

Title PCA70107 Top			
Size A4	Project Number <Project number>	Revision 0	
Date: 08/02/2020			Sheet 1 of 4
File: oysm_Keyboard_Top.SchDoc			Drawn By:

A

B

C

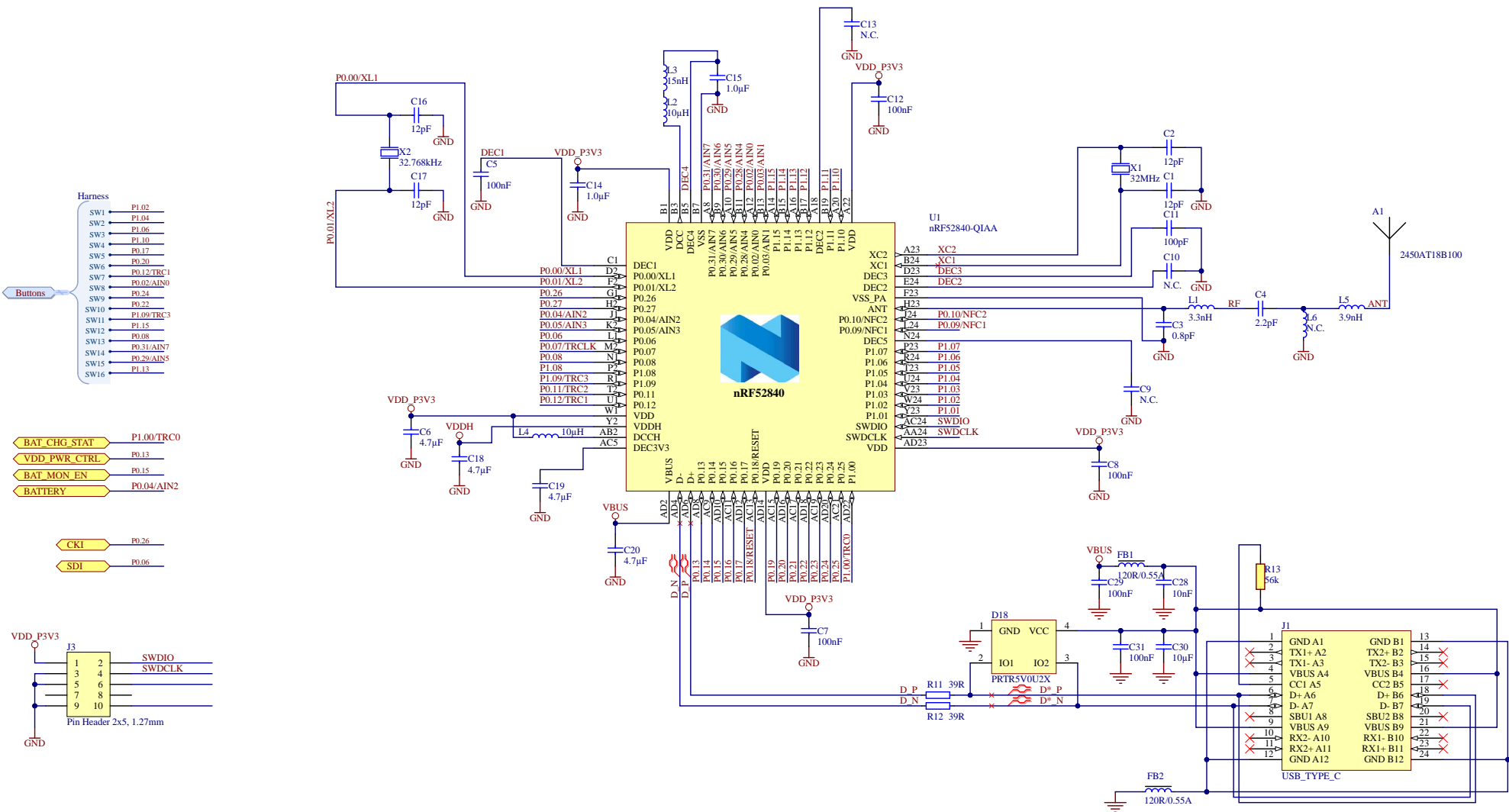
D


A

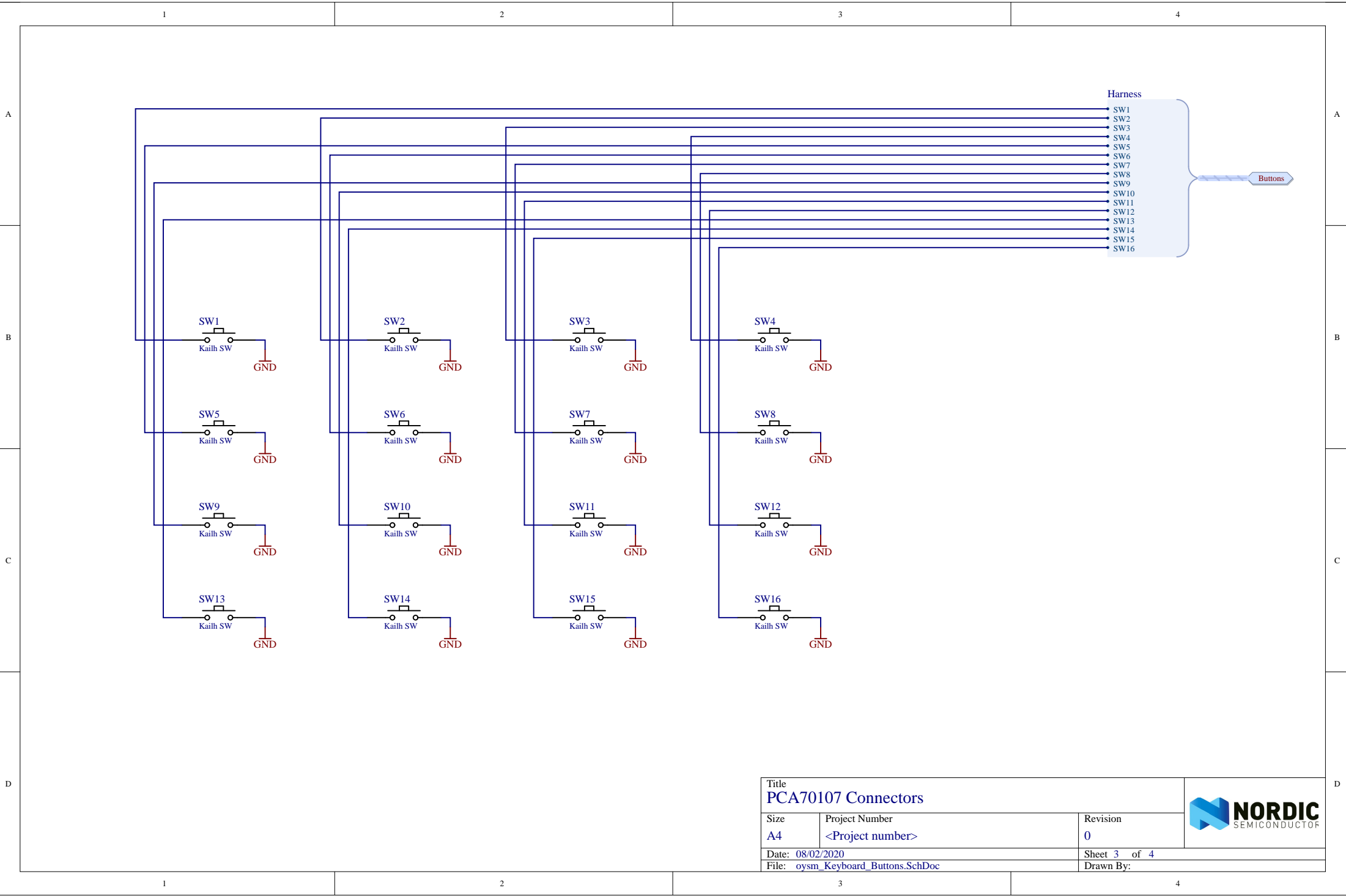
B


C

D

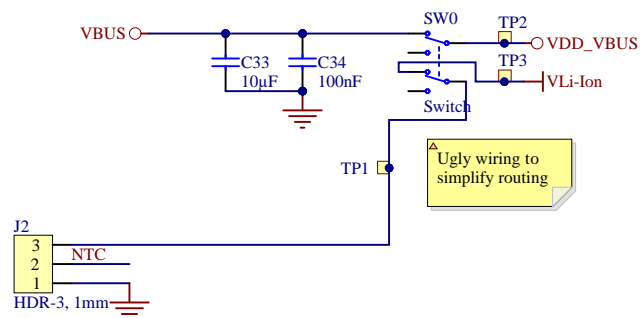


Title PCA70141 MCU			
Size A4	Project Number <Project number>	Revision 0	
Date: 09/02/2020		Sheet 2 of 4	
File: oysm_Keyboard MCU.SchDoc		Drawn By:	

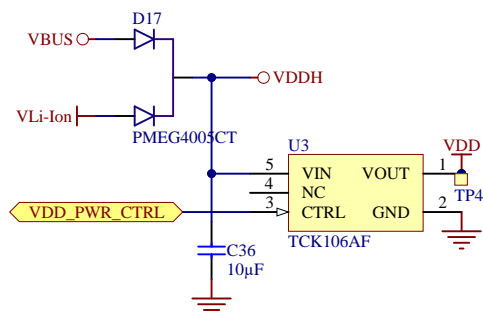


Title PCA70107 Connectors			
Size A4	Project Number <Project number>	Revision 0	
Date: 08/02/2020			Sheet 3 of 4
File: oysm_Keyboard_Buttons.SchDoc			Drawn By:

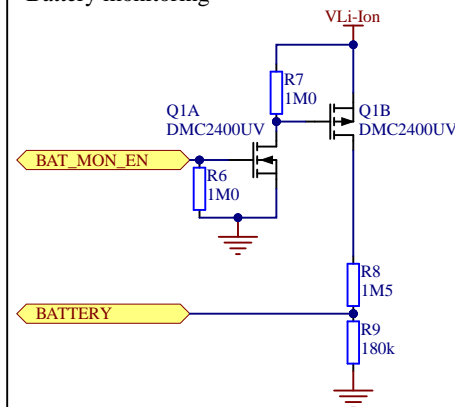
USB- and battery connector and power switch



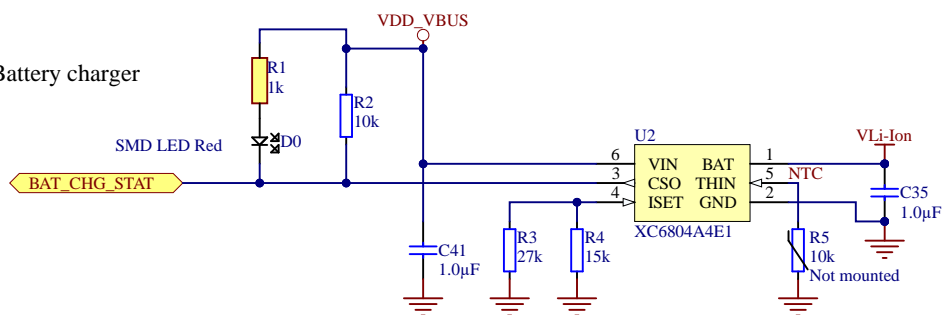
VDD power switch



Battery monitoring



Battery charger



Title
PCA20020 - Power Supply

Size
A4

Project Number

Revision

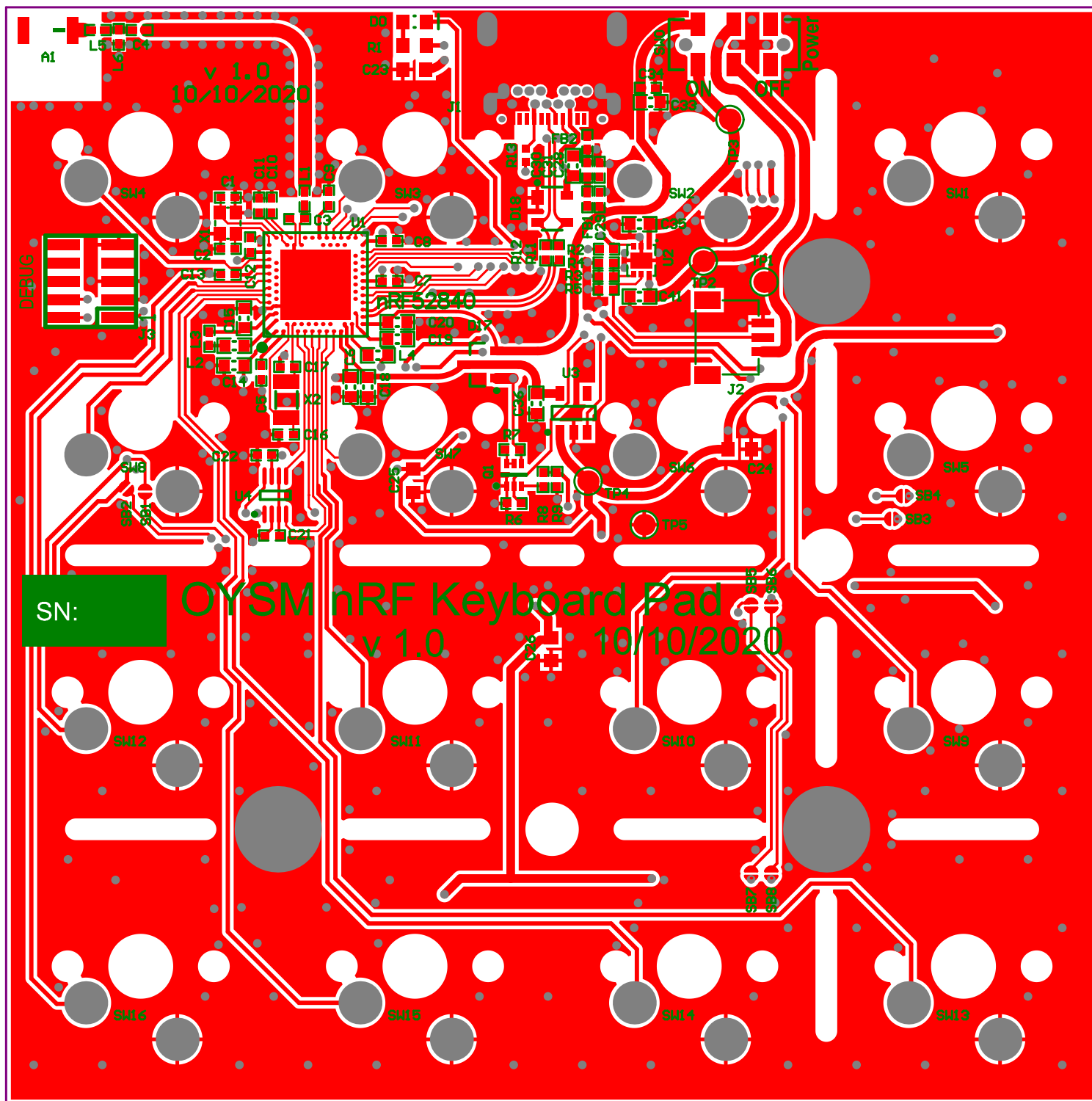
Date: 08/02/2020

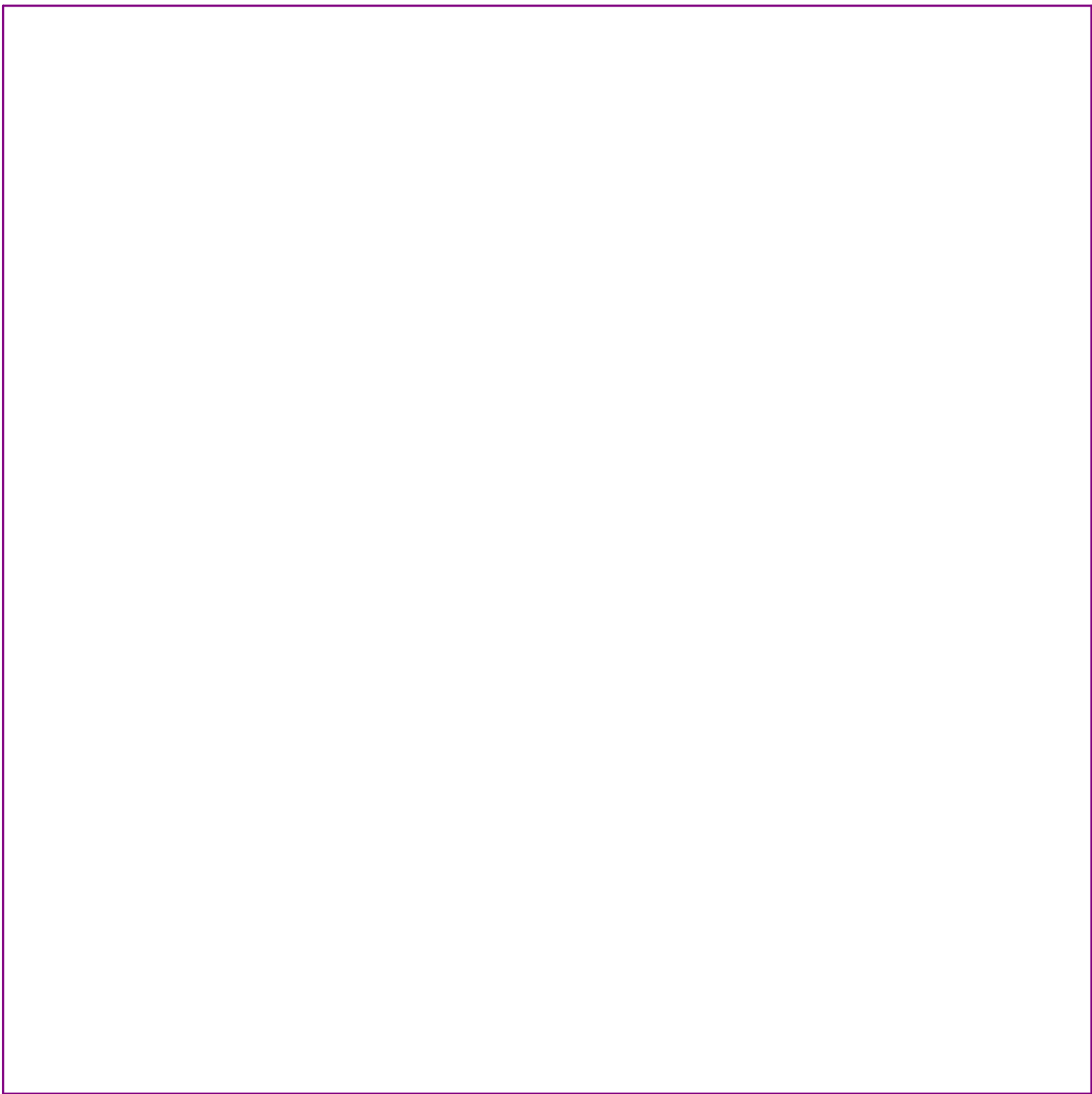
Sheet 8 of 9

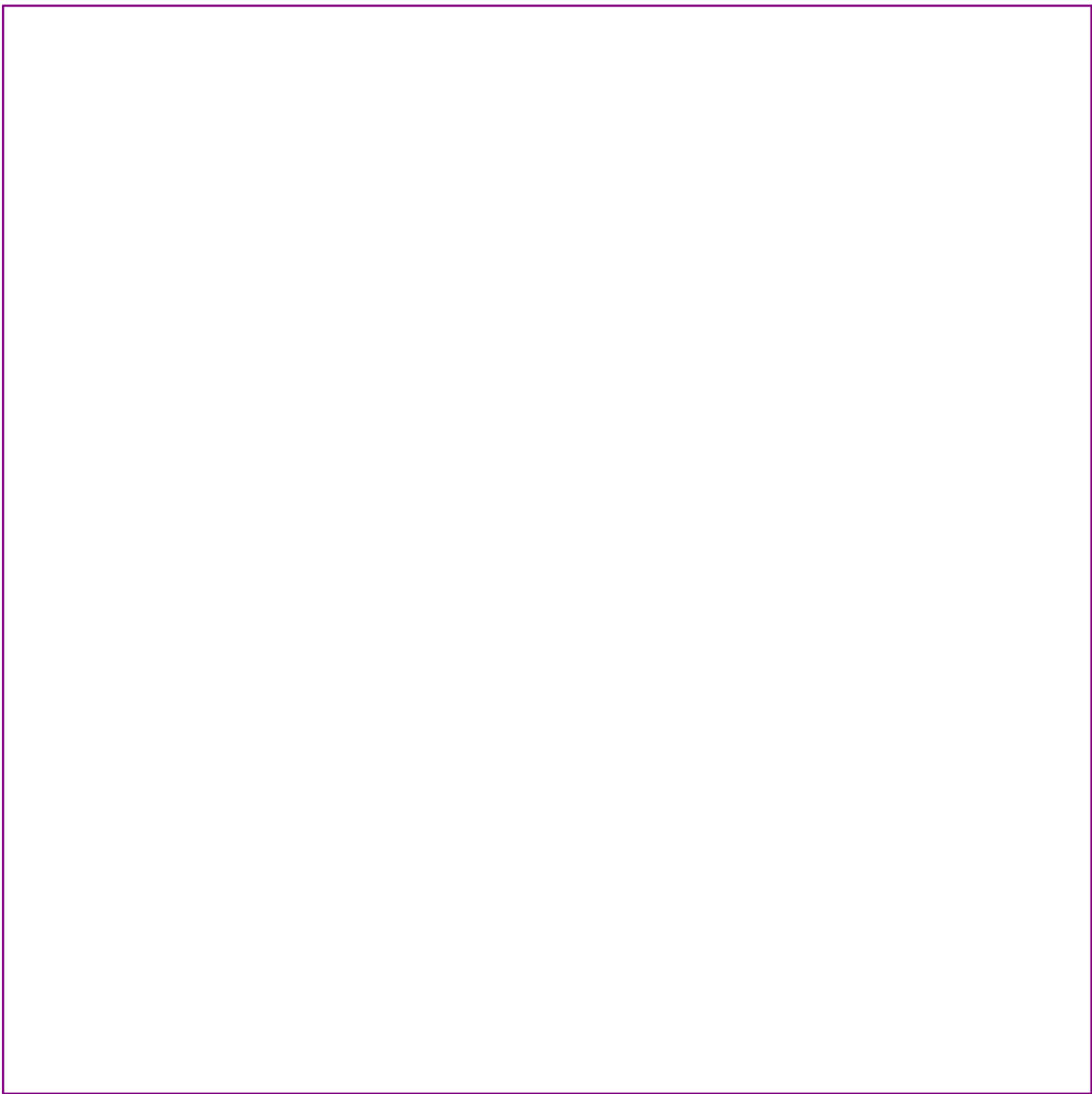
File: oysm_Keyboard_Power_supply.SchDoc

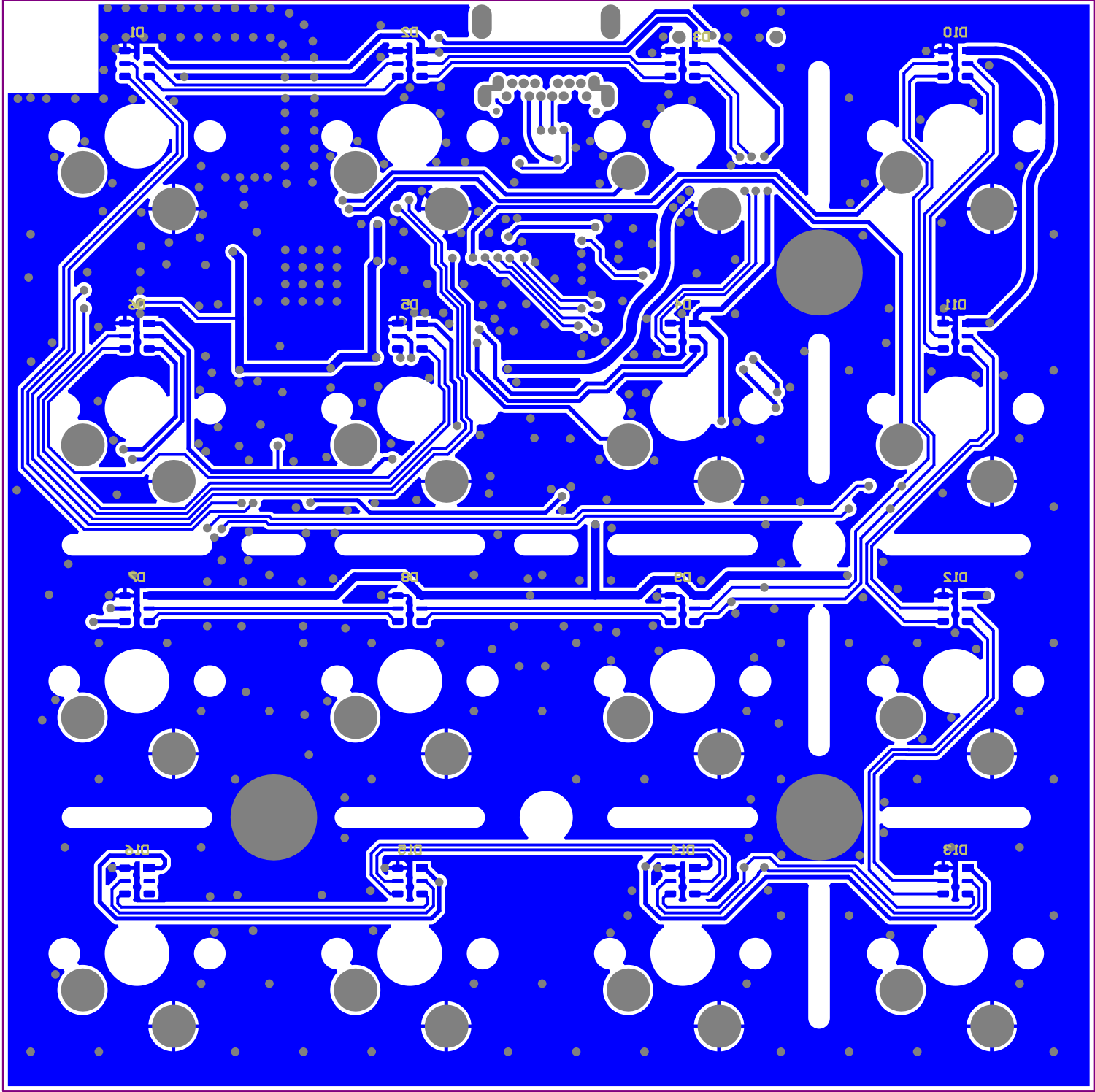
Drawn By:











Designator	Comment	Description	Footprint Doc	Manufacturer	Manufacturer Part Number	Part Number	Quantity	Supplier	Supplier part number	2nd source Supplier	2nd source part number	Value
A1	2450AT18B100	2.45 GHz chip antenna	2450AT18B100	Johanson Technology	2450AT18B100	Johanson 2450AT18B100	1					2450AT18B100
C1, C2, C16, C17	12pF	Capacitor, NPO, ±2%	0402			C0402-12p	4					12pF
C3	0.8pF	Capacitor, NPO, ±5%	0402			C0402-0.8p	1					0.8pF
C4	2.2pF	Capacitor, NPO, ±0.1pF	0402			C0402-2.2p	1					2.2pF
C5, C7, C8, C12, C21, C22, C29, C31, C34	100nF	Capacitor, X7R, ±10%	0402			C0402-100n	9					100nF
C6	4.7µF	Capacitor, X7R, ±10%, 6.3V	0603	Samsung	CL10B475KQ8NQN	C0603-4µ7-6.3V-X7R	1	Digi-Key	1276-2087-1-ND			4.7µF
C9, C10, C13	N.C.	Not mounted	0402			C0402-N.C.	3					N.C.
C11	100pF	Capacitor, NPO, ±5%	0402			C0402-100p	1					100pF
C14, C15, C35, C41	1.0µF	Capacitor, X7R, ±10%	0603			C0603-1µ0	4					1.0µF
C18, C19, C20	4.7µF	Capacitor, X5R, ±10%	0603			C0603-4µ7	3					4.7µF
C23, C24, C25, C26	100nF	X7R 50V 5%					4					
C28	10nF	Capacitor, X7R, ±10%	0402			C0402-10n	1					10nF
C30, C33, C36	10µF	Capacitor, X5R, ±20%	0603			C0603-10µ	3					10µF
D0	SMD LED Red	SMD					1					
D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16	APA102 2020	2x2mm SMD RGB Addresserbar LED					16					
D17	PMEG4005CT					PMEG4005CT	1					
D18	PRTS5V0U2X	Ultra low capacitance double rail-to-rail ESD protection diode	SOT-143B	NXP	PRTS5V0U2X	PRTS5V0U2X	1	Digi-Key	568-4140-1-ND	Farnell	152-4157	PRTS5V0U2X
FB1, FB2	120R/0.55A	Ferrite Bead, 120 Ohm @ 100MHz, 500mA, 250 mOhm Max	0402	Murata	BLM15AG121SN1D	FB0402-120R@100M-500mA	2	Digi-Key	490-1005-1-ND	Farnell	151-5760	120R/0.55A
J1	USB_TYPE_C	TH and SMD					1					
J2	HDR-3, 1mm	1.0mm pitch connector side entry SMD	SM03B-SRSS-TB	JST	SM03B-SRSS-TB(LF)(SN)	SM03B-SRSS-TB	1					HDR-3, 1mm
J3	Pin Header 2x5, 1.27mm	Pin Header 2x5, 1.27mm (50mil), SMD, Keying Shroud	HDR_2x5-SMD-1.27mm	W-CON	3132-10MS0BK00R1	Pin Header 2x5 SMD, 1.27mm, KS	1	Cabcon	3132-10MS0BK00R1	Samtec	FTSH-105-01-F-DV-K	Pin Header 2x5, 1.27mm
L1	3.3nH	Inductor, 190mA, ±0.1nH	0402	Murata	L0P15MN3N3B02D	L0402-3n3	1	Digi-Key	490-1130-1-ND			3.3nH
L2, L4	10µH	Inductor, 80mA, ±10%	0603	Taiyo Yuden	LBMF1608T100K	L0603-10µ	2	Digi-Key	587-1714-1-ND	Farnell	178-6105	10µH
L3	15nH	Inductor, 320mA, ±5%	0402	Taiyo Yuden	HK100515NJ-T	L0402-15n	1	Digi-Key	587-1521-1-ND	Farnell	658-1328	15nH
L5	3.9nH	Inductor, 170mA, ±0.1nH	0402	Murata	L0P15MN3N9B02D	L0402-3n9	1					3.9nH
L6	N.C.	Not mounted	0402			L0402-N.C.	1					N.C.
Q1	DMC2400UV	Dual N & P Ch MOFET, 1.03A/0.7A, 480mOhm, 450mW	SOT-563	Diodes Incorporated	DMC2400UV	DMC2400UV	1					DMC2400UV
R1	1k	0.1W 1% Thick film resistor					1					
R2	10k	Resistor, ±1%, 0.063W	0402			R0402-10k	1					10k
R3	27k	Resistor, ±1%, 0.063W	0402			R0402-27k	1					27k
R4	15k	Resistor, ±1%, 0.063W	0402			R0402-15k	1					15k
R5	10k	THERMISTOR 10K OHM NTC 0402 SMD	0402	Murata	NCP15XH103F03RC	NCP15XH103F03RC	1					10k
R6, R7	1M0	Resistor, ±1%, 0.063W	0402			R0402-1M0	2					1M0
R8	1M5	Resistor, ±1%, 0.063W	0402			R0402-1M5	1					1M5
R9	180k	Resistor, ±1%, 0.063W	0402			R0402-180k	1					180k
R11, R12	39R	Resistor, ±1%, 0.063W	0402			R0402-39R	2	Farnell	173-8831			39R
R13	56k	0.1W 1% Thick film resistor					1					
SW0	Switch	SMD slide Switch (ON-ON)	Switch-Slide-RA-J-Lead-DPDT-8.5x3.5mm	C&K Components	JS202011JAQN	Switch-Slide-RA-J-Lead-DPDT-8.5x3.5mm_C&K	1					Switch
SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, SW9, SW10, SW11, SW12, SW13, SW14, SW15, SW16	Kailh SW	Kailh Mechanical keyboard switch					16					
U1	nRF52840-QIAA	Multi-protocol Bluetooth Low Energy, IEEE 802.15.4, ANT and 2.4GHz proprietary system-on-chip	AQFN-73	Nordic Semiconductor	nRF52840-QIAAAA	nRF52840-QIAAAA	1	Nordic Semiconductor	nRF52840-QIAAAA			nRF52840-QIAA
U2	XC6804A4E1	One Cell Li-ion/Li-polymer Linear Charger IC with Battery Temperature Detection	USP-6EL	Torex Semiconductor	XC6804A4E14R-G	XC6804A4E14R-G	1					XC6804A4E1
U3	TCK106AF	1.0 A Load Switch IC with Slew Rate Control Driver in Small Package	SOT-25	Toshiba	TCK106AF_LF	TCK106AF_LF	1					TCK106AF
U4	TXS0102DCUR	IC VOLT-LEVEL TRANSLATOR 8-USB	8-VFSOP	Texas Instruments	TXS0102DCUR	TXS0102DCUR	1					TXS0102DCUR
X1	32MHz	XTAL SMD 2016, 32MHz, Cl-8pF, Tol: ±10ppm, Stab: ±10ppm	XTAL_2016	Epson Toyocom	Q22FA12800025	XTAL_SMD2016_32MHz_8pF_Epson	1	Farnell	171-2806			32MHz
X2	32.768kHz	XTAL SMD 3215, 32.768kHz, 9pF, ±20ppm, -40°C - 125°C	XTAL_3215	Kyocera	ST3215SB32768EOHSZB1	XTAL_SMD3215_32.768kHz_9pF_Kyocera_HT	1	Digi-Key	1253-1402-1-ND			32.768kHz