001

TP1
TestPoint

TP2
TestPoint

GND

Power
USB_Power
PACK+
File: Power.kicad_sch

Battery
USB_Power
PACK+
BAT_DIAG
PG
BAT_V_SENSE
File: Battery.kicad_sch

Microcontroller
BAT_V_SENSE
PG
BAT_DIAG
CS
RESET
DC/RS
SDI (MOSI)
SCK
LED
SDO(MISO)
SCREEN_SS
SCREEN_RESET
SCREEN_DCRS
SCREEN_MISO
SCREEN_SCK
SCREEN_BACKLIGHT
SCREEN_MOSI
T_CLK
T_CS
T_DIN
T_DO
T_IRQ
TOUCH_SCK
TOUCH_SS
TOUCH_MISO
TOUCH_MOSI
TOUCH_IRQ
SD_SCK
SD_CS
SD_MISO
SD_MOSI
SWDIO
SWCLK
SWO
SWRESET
DAC_OUT
File: Microcontroller.kicad_sch

Controllers
SlideSwitch
SW1
SW2
SW3
SW4
SW5
ROTA2
ROTB2
ROTP2
ROTP1
ROTB1
ROTA1
File: Controllers.kicad_sch

+3.3V

GND

RSM-114-02-T-S
J1
CS TP16
RESET TP17
DC/RS TP18
SDI (MOSI) TP19
SCK TP20
LED TP21
SDO(MISO) TP22
T_CLK TP23
T_CS TP24
T_DIN TP25
T_DO TP26
T_IRQ TP27

1X14 CONNECTOR FOR TOUCH AND SCREEN MODULE

J2
91601-304ALF
SD_CS TP28
SD_MOSI TP29
SD_MISO TP30
SD_SCK TP31

1x4 Connector for SD Card Reader

J3
M20-7910542R
SWRESET TP32
SWDIO TP33
SWCLK TP34
SWO TP35
GND

Right angle 5 PIN debugger header

J5
SJ-3524-SMT-PI

3.5mm output

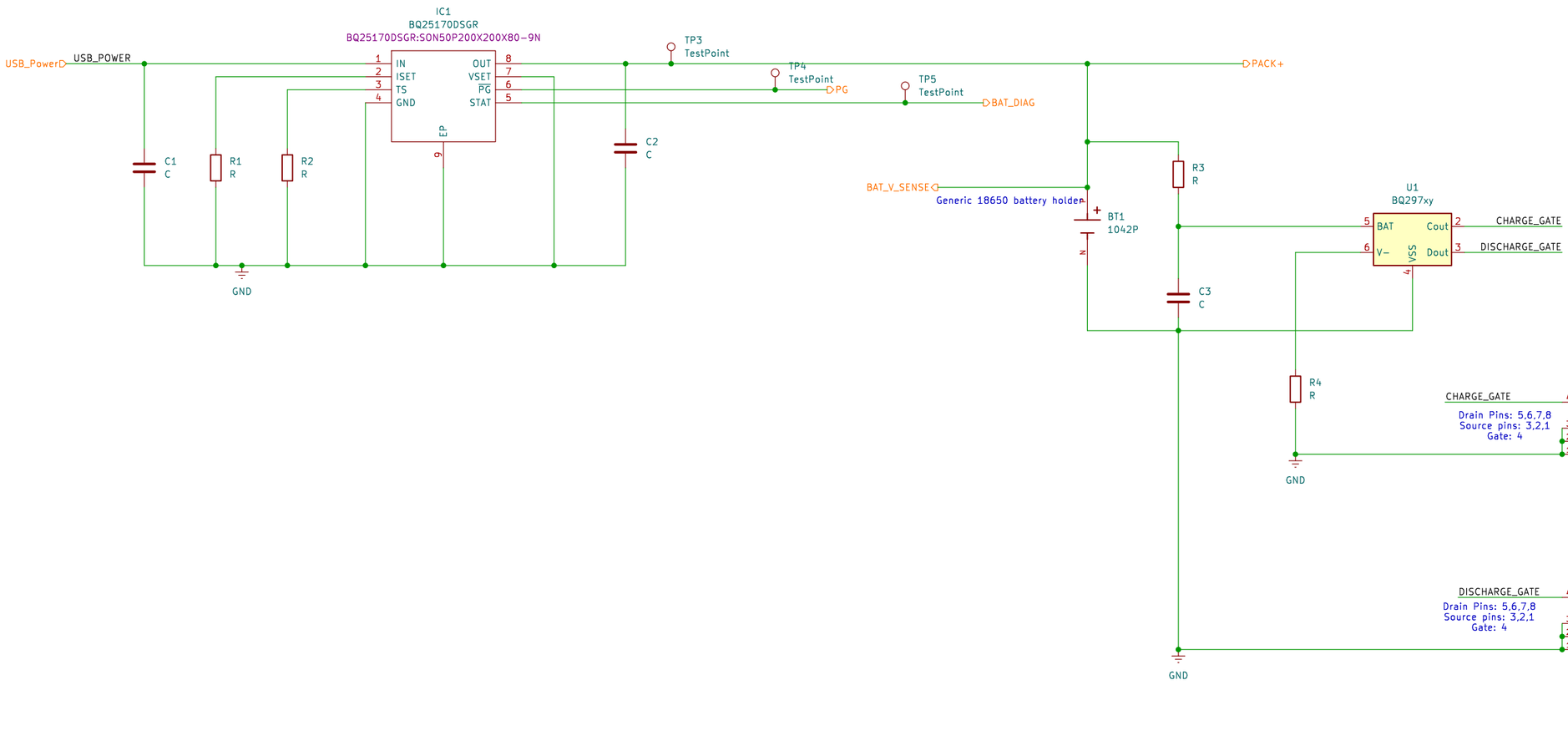
Things I need to do
SWD PIN OUT
Double check battery circuitry

Finish wiring microcontroller

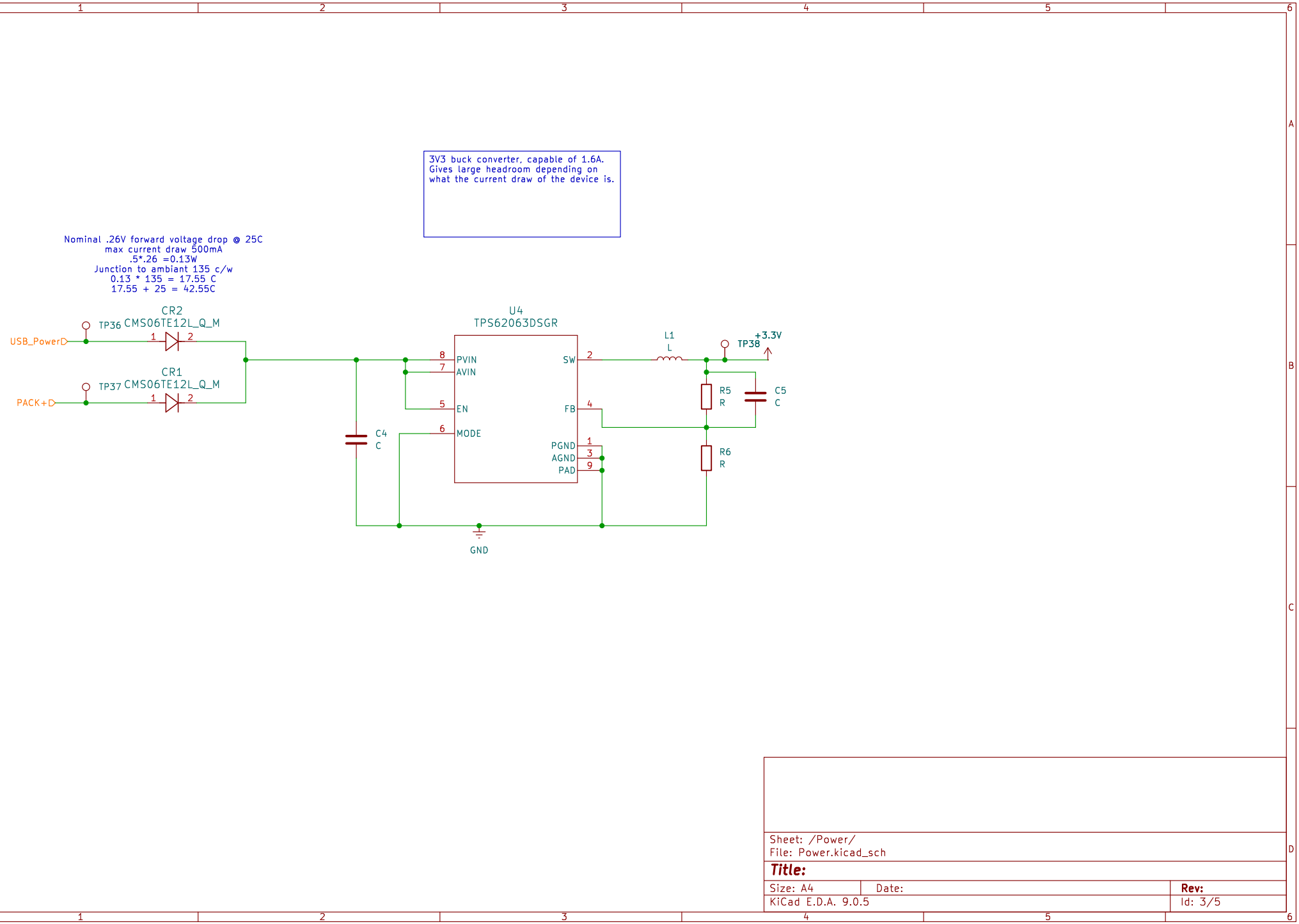
and ribbon cable connector
SD CARD READER

Sheet: /
File: Etch_A_Tune.kicad_sch
Title:
Size: A2
Date:
Rev:
KiCad E.D.A. 9.0.5
Id: 1/5

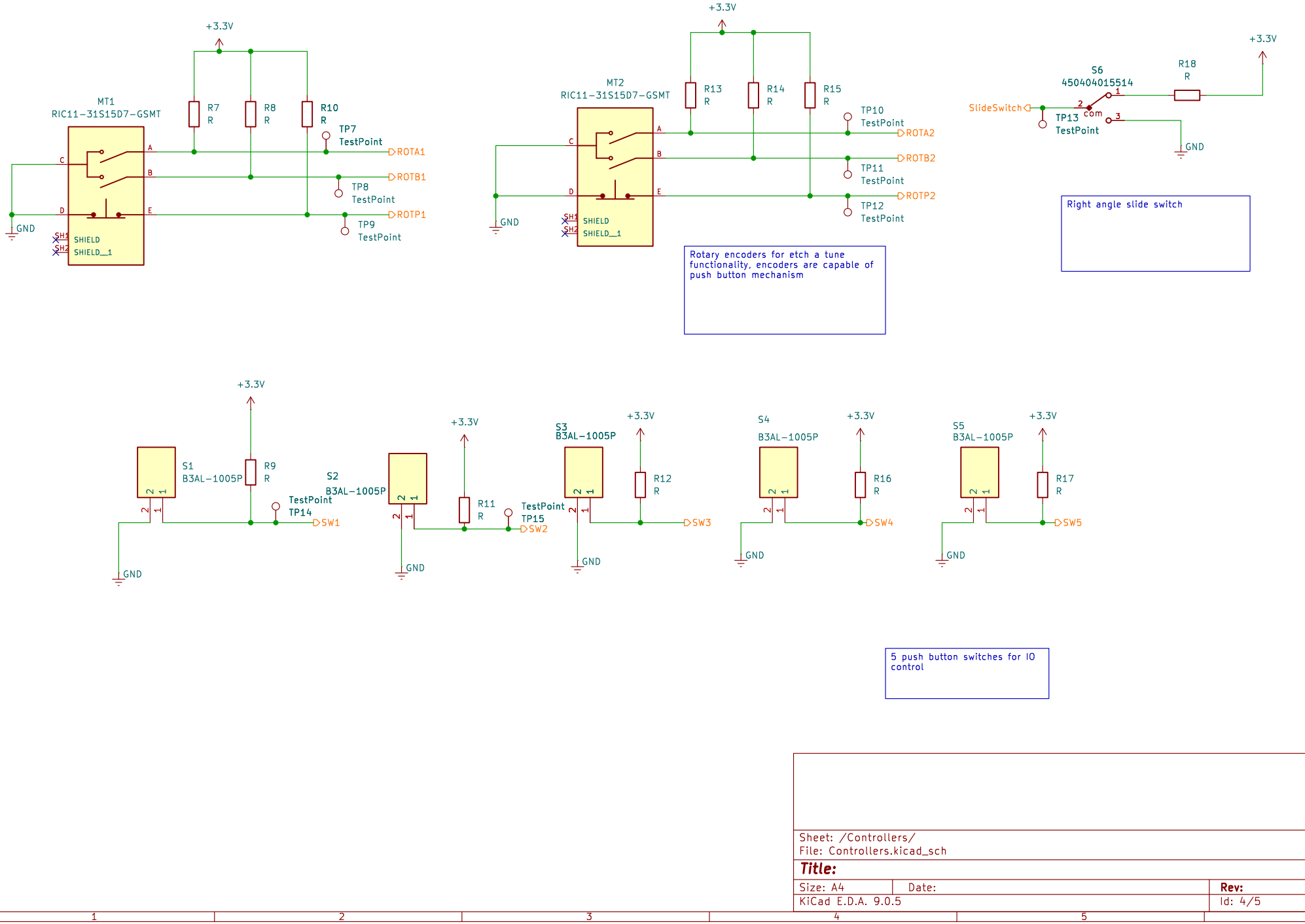
800-MA LINEAR BATTERY CHARGER



Sheet: /Battery/		
File: Battery.kicad_sch		
Title: Voltage and Current Protection Integrated Circuit for Single		
Size: A3	Date:	**Rev:**
KiCad E.D.A. 9.0.5		Id: 2/5



Sheet: /Power/		
File: Power.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.5		Id: 3/5


+3.3V
MT1
RIC11-31S15D7-GSMT
R7
R
R8
R
R10
R
TP7
TestPoint
ROTA1
TP8
TestPoint
ROTB1
TP9
TestPoint
ROTP1
GND
SHIELD
SHIELD__1
MT2
RIC11-31S15D7-GSMT
R13
R
R14
R
R15
R
TP10
TestPoint
ROTA2
TP11
TestPoint
ROTB2
TP12
TestPoint
ROTP2
Rotary encoders for etch a tune functionality, encoders are capable of push button mechanism
S6
450404015514
R18
R
SlideSwitch
TP13
TestPoint
com
Right angle slide switch
S1
B3AL-1005P
R9
R
TestPoint
TP14
SW1
S2
B3AL-1005P
R11
R
TestPoint
TP15
SW2
S3
B3AL-1005P
R12
R
SW3
S4
B3AL-1005P
R16
R
SW4
S5
B3AL-1005P
R17
R
SW5
5 push button switches for IO control
Sheet: /Controllers/
File: Controllers.kicad_sch
Title:
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U5A
STM32H7A3ZIT6Q

1	PE2	PB12	72
2	PE3	VDD	71
3	PE4	VDDLDO	70
4	PE5	VSS	69
5	PE6	VCAP	68
6	VSS	PB11	67
7	VDD	PB10	66
8	VBAT	PE15	65
9	PC13	PE14	64
10	PC14-OSC32_IN	PE13	63
11	PC15-OSC32_OUT	PE12	62
12	VSS	PE11	61
13	VDD	PE10	60
14	VSSSMPS	PE9	59
15	VLXSMPS	PE8	58
16	VDDSMPS	PE7	57
17	VFBSMPS	VDD	56
18	VSS	VSS	55
19	VDD	PF15	54
20	PF6	PF14	53
21	PF7	PF11	52
22	PF8	PB2	51
23	PF9	PB1	50
24	PF10	PB0	49
25	PH0-OSC_IN	PC5	48
26	PH1-OSC_OUT	PC4	47
27	NRST	PA7	46
28	PC0	PA6	45
29	PC1	PA5	44
30	PC2_C	PA4	43
31	PC3_C	VDD	42
32	VDD	VSS	41
33	VSS	PA3	40
34	VSSA	PA2	39
35	VREF+	PA1	38
36	VDDA	PA0	37

PB12 → TOUCH_SS
PB1 → SCREEN_BACKLIGHT
PB0 → SCREEN_DCRS
PC5 → SCREEN_RESET
PC4 → SCREEN_SS
PA7 → SCREEN_MISO
PA6 → SCREEN_MOSI
PA5 → SCREEN_SCK
PA4 → DAC_OUT
PA3 → BAT_V_SENSE

+3.3V
C6
C
R19
10k
+3.3V
SWRESET
C7
100n
GND
GND
GND
SWDIO
SWCLK
SWO

SWD Programming Pins

SPI COMM for screen
1 GPIO for backlight
1 GPIO for DCRS
1 GPIO for RESET

5V tolerant battery sense pin

16 GPIO Pins for screen

NEED TOUCH SPI
1 for IRQ
need extra ground and VCC for screen module

U5B
STM32H7A3ZIT6Q

TOUCH_SCKD	73	PB13	VDD 144
TOUCH_MOSID	74	PB14	VDDLDO 143
TOUCH_MISOD	75	PB15	PDR_ON 142
TOUCH_IRQD	76	PD8	VSS 141
	77	PD9	VCAP 140
	78	PD10	PE1 139
	79	VDD	PE0 138
	80	VSS	PB9 137
	81	PD11	PB8 136
	82	PD12	BOOT0 135
	83	PD13	PB7 134
	84	PD14	PB6 133
	85	PD15	PB5 132
	86	PG6	PB4 131
	87	PG7	PB3 130
	88	PG8	VDD 129
	89	VSS	VSS 128
	90	VDD50USB	PG14 127
	91	VDD33USB	PG13 126
	92	VDD	PG12 125
	93	PC6	PG11 124
	94	PC7	PG10 123
	95	PC8	PG9 122
	96	PC9	PD7 121
	97	PA8	PD6 120
	98	PA9	VDDMMC 119
	99	PA10	VSS 118
	100	PA11	PD5 117
	101	PA12	PD4 116
	102	PA13	PD3 115
	103	VCAP	PD2 114
	104	VSS	PD1 113
	105	VDDLDO	PD0 112
	106	VDD	PC12 111
	107	PA14	PC11 110
SD_SSD	108	PA15	PC10 109

TOUCH_SCKD → PB13
TOUCH_MOSID → PB14
TOUCH_MISOD → PB15
TOUCH_IRQD → PD8
SD_SSD → PA15
PG14 → IPG
PG13 → BAT_DIAG
PG12 → SlideSwitch
PG11 → SW5
PG10 → SW4
PG9 → SW3
PD7 → SW2
PD6 → SW1
PD5 → ROTA2
PD4 → ROTB2
PD3 → ROTP2
PD2 → ROTA1
PD1 → ROTB1
PD0 → ROTP1
PC12 → SD_MISO
PC11 → SD_MOSI
PC10 → SD_SCK
GND

SD CARD SPI BUS

SPI1 BUS

SPI2 BUS

SPI3 BUS

SPI4 BUS

LQFP144	WLCSP139	UFBGA169	UFBGA176	LQFP176	TFBGA225	LQFP208	TFBGA240	LQFP100	LQFP64	UFBGA144	LQFP80	TFBGA100				What does this pa
61	J5	N8	R12	73	R12	-	H6	41	64	P10	74	P10	PE11	I/O	FT_ah2	TIM1_CH2, DFSDM1_CKIN4, SPI4_SS, SAI2_SD_B, OCTOSPIM_P1_NCS, FMC_D8/FMC_DA8, LCD_G3, EVENTOUT
62	K5	L8	P12	74	L9	-	J6	42	65	R10	75	R10	PE12	I/O	FT_h2	TIM1_CH3N, DFSDM1_DATIN5, SPI4_SCK, SAI2_SCK_B, FMC_D9/FMC_DA9, COMP1_OUT, LCD_B4, EVENTOUT
63	L5	K8	P13	75	M10	-	K6	43	66	N11	76	R12	PE13	I/O	FT_h2	TIM1_CH3, DFSDM1_CKIN5, SPI4_MISO, SAI2_FS_B, FMC_D10/FMC_DA10, COMP2_OUT, LCD_DE, EVENTOUT
64	H5	J9	M12	76	N10	-	G7	44	67	P11	77	P11	PE14	I/O	FT_h2	TIM1_CH4, SPI4_MOSI, SAI2_MCK_B, FMC_D11/FMC_DA11, LCD_CLK, EVENTOUT

Sheet: /Microcontroller/
File: Microcontroller.kicad_sch

Title:

Size: A2	Date:	Rev:
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