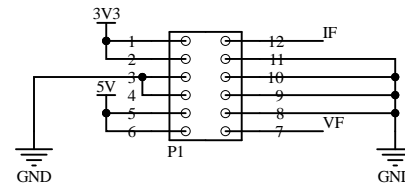
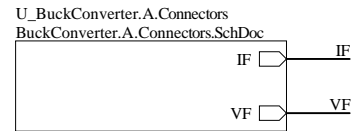


Connections

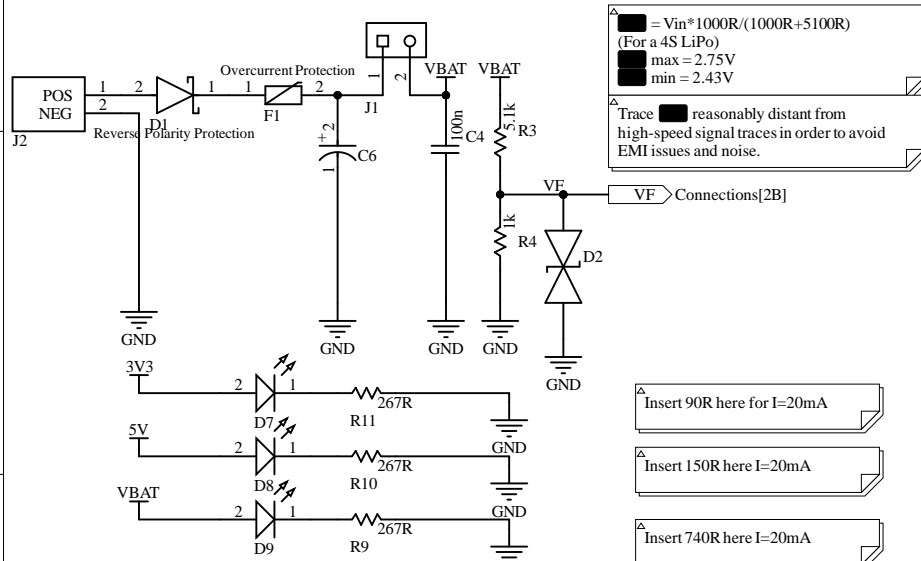
Connector (Top)



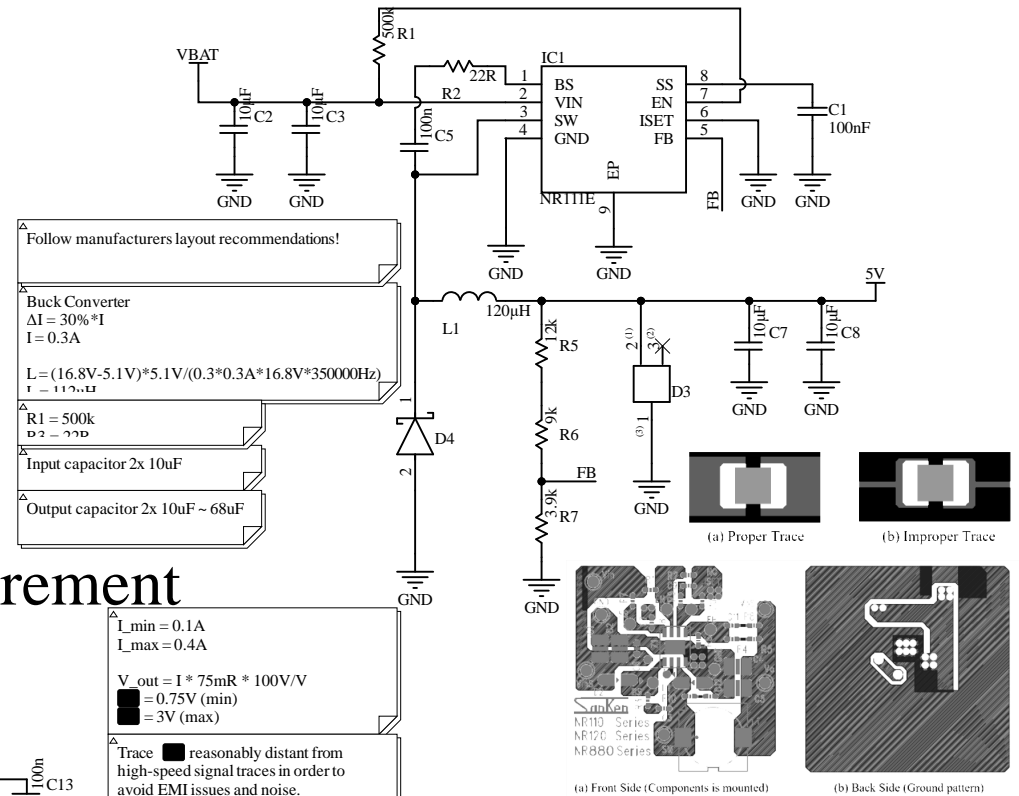
Project: Power_Management_Board.PrjPcb		Cannot open file C:\Users\Mohammed\Downloads\FINAL LIT LOGO (1).png. File does not exist.
Sheet Title: Connections.SchDoc		
Size: A4	Schematic Designer: Mohammrd Abdeen	
	PCB Designer: Mohammed Abdeen	
	Responsible Enginner: Mohammed Abdeen	
Date: 5/29/2025	Revision: A	Sheet: 1 / 2
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Power and Status

3S LiPo Battery XT-60



Buck Converter (16.8V to 5V)



LDO (5V to 3V3V) Current Measurement

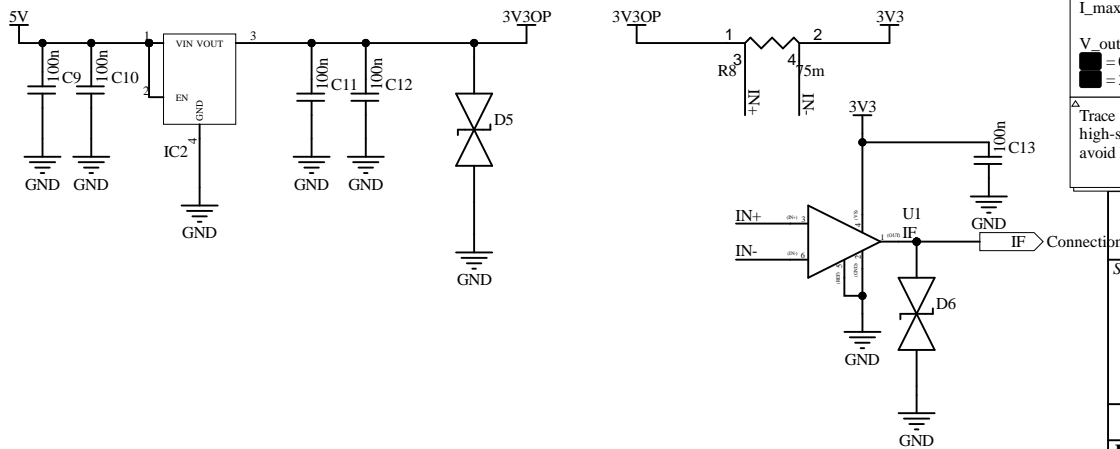


Figure 13-1. Pattern Layout Example (PCB size: 40 mm x 40 mm)

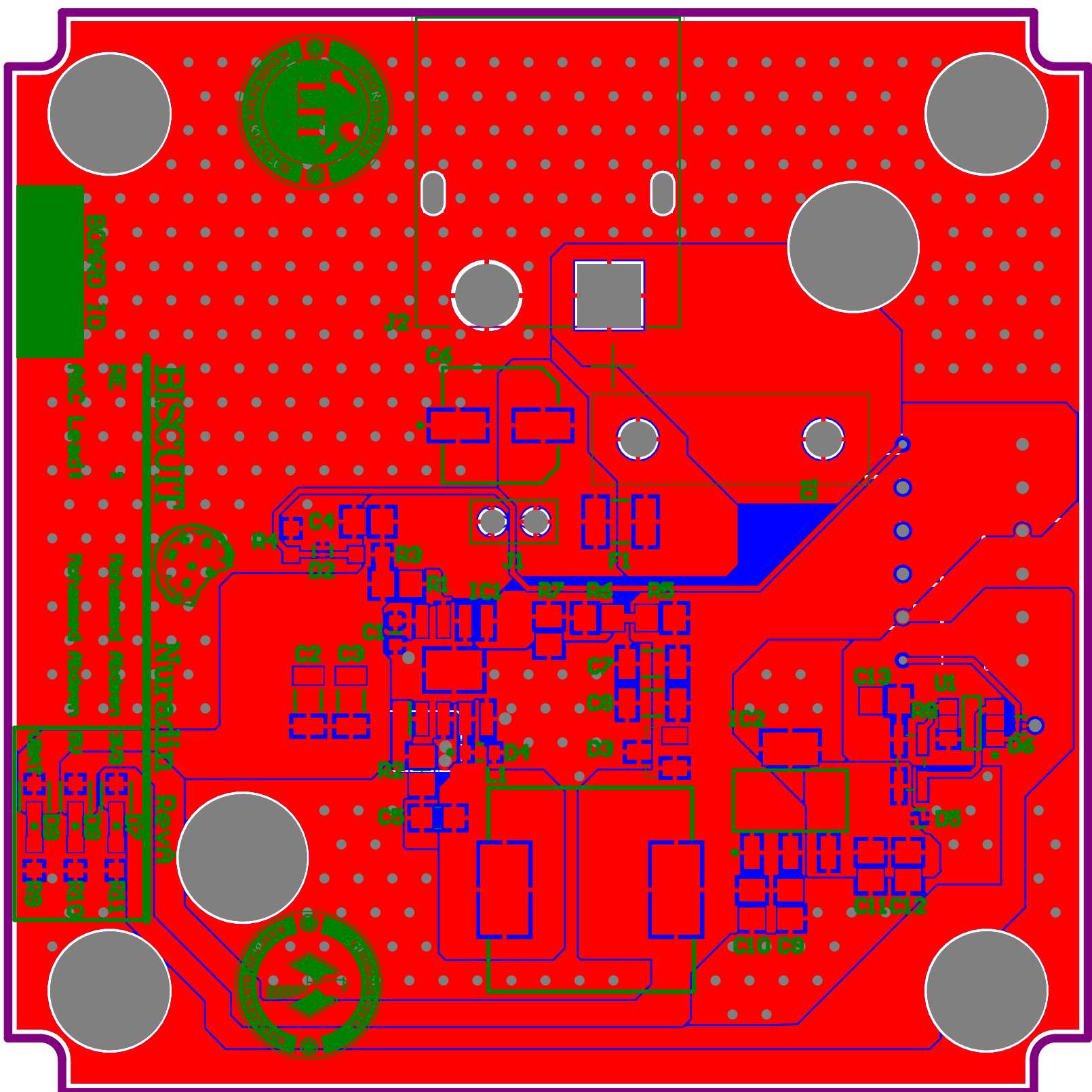
Project: **Power_Management_Board.PrjPcb**
 Schematic Title: **BuckConverter.A.Connectors.SchDoc**

Size: **A4**
 Schematic Designer: **Mohammrd Abdeen**
 PCB Designer: **Mohammed Abdeen**
 Responsible Engineer: **Mohammed Abdeen**

Date: **5/29/2025** Revision: **A** Sheet: **2 / 2**

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Comment	Description	Designator	Footprint	LibRef	Quantity
GMK101B7104K4HT	Ceramic Capacitor, Multilayer, Ceramic, 35V, 10%+Tol, 10%-Tol, X7R, 15%TC, 0.1uF, Surface Mount, 0603	C1	0603(1608)-CAP	OMP-001-00083-1	1
GRM31C71C108KAC7L	10 uF±10% 16V Ceramic Capacitor X7R 1206 (3216 Metric)	C2, C3, C7, C8	1206-RES	CAP-1206-16V-10uF	4
HCM21NR71E104KT	0.1 uF±10% 25V Ceramic Capacitor X7R 0805 (2012 Metric)	C4, C8, C10, C11, C12, C13	0805-RES	CAP-0805-25V-100n	6
HCM21NR71E104KT	0.1 uF±10% 25V Ceramic Capacitor X7R 0805 (2012 Metric)	C5	CAP-0805	CAP-0805-25V-100n	1
IEEFK15470P	47 uF±25 V Aluminum Electrolytic Capacitors Radial, Can - SMD 2000 Hrs @ 105°C	C6	FP-FKD-MFG	CAP-RADIALSMD-25V(BIAS)	1
APT60S20BG	Diode 200V 75A Through Hole TO-247 B3	D1	APT60S20BG	SCHOTTKY-TH-200V-75A	1
PE803/GY1BSPML	3.7V (Typ) Clamp Ipo Tvs Diode Surface Mount DSG0603-2	D2, D6, D6	FP-SOD0602-2-CA-MFG	TVS-3V3-4V2	3
824021	7V Clamp 15A (8/23u)s Ipo Tvs Diode Surface Mount SOT-23-3	D3	824021	TVS-6.1V-7V	1
NSR20F40NX1TSG	Diode 40V 2A Surface Mount 2-DSN (1.6x0.8), (0603)	D4	0603-SchottkyDIODE	SCHOTTKY-0603-40V-2A	1
UTST-C190KGKT	Green 571nm LED Indication - Discrete 2V 0603 (1608 Metric)	D7, D8, D9	FP-LTST-C190KGKT-MFG	LED-0603-Green_	3
MF-US4T050P0-2	Polymeric PTC Resettable Fuse 30V 500mA 1/4 Surface Mount 1210 (3225 Metric), Concave	F1	1210-IND	DIC-FUSE 2.5A	1
NR111E	Integrated Circuit	IC1	SOIC8-Thermally-Enhanced	OMP-031-00008-2	1
AP2114HA-3.3TRG1	Linear Voltage Regulator IC Positive Fixed 1 Output 1A SOT-223-3	IC2	TO-261AA	LDO-6V-3V3	1
61300211121	Connector Header Through Hole 2 position 0.100" (2.54mm)	J1	HEADER-2-Pin	Header-2-Pin-Male	1
PRT-10474	XTB0 CONNECTORS FEMALEPAIR 120uH Shielded Drum Core, Wirewound Inductor 2.3A 170mOhm Max Nonstandard	L2	AWASS_XTB0PVM	XTB0-F	1
SRR1210-121M	12 Position Receptacle Connector 0.100" (2.54mm) Through Hole Gold	L1	SRR1210-121M	IND-120uH-2.3A	1
NFP0062RMSRC	500K Ohms ±0.1%, 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Automotive AEC-Q200 Thin Film	P1	NFP0062RMSRC	BoardToBoard_Top	1
RNCF0805BTE500K	22 Ohms ±1%, 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Automotive AEC-Q200 Thin Film	R1	0805-RES	RES-0805-500k	1
RO805FR-0722RL	1K Ohms ±1%, 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film	R2	0805-RES	RES-0805-22R	1
RO603FR-075K1L	5.1K Ohms ±1%, 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film	R3	0603-RES	RES-0603-5.1k	1
ESR03E27F1001	1K Ohms ±1%, 0.25W, 1/4W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film	R4	0603-RES	RES-0603-1k_	1
RMCF0805JT1240	12K Ohms ±5%, 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Automotive AEC-Q200 Thick Film	R5	0805-RES	RES-0805-12k	1
RT0605REED73HL	9K Ohms ±0.1%, 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Thin Film	R6	0805-RES	RES-0805-9k	1
CR0805F390	3.9K Ohms ±1%, 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Thick Film	R7	0805-RES	RES-0805-3.9k	1
LUK12K05DER	75m Ohms ±0.5%, 0.5W, 1/2W Chip Resistor 1206 (3216 Metric) Anti-Corrosive, Current Sense, Moisture Resistant Thick Film	R8	LUK12K05DER	RES-1206-75m-OELVIN	1
BRJ3B4F2670V	267 Ohms ±1%, 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film	R9, R10, R11	0603-RES	RES-0603-267R	3
INA181A3DBVR	Current Sense Amplifier 1 Circuit Rail-to-Rail SOT-23-6	U1	SOT06P280K145-6N	AMP-100V/V-SOT23-6	1