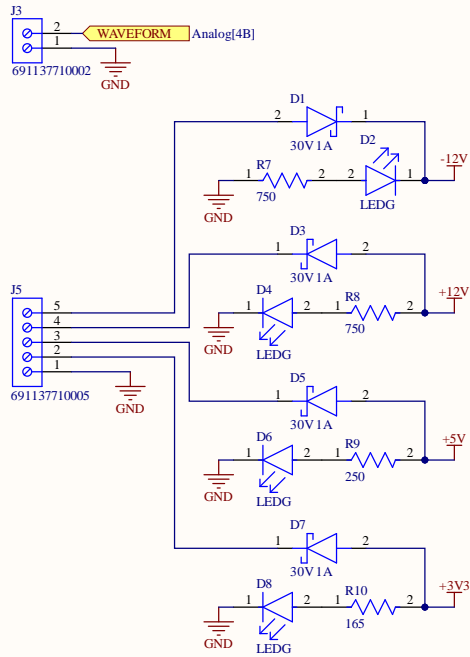
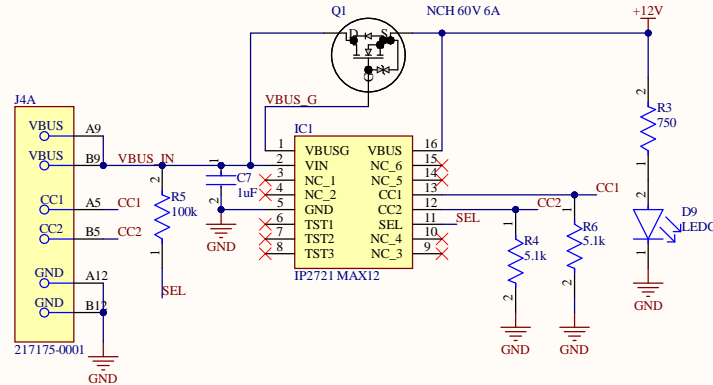


Title		
Size	Number	Revision
B		
Date:	12/29/2025	Sheet of
File:	C:\Users\...\Digital.SchDoc	Drawn By:

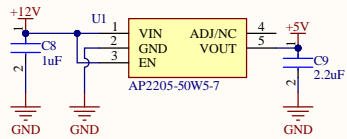
## Output Terminals



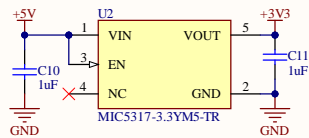
## USBC PD



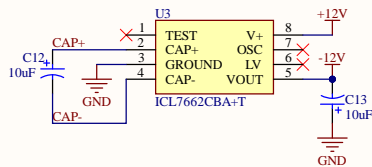
## LDO 12V to 5V



## LDO 5V to 3V3

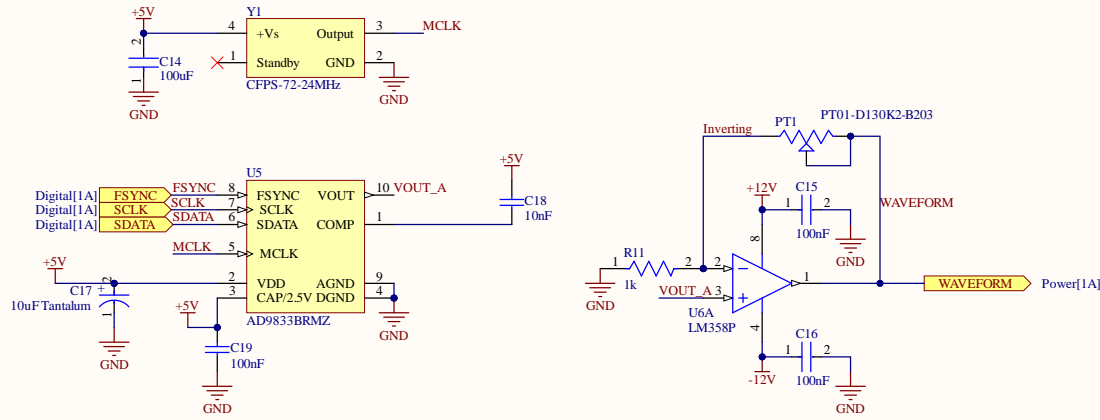


## Charge Pump 15V to -15V



Title		
Size	Number	Revision
B		
Date:	12/29/2025	Sheet of
File:	C:\Users\...\Power.SchDoc	Drawn By:

## Waveform Generator



Title		
Size B	Number	Revision
Date:	12/29/2025	Sheet of
File:	C:\Users\...\Analog.SchDoc	Drawn By:

Digital

-12V  
+12V  
+5V  
+3V3  
GND

Analog

WAVE  
GND

STLINK

+3V3  
SWCLOCK  
SWDIO  
NRST  
GND

U1

SW5  
NRST

SINE

TRIANGLE

SQUARE

SAWTOOTH

FREQUENCY | PHASE

VOLTAGE

+3V3 CS1B RES A0 SCL SI GND NC

-12V  
+12V  
+5V  
+3V3

J3

J5

J2

J4

IC1

C7

Q1

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

R11

C19

C14

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D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

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C7

C11

C16

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U6

C15

C18

C17

R11

C19

C14

D7

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D1

R6

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D9

C9

U1

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U3

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C14

D7

D5

D3

D1

R6

R4

R5

R3

D9

C9

U1

C8

C12

U3

C13

C10

U2

C7

C11

C16

U5

U6

C15

C18

C17

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, X5R, 15%, 20%, 25V	C1		Unknown server		1	Bradford Electronics	RLR20C2371FS					
	100nF	Ceramic 100nF X7R 16V 5%, Ceramic 100nF X7R 16V 5% 1206	C2, C3, C4, C6, C19		Unknown server		5	HEMET	C06030104URACTU	Volume Production				
	10nF	CAP 10nF 10V ±5% 1206 (3216 Metric) Thickness 1.45mm SMD	C5, C18		Unknown server		2	HEMET	C1206C103JG4C					
	1uF	Cap Ceramic 1uF 25V X7R 20% Pad SMD 1206 +125°C Automotive T/R	C7, C8		Unknown server		2	TDK	OGA6L2X7R1E109M160AD	Volume Production				
	2.2uF		C9		Unknown server		1							
	1uF	CAP 1uF 10V ±5% 1206 (3216 Metric) Thickness 1.3mm SMD	C10, C11		Unknown server		2	KYOCERA V/X	1206D1105JAT4A	Volume Production				
	10uF	Tantalum Capacitor, 10uF, +/- 10%, 50V, -55 to 125 degC, 2-Pin SMD (7343-43), RoHS, Tape and Reel	C12, C13		Unknown server		2	Vishay	293D106X000E2TE3	Volume Production				
	100uF, 100nF	C12060.10uF ODG 10.00% 25V X7R	C14, C15, C16		Unknown server		3	HEMET	C1206C104K3GACTU	Volume Production				
	10uF Tantalum	CAP TANT 10uF 10V 20V 1411	C17		Unknown server		1	Vishay	293D106X000E2TE3	Volume Production				
	30V 1A	Schottky Diode	D1, D3, D5, D7		Not managed		4	Toshiba	CLU10S30-H3F1B	Volume Production				
	LEDG	LED GREEN CLEAR SMD	D2, D4, D6, D8, D9		Unknown server		5	Lite-On	LTST-C170GKT	Volume Production				
	PEC12R-4225F-S0024	24 Pulse Incremental Mechanical Rotary Encoder w/ 6mm Flat Shaft Through Hole   Bourns PEC12R-4225F-S0024	ENC1		Not managed		1							
	IP2721 MAX12	Integrated Circuit	IC1		Not managed		1							
	61300611821		J1		Unknown server		1	Wurth Elektronik	61300611821					
	61300611821		J2		Unknown server		1	Wurth Elektronik	61300611821					
	691137710002		J3		Unknown server		1	Wurth Elektronik	691137710002					
	217175-0001	CONN RCP USB2.0 C 6+18P SMD RA	J4		Unknown server		1	Molex	217175-0001	Volume Production				
	691137710005		J5		Unknown server		1	Wurth Elektronik	691137710005					
	PR01-D130K2-B203		PF1		Not managed		1							
	NOH 60V 6A	N-ch MOSFET, 60 V, 6.0 A, 0.036 [to @10V, SOF, 323P(LFM)]	Q1		Not managed		1	Toshiba	SSM9K41TULF8					
	10k	RES Thin Film, 10kΩ, 0.1%, 0.063W, 50ppm/°C, 0402	R1, R2		Unknown server		2	Venkel	TFCRD402-16W-C-1002BT	Volume Production				
	750	Thin Film Chip Resistors Automotive Grade 10kΩ 0.1% 50ppm/°C 0805	R3		Unknown server		1	Yageo Group	AT0805BRE0710KL	Volume Production				
	5.1k	RES Thin Film, 5.1kΩ, 0.25%, 0.1W, 25ppm/°C, 0603	R4, R6		Unknown server		2	Venkel	TFCRD603-10W-E-5101CT-1K	Volume Production				
	100k, 1k	0805, RES 1.05K OHM 0.5% 1/5W 0805	R5, R11		Unknown server		2	Vishay	MCL08050F1001BP100	Volume Production				
	750, 250	6.8kΩ ±5%, 0.125W 0805 Thick Film Chip Resistor AEC-Q200 compliant, 0805 250 Ohms 0.25W	R7, R8, R9		Unknown server		3	Stackpole Electronics	RMCFR005LFBX80	Volume Production				
	165	RES Thin Film, 620Ω, 0.25%, 0.1W, 25ppm/°C, 0603	R10		Unknown server		1	Venkel	TFCRD603-10W-E-6200CT	Volume Production				
	PT36479C89MTR2LFS	TACT 4.5 X 4.5, 3.8 MMH, 2.5N	SW1, SW2, SW3, SW4, SW5		Unknown server		5	C&K Components	PT36479C89MTR2LFS	Volume Production				
	AP2205-50W6-7	Integrated Circuit	U1		Not managed		1							
	MICS317-3.3YM5-TR	IC RES LINEAR 3.3V 150MA SOT23	U2		Unknown server		1	Microchip	MICS317-3.3YM5-TR	Volume Production				
	ICL7862CBA+T	Integrated Circuit	U3		Not managed		1	Analog Devices	ICL7862CBA+T	Volume Production				
	STM32F030C8T6	ARM Cortex-M0 32-bit MCU, 64KB Flash, 8KB Internal RAM, 39 I/Os, 48-Pin LQFP, -40 to 85 degC, Tape and Reel	U4		Unknown server		1	STMicroelectronics	STM32F030C8T6TR	Volume Production				
	AC9833SRMZ	Low Power, 12.65 mW, 2.3 V to 5.5 V, Programmable Waveform Generator, 10-Bit Serial, RM-10, 50 Tube, Pb-Free	U5		Unknown server		1	Analog Devices	AC9833SRMZ	Volume Production				
	LM358P	Dual Operational Amplifier, 3 to 32 V, 0 to 70 degC, 8-Pin PDIP (P), RoHS, Tape and Reel	U6		Unknown server		1	Texas Instruments	LM358P	Volume Production				
	CPFS-72-24MHz	831019082 W6 SPXO Crystal Oscillator	Y1		Unknown server		1	Wurth Elektronik	831019082					