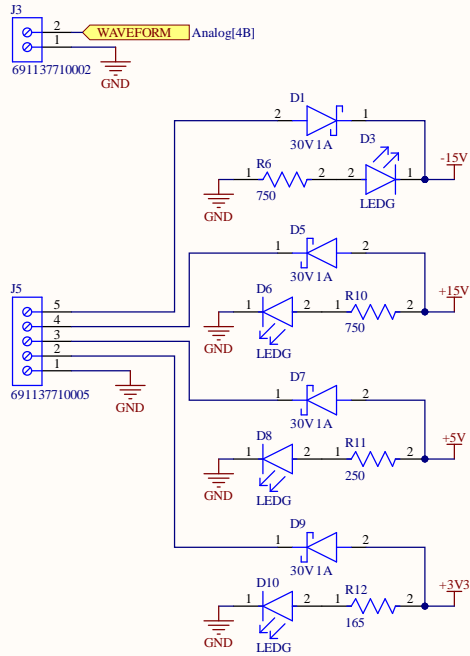
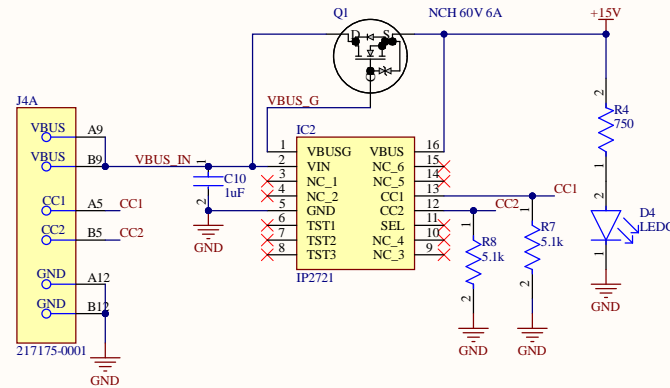


Title		
Size	Number	Revision
B		
Date:	12/23/2025	Sheet of
File:	C:\Users\...\Digital.SchDoc	Drawn By:

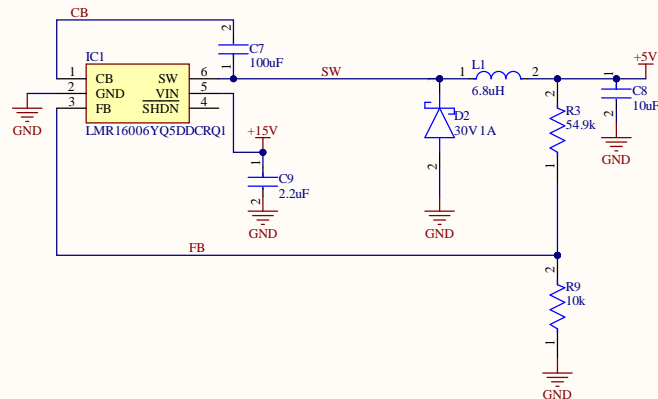
## Output Terminals



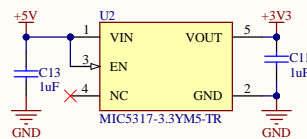
## USBC PD



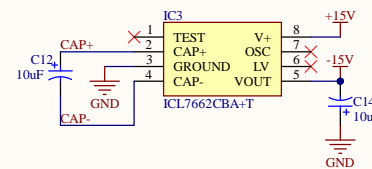
## Buck Converter 15V to 5V



## LDO 5V to 3V3

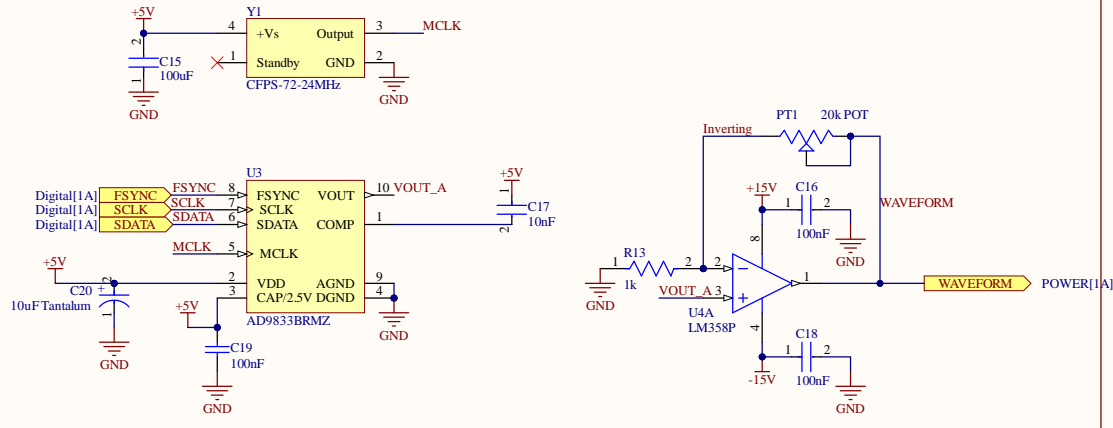


## Charge Pump 15V to -15V



Title		
Size	Number	Revision
B		
Date:	12/23/2025	Sheet of
File:	C:\Users\...\POWER.SchDoc	Drawn By:

## Waveform Generator



Title		
Size B	Number	Revision
Date:	12/23/2025	Sheet of
File:	C:\Users\...\Analog.SchDoc	Drawn By:

Digital

-15V  
+15V  
+5V  
+3V3  
GND

Analog

WAVE  
GND

STLINK

+3V3  
SWCLOCK  
SWDIO  
NRST  
GND

+3V3 CS1B RES A0 SCL SI GND NC

SINE

TRIANGLE

SQUARE

SAWTOOTH

FREQUENCY | PHASE

VOLTAGE

ENC1

PT1

J3

J5

J2

U4

U3

U1

IC2

IC3

R9

R3

C9

D2

L1

U2

C13

C10

C11

Q1

R7

R8

R4

D4

D1

D5

D7

D9

Y1

C18

C19

C15

C20

C17

R13

R6

R10

R11

R12

D3

D6

D8

D10

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

C12

C7

J4

C8

C14

C2

C18

C19

C15

C20

C17

C16

C2

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

IC3

R9

R3

C9

D2

L1

U2

C13

C10

C11

Q1

R7

R8

R4

D4

D1

D5

D7

D9

Y1

C18

C19

C15

C20

C17

R13

R6

R10

R11

R12

D3

D6

D8

D10

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

IC3

R9

R3

C9

D2

L1

U2

C13

C10

C11

Q1

R7

R8

R4

D4

D1

D5

D7

D9

Y1

C18

C19

C15

C20

C17

R13

R6

R10

R11

R12

D3

D6

D8

D10

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

IC3

R9

R3

C9

D2

L1

U2

C13

C10

C11

Q1

R7

R8

R4

D4

D1

D5

D7

D9

Y1

C18

C19

C15

C20

C17

R13

R6

R10

R11

R12

D3

D6

D8

D10

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

IC3

R9

R3

C9

D2

L1

U2

C13

C10

C11

Q1

R7

R8

R4

D4

D1

D5

D7

D9

Y1

C18

C19

C15

C20

C17

R13

R6

R10

R11

R12

D3

D6

D8

D10

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

IC3

R9

R3

C9

D2

L1

U2

C13

C10

C11

Q1

R7

R8

R4

D4

D1

D5

D7

D9

Y1

C18

C19

C15

C20

C17

R13

R6

R10

R11

R12

D3

D6

D8

D10

C1

C3

C5

C6

R2

C16

C2

R1

C4

U1

SW5

NRST

SW1

SW3

SW2

SW4

IC3

R9

R3

C9

D2

L1

U2

Line#	Name	Description	Designator	Revision ID	Revision State	Revision Status	Quantity	Manufacturer 1	Manufacturer Part Number 1	Manufacturer Lifecycle 1	Supplier 1	Supplier Part Number 1	Supplier Unit Price 1	Supplier Subtotal 1
	4.7uF	Chip Multilayer Ceramic Capacitors for General Purpose 0805, 4.7uF, X6R 15%, 25V	C1		Unknown server		1	Bradford Electronics	RLP00C2371FS					
	100nF	Ceramic 100nF X7R 16V 5%	C2, C3, C4, C6, C19		Unknown server		5	HEMET	C0603X104UR1CTU	Volume Production				
	10nF	CAP 10nF 10V 45% 1206 (3216 Metric) Thickness 1.45mm SMD	C5		Unknown server		1	HEMET	C1206C103JG4C					
	100uF, 100nF	C1206 0.10uF C0G 10.00% 25 V X7R	C7, C15, C16, C18		Unknown server		4	HEMET	C1206C104RG3ACTU	Volume Production				
	10uF	CL21 Series 0805 10uF 25V ±10% Tolerance X6R Multilayer Ceramic Chip Capacitor	C8		Unknown server		1	Samsung Electro-Mechanics	CL21A106K9VNNNE	Volume Production				
	2.2uF	C0402 2.200uF C0G 0.02 25 V	C9		Unknown server		1	HEMET	C0402C222G3G4C	Volume Production				
	1uF	Cap Ceramic 1uF 25V X7R 25% Rad SMD 1206 -40°C Automotive T/R	C10		Unknown server		1	TDK	CGA5L207R1E105M160AD	Volume Production				
	1uF	CAP 1uF 10V 45% 1206 (3216 Metric) Thickness 1.3mm SMD	C11, C13		Unknown server		2	KYOCERA V/X	1206C105JAT4A	Volume Production				
	10uF	Tantalum Capacitor, 10uF, +/- 10%, 50 V, 45 to 125 degC, 2-Pin SMD (7343-43), Reel	C12, C14		Unknown server		2	Vishay	290D100X80502T23	Volume Production				
	10nF	C0301 10,000pF X6R 30ppm/C 10.00% 10 V	C17		Unknown server		1	HEMET	C0301C103R6PACTU	Volume Production				
	10uF Tantalum	CAP TANT 10uF 10% 20V 1411	C20		Unknown server		1	Vishay	290D100X80502T23	Volume Production				
	30V 1A	Schottky Diode	D1, D2, D5, D7, D8		Not managed		5	Iskra	CL80S050-13R1B	Volume Production				
	LED3	LED GREEN CLEAR SMD	D3, D4, D6, D8, D10		Unknown server		5	Lite-On	LTSF-C170GKT	Volume Production				
	PEC12R-4225F-S0024	ROTARY ENCODER MECHANICAL 24PPR	ENC1		Unknown server		1	Bourns	PEC12R-4225F-S0024	Volume Production				
	LMR16006YK5C00RQ2	Integrated Circuit	IC1		Not managed		1	Texas Instruments	LMR16006YK5C00RQ2	Volume Production				
	P2721	Integrated Circuit	IC2		Not managed		1							
	ICL7662C9A-T	Integrated Circuit	IC3		Not managed		1	Analog Devices	ICL7662C9A-T	Volume Production				
	61300511821		J1		Unknown server		1	Wurth Elektronik	61300511821					
	61300511821		J2		Unknown server		1	Wurth Elektronik	61300511821					
	691137710002		J3		Unknown server		1	Wurth Elektronik	691137710002					
	217175-0001	CONN RCP USB2.0 C6+18P SMD RA	J4		Unknown server		1	Molex	217175-0001	Volume Production				
	691137710005		J5		Unknown server		1	Wurth Elektronik	691137710005					
	6.8uH	Wire Wound Ferrite Inductor for Power Lines For Automotive 6.8uH ±20% 0.168Q 1450mA 1212	L1		Unknown server		1	Murata	LQH3NH68RM1EL	New Product				
	PR01-D130K2-B203		PT1		Unknown server		1	Sams Sky	PR01-D130K2-B203	Volume Production				
	NCH60V6A	N-ch MOSFET, 60 V, 6.0 A, 0.036 Isd@10V, 50T, 323F (U,F,M)	Q1		Not managed		1	Toshiba	SSMB041TU1U1B					
	10k	RES Thin Film, 10kQ, 0.1%, 0.063W, 50ppm/C, 0402	R1, R2		Unknown server		2	Venkel	TFOR0402-16W-C-1002BT	Volume Production				
	54.9k	RES Thin Film, 54.9kQ, 0.25%, 0.11W, 50ppm/C, 0603	R3		Unknown server		1	Venkel	TFOR0603-16W-C-5492CT-1K	Volume Production				
	750, 10k	Thin Film Chip Resistors Automotive Grade 10kQ 0.1% 50ppm/C 0805	R4, R9		Unknown server		2	Yageo Group	AT0805BRED7104L	Volume Production				
	750, 250	6.8kQ ±5% 0.125W 0805 Thick Film Chip Resistor AEC-Q200 compliant, 0805-250 Ohms 0.25W	R6, R10, R11		Unknown server		3	Stackpole Electronics	RMCF0805JRB90	Volume Production				
	5.1k	RES Thin Film, 5.1kQ, 0.25%, 0.11W, 25ppm/C, 0603	R7, R8		Unknown server		2	Venkel	TFOR0603-10W-E-5101CT-1K	Volume Production				
	165	RES Thin Film, 620Q, 0.25%, 0.11W, 25ppm/C, 0603	R12		Unknown server		1	Venkel	TFOR0603-10W-E-6200CT	Volume Production				
	1k	RES 1.0K OHM 0.5% 1/5W 0805	R13		Unknown server		1	Vishay	MCL0805SF1001SP00	Volume Production				
	PTS6479C6SMPL2FS	FACT 4.5 X 4.5, 3.8 MHz, 2.2A	SW1, SW2, SW3, SW4, SW5		Unknown server		5	C&K Components	PTS6479C6SMPL2FS	Volume Production				
	STM32F030C8T6	ARM Cortex-M0 32-bit MCU, 64 KB Flash, 8 KB Internal RAM, 39 I/Os, 48-Pin LQFP, -40 to 85 degC, Tape and Reel	U1		Unknown server		1	STMicroelectronics	STM32F030C8T6TR	Volume Production				
	MC3317-3.3V1M5-TR	IC REG LINEAR 3.3V 150mA SOT23-5	U2		Unknown server		1	Microchip	MC3317-3.3V1M5-TR	Volume Production				
	AD9833BRMZ	Low Power, 12.65 mW, 2.3 V to 5.5 V, Programmable VCO, 10-Bit Serial, RM-10, 50 Tube, Pb-Free	U3		Unknown server		1	Analog Devices	AD9833BRMZ	Volume Production				
	LM358P	Dual Operational Amplifier, 3 to 32 V, 0 to 70 degC, 8-Pin PDIP (P), RoHS, Tape and Reel	U4		Unknown server		1	Texas Instruments	LM358P	Volume Production				
	GPS 72-24MHz	831019082 VME SMD Crystal Oscillator	Y1		Unknown server		1	Wurth Elektronik	831019082					