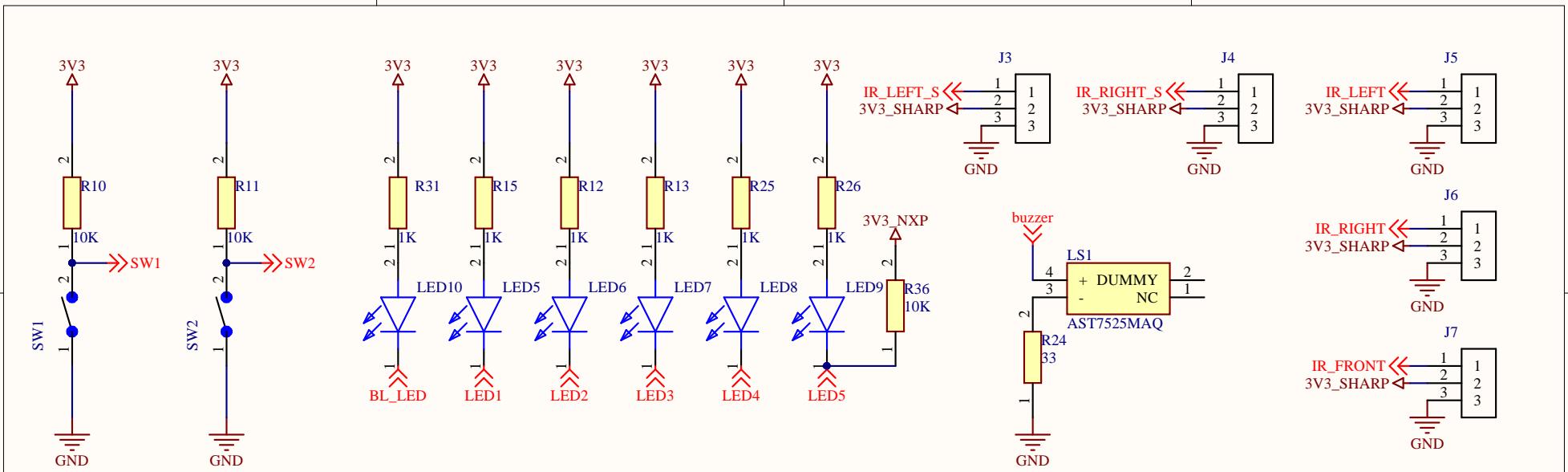


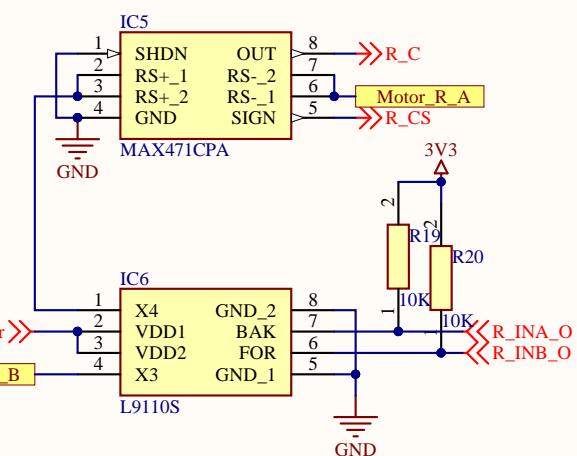
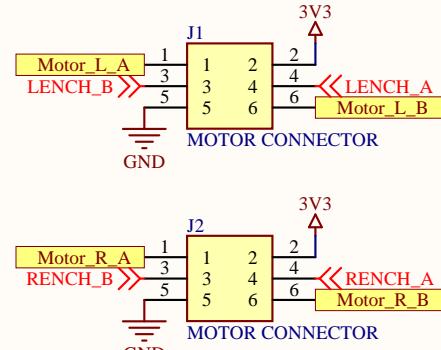
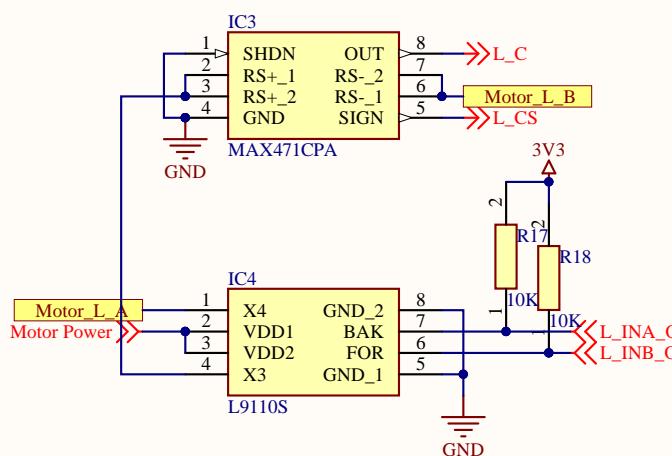
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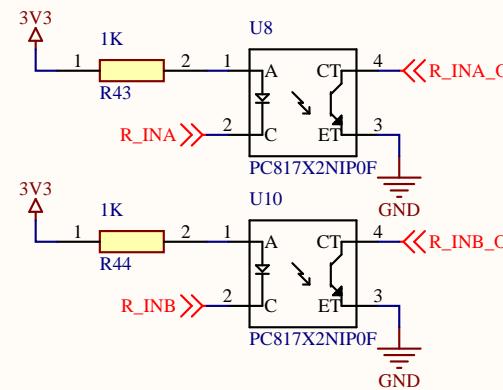
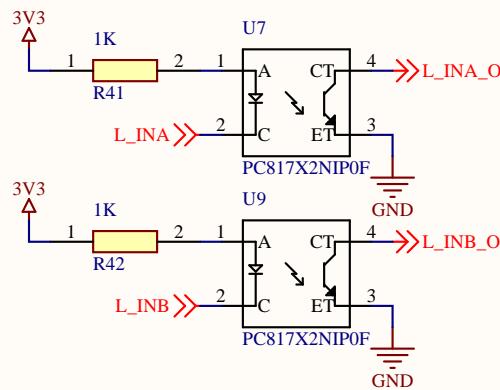
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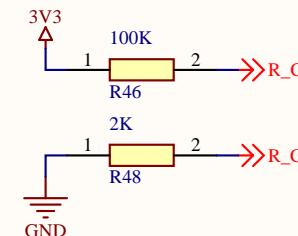
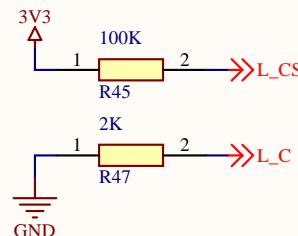
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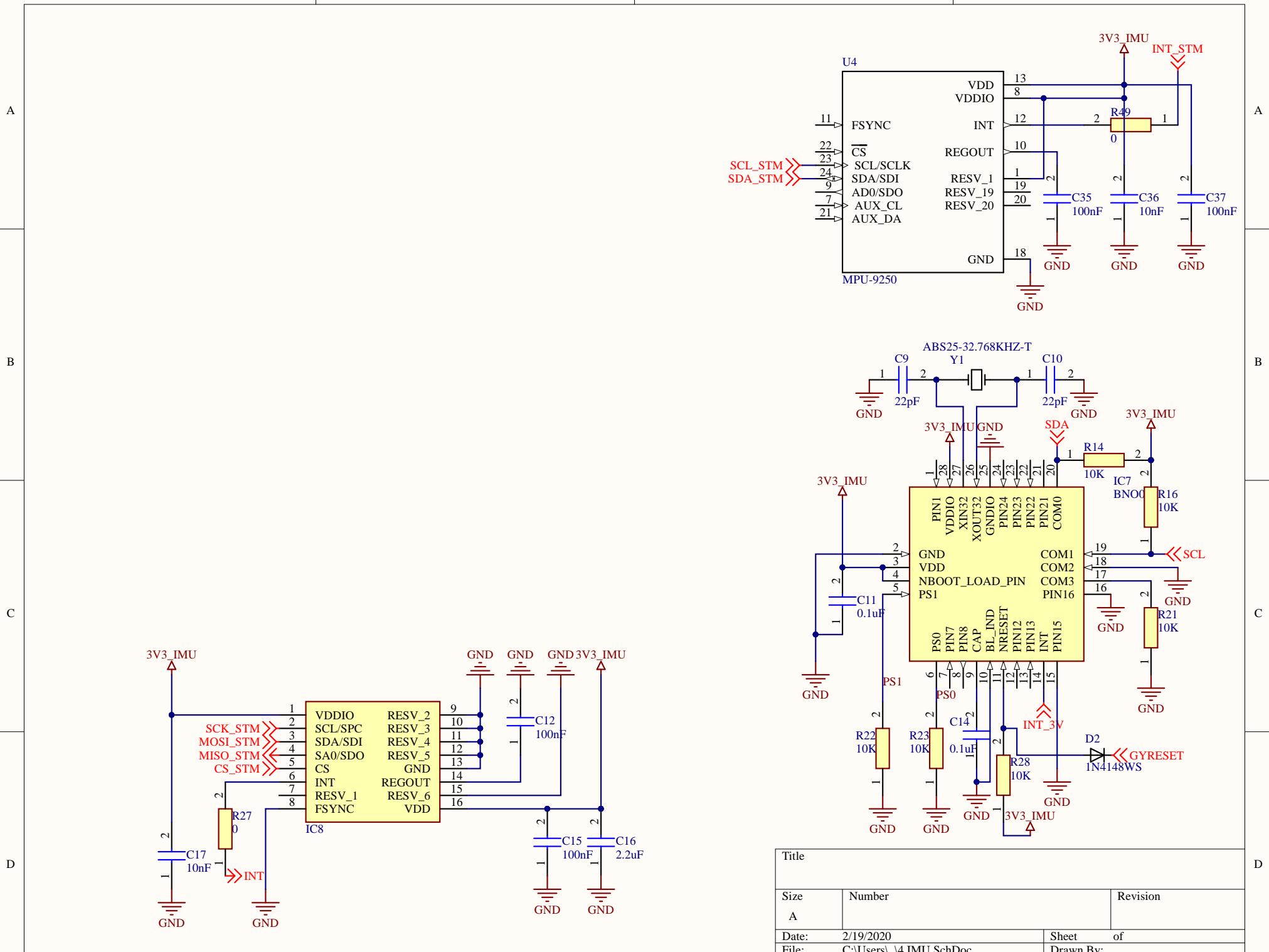
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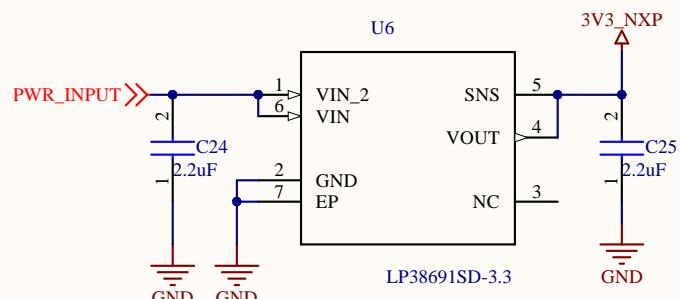
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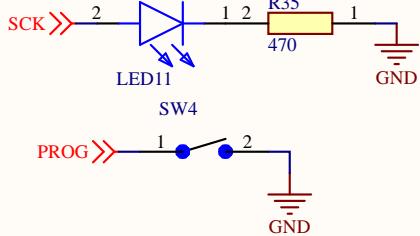
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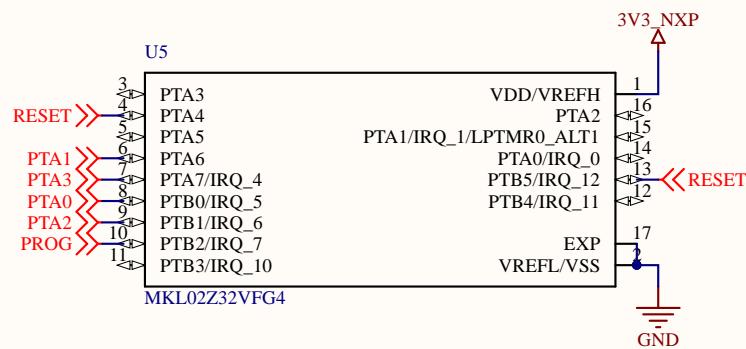
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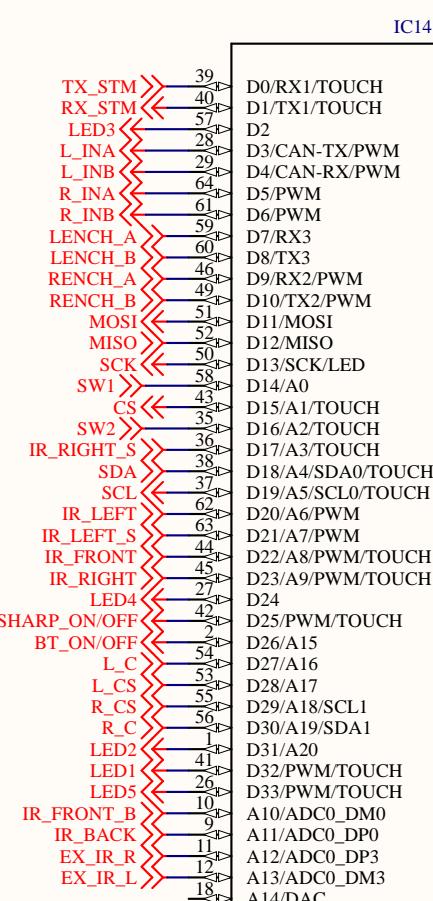
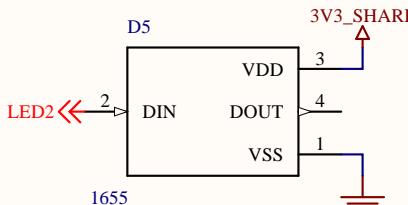
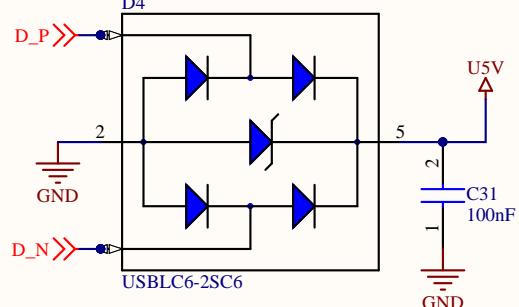
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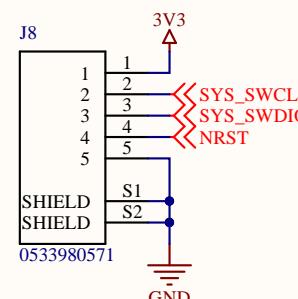


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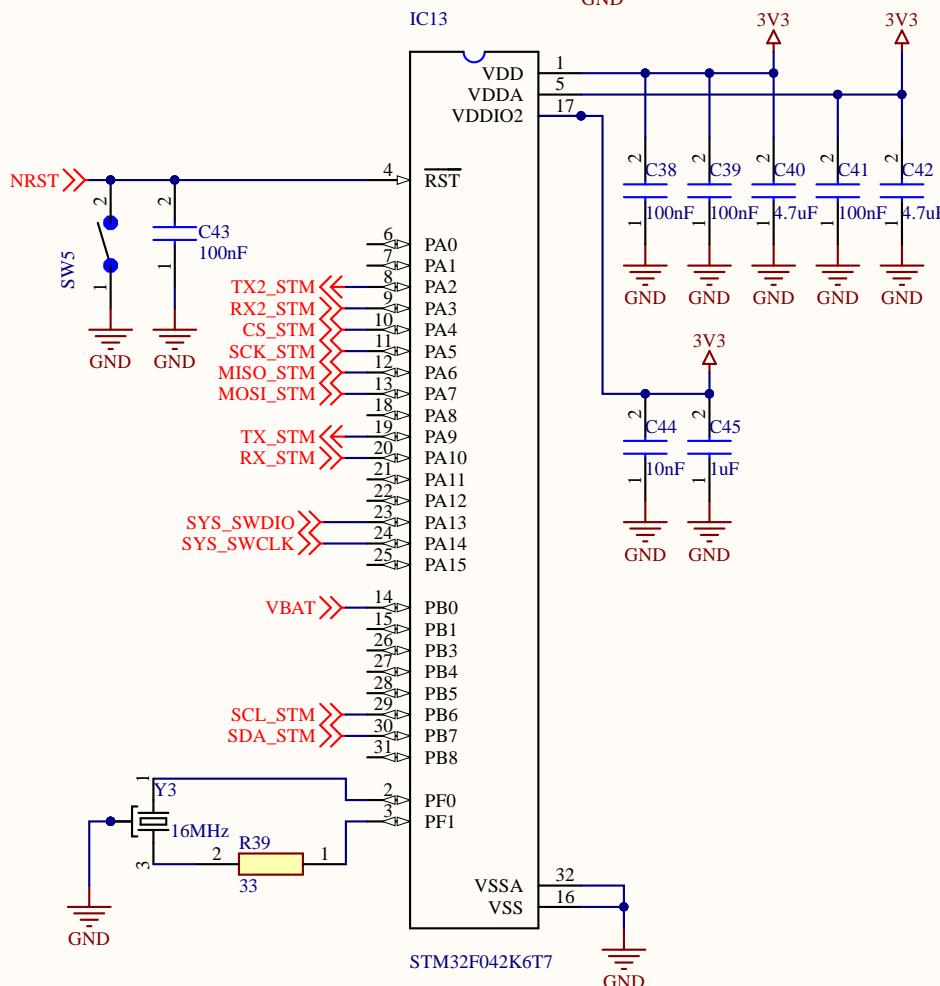


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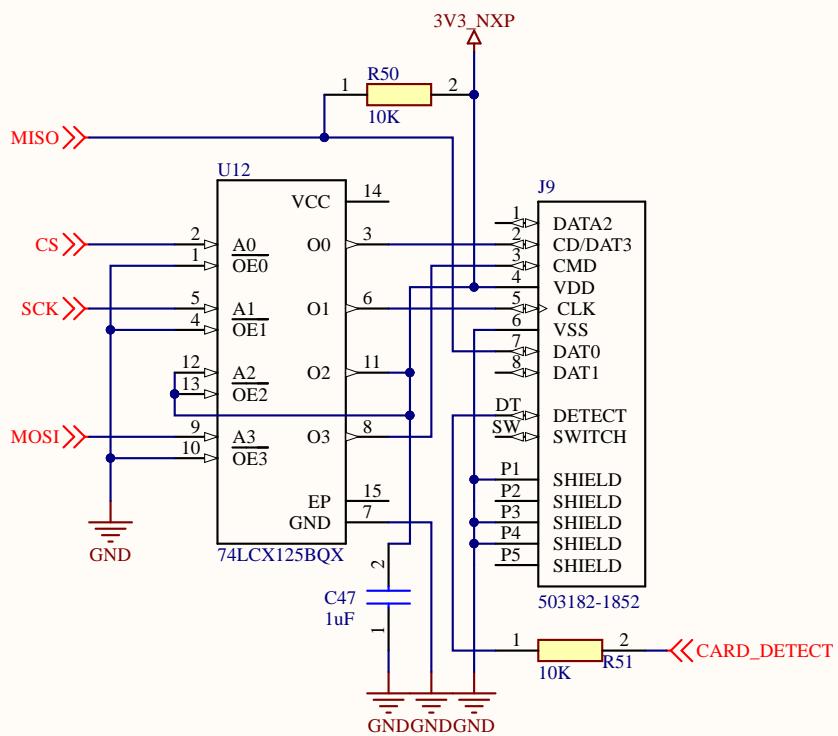
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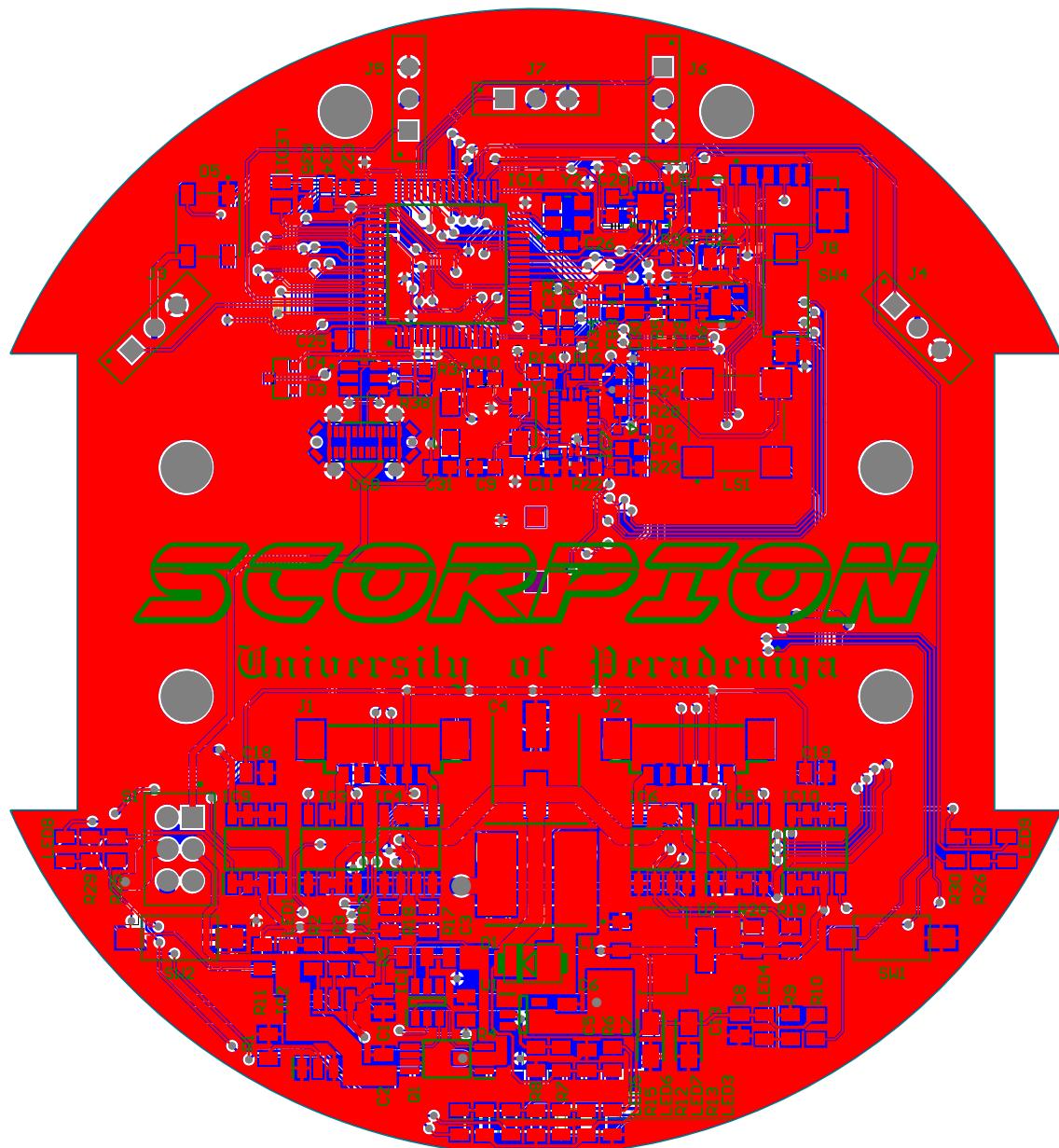
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Line #	Designator	Value	Name	Description	Quantity	Manufacturer 1	Manufacturer Part Number 1	Manufacturer Lifecycle 1	Supplier 1	Supplier Part Number 1	Supplier Unit Price 1	Supplier Subtotal 1
C1		10uF	08055A101JAT2A	Capacitor	1							
C2, C3		0.1uF	08055A101JAT2A	Capacitor	2							
C4		22uF	UD1E221MNL1GS	Capacitor Polarsed	1							
C5, C6		22uF	08055A101JAT2A	Capacitor	2							
C7, C13, C20, C22		100uF	tantalum capacitor 1206	Capacitor Polarsed	4	KEMET	T491A106K010AT	Volume Production	Digi-Key	399-3684-1-ND	0.41	1.64
C8, C21, C23		100nF	08055A101JAT2A	Capacitor	3							
C9, C10		22pf	capacitor 0603	Capacitor	2							
C11, C14, C26, C27, C28, C32, C33, C34		0.1uF	capacitor 0603	Capacitor	8	KEMET	C0603C104K8RACTU	Volume Production	Digi-Key	399-1095-1-ND	0.098	0.98
C12, C15, C31, C35, C37, C38, C39, C41, C43		100nF	capacitor 0603	Capacitor	9	KEMET	C0603C104K8RACTU	Volume Production	Digi-Key	399-1095-1-ND	0.098	0.98
C16		2.2uF	capacitor 0603	Capacitor	1	KEMET	C0603C225K8PACTU	Volume Production	Digi-Key	399-4911-1-ND	0.24	0.24
C17, C36, C44		10nF	capacitor 0603	Capacitor	3	KEMET	C0603C103K8RACTU	Volume Production	Digi-Key	399-11132-1-ND	0.11	0.33
C18, C19		4.7uF	08055A101JAT2A	Capacitor	2							
C24, C25, C29, C30		2.2uF	08055A101JAT2A	Capacitor	4	Kyocera AVX	08053C225MAT2A	Volume Production	Digi-Key	478-10489-1-ND	0.43	1.72
C40, C42		4.7uF	capacitor 0603	Capacitor	2	KEMET	C0603C475M8PACTU	Volume Production	Digi-Key	399-9100-1-ND	0.3	0.6
C45, C47		1uF	capacitor 0603	Capacitor	2	KEMET	C0603C105K8PACTU	Volume Production	Digi-Key	399-3118-1-ND	0.1	0.2
C46			08055A101JAT2A	Capacitor	1							
D1			SS34	Diode Schottky 40V 3A 2-Pin SMC T/R	1	Diodes	B340-13-F	Volume Production	Digi-Key	B340-FDICT-ND	0.36	0.36
D2			1N4148WS	Diode Switching 75V 0.3A 2-Pin SOD-323 T/R	1	SMC	IN4148WSTR	Volume Production	Digi-Key	1655-1359-1-ND	0.13	0.13
D3			BAT54C	BAT54C	1	NXP Semiconductors	BAT54C	Volume Production	Digi-Key	BAT54CF5CT-ND	0.26	0.26
D4			USBLC6-2SC6	USBLC6 Series 2 Line 6 V Uni / Bi-Directional	1	ST Microelectronics	USBLC6-2SC6	Volume Production	Mouser	511-USBLC6-2SC6	0.45	0.45
D5			1655	Addressable Lighting Neopixel 10 LED Discrete	1							
FB2, FB3, FB5		10uH	inductor 0603	Ferrite Bead	3	Murata	LOM18FN100M00D	Volume Production	Digi-Key	490-4025-1-ND	0.15	0.45
IC1			DW01-P	Integrated Circuit	1							
IC2			T14056	Integrated Circuit	1							
IC3, IC5			MAX471CPA	Integrated Circuit	2							
IC4, IC6			L9110S	Integrated Circuit	2							
IC7			BIN005	Integrated Circuit	1	Bosch	BNO055		Digi-Key	828-1058-1-ND	11.16	11.16
IC8			ICM20602	Integrated Circuit	1	TDK InvenSense	ICM-20602	Volume Production	Digi-Key	1428-1060-1-ND	3.7	3.7
IC9, IC10			SI4143DY-T1-GE3	Integrated Circuit	2							
IC12			TPS62203	Integrated Circuit	1	Texas Instruments	TPS62203DBVR	Volume Production	Digi-Key	296-39452-1-ND	1.23	1.23
IC13			STM32F042K6T7	Entry-level ARM Cortex-M0 USB line MCU with	1	STMicroelectronics	STM32F042K6T6	Volume Production	Digi-Key	497-14647-ND	2.83	2.83
IC14			MK20DX256VLH7	Kinetis K20 72MHz Cortex-M4 Performance MC	1	NXP Freescale	MK20DX256VLH7	Volume Production	Digi-Key	MK20DX256VLH7-ND	8.67	8.67
J1, J2			MOTOR CONNECTOR	Connector	2	Molex	53398-0671	Volume Production	Digi-Key	WM7610C-ND	1.39	2.78
J3, J4, J5, J6, J7			022057035_5268-03A	Socket: wire-board; male; PIN: 3; 2.5mm; THT	5							
J8			0533980571	Conn Shrouded Header HDR 5 POS 1.25mm	1							
J9			503182-1852	MICRO SD NORMAL ULTRALOWPRO8CKTE	1	Molex	503182-1852	Volume Production	Digi-Key	WM12834C-ND	2.45	2.45
L1		22uH	74404084220	Inductor	1	Sumida	CDRH104RT125NP-220MC	Volume Production	Digi-Key	308-1919-1-ND	1.91	1.91
LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10		1500808575000	LED		11							
LS1			AST7525MAQ	Loudspeaker or Buzzer	1	DB Unlimited	TE082603-2		Digi-Key	2104-TE082603-2C-ND	4.09	4.09
O1			FS8205A	Transistor	1							
R1		1.2k	CPF0805B100KE	Resistor	1	TE Connectivity	CRGCQ0805F1K2		Digi-Key	A129750C-ND	0.1	0.1
R2, R3, R4, R6, R9, R12, R13, R15, R25, R26		1K	CPF0805B100KE	Resistor	10							
R5		100	CPF0805B100KE	Resistor	1							
R7		20K	CPF0805B100KE	Resistor	1							
R8		2.2K	CPF0805B100KE	Resistor	1							
R10, R11, R17, R18, R19, R20		10K	CPF0805B100KE	Resistor	6							
R14, R16, R21, R22, R23, R28, R36, R50, R51		10K	resistor	Resistor	9	Yageo	RC0603FR-0710KL	Volume Production	Digi-Key	311-10.0KHRCT-ND	0.023	0.23
R24, R37, R38, R39		33	resistor	Resistor	4	Yageo	RC0603FR-0733RL	Volume Production	Digi-Key	311-33.0HRCT-ND	0.023	0.23
R27, R49		0	resistor	Resistor	2							
R29, R30, R32, R33, R40		10K	CPF0805	Resistor	5	Yageo	RC0805FR-0710KL	Volume Production	Digi-Key	311-100KCRCT-ND	0.04	0.4
R31, R41, R42, R43, R44		1K	CPF0805	Resistor	5	Yageo	RC0805FR-071KL	Volume Production	Digi-Key	311-100KCRCT-ND	0.04	0.4
R34, R35		470	resistor	Resistor	2	Yageo	RC0603FR-07470RL	Volume Production	Digi-Key	311-470HRCT-ND	0.1	0.2
R45, R46		100K	CPF0805	Resistor	2	Yageo	RC0805FR-0710KL	Volume Production	Digi-Key	311-100KCRCT-ND	0.1	0.2
R47, R48		2K	CPF0805	Resistor	2	Yageo	RC0805FR-072KL	Volume Production	Digi-Key	311-200KCRCT-ND	0.1	0.2
S1		1-1437575-7	Slide Switch ON ON DPDT Top Slide 0.4VA 20V		1							
SW1, SW2, SW3, SW4, SW5		1437566-3	Switch Tactile OFF _ON_ SPST Rectangular But		5	TE Connectivity Alt	FSMSM	Volume Production	Digi-Key	450-1140-ND	0.27	1.35
U1			MT3608	Undefined or Miscellaneous	1							
U2			AMS1117	1A LOW DROPOUT VOLTAGE REGULATOR	1	Texas Instruments	LM1117MPX-3.3/NOPB	Volume Production	Digi-Key	LM1117MPX-3.3/NOPBCT-ND	1.14	1.14
U3			BLUETOOTH-SERIAL-HC-06	Bluetooth Modules _802.15.1_ BLUETOOTH-SE	1							
U4			MPU-9250	IMUs - Inertial Measurement Units RECOMMEN	1	TDK InvenSense	MPU-9250	Not Recommended for New Design				
U5			MKL02Z32VFG4	32 Bit Microcontroller Kinetics L Series Ultra Lo	1	NXP Freescale	MKL02Z32VFG4	Volume Production	Digi-Key	MKL02Z32VFG4-ND	2.5	2.5
U6			LP38691SD-3.3	500mA Low Dropout CMOS Linear Regulators S	1	T1 National Semiconductor	LP38691SD-3.3/NOPB	Volume Production	Digi-Key	LP38691SD-3.3/NOPBCT-ND	1.75	1.75
U7, U8, U9, U10			PC817X2NIPOF	Optocoupler DC-IN 1-CH Transistor DC-OUT 4	4	Sharp	PC817X2NIPOF	Not Recommended for New Design				
U12			74LCX125BX	Buffer/Line Driver 4-CH Non-Inverting 3-ST CM	1							
U15			NCP303LSN36T1G	NCP303LSN36T1G	1	ON Semiconductor	NCP303LSN36T1G	Volume Production	Digi-Key	NCP303LSN36T1GOSCT-ND	0.48	0.48
USB			USB4070-XX-X-REV.C	Usb Type c Rec. 30 , Vertical, Smt With Stakes &	1	Amphenol FCI	1013232-10011LF	Volume Production	Digi-Key	609-5380-1-ND	2.54	2.54
Y1			ABS25-32.768KHZ-T	32.768 Mhz Plastic Smt Low Pro	1	Abracan	ABS25-32.768KHZ-T	Volume Production	Digi-Key	535-9166-1-ND	0.63	0.63
Y2, Y3		16MHz	NX3225SA-12.000M-STD-CRS-2	Crystal 12.000mhz 8pf Smd	2	NDK	NX3225SA-12.000M-STD-CRS-2	Volume Production	Digi-Key	644-1128-1-ND	0.72	1.44