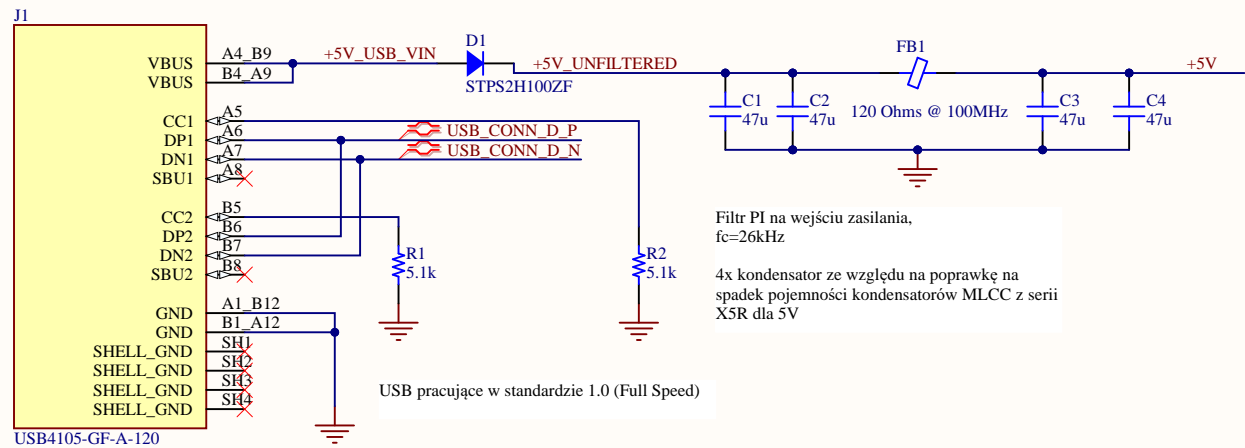
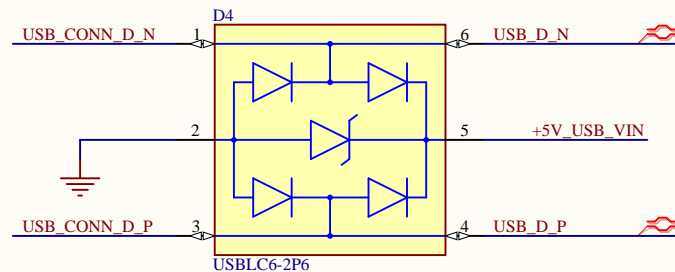


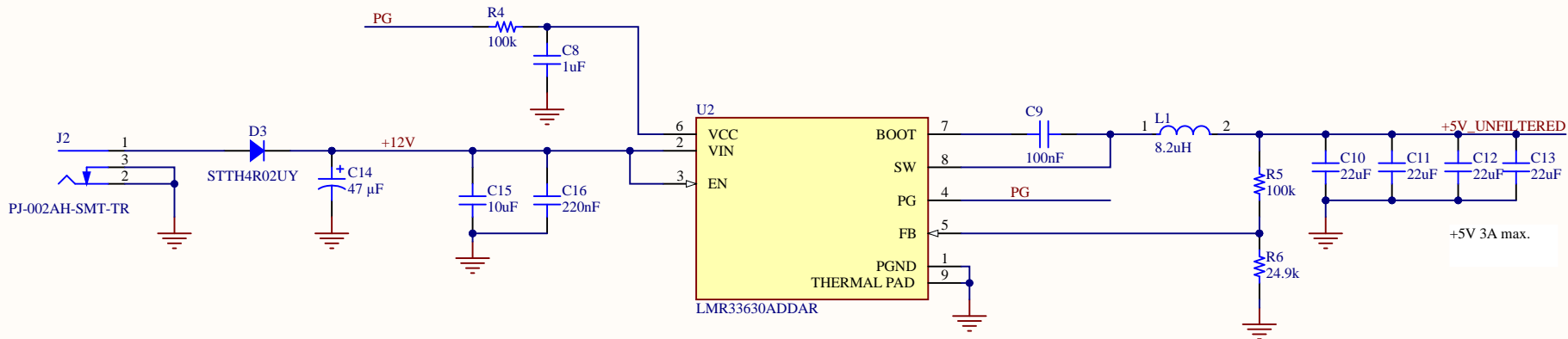
Konektor USB-C



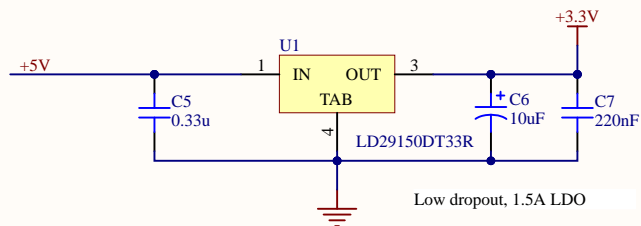
Zabezpieczenie ESD na linii USB



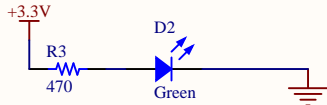
Przetwornica +12V -> +5V



Stabilizator liniowy +5V -> +3.3V

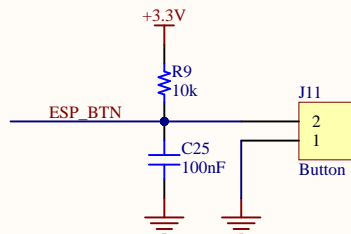


Dioda LED zasilania

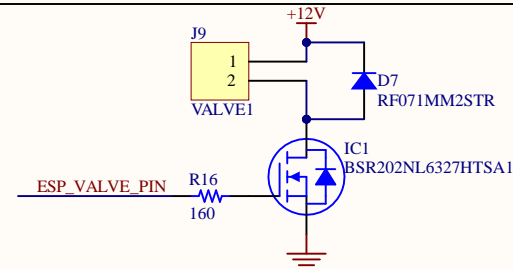
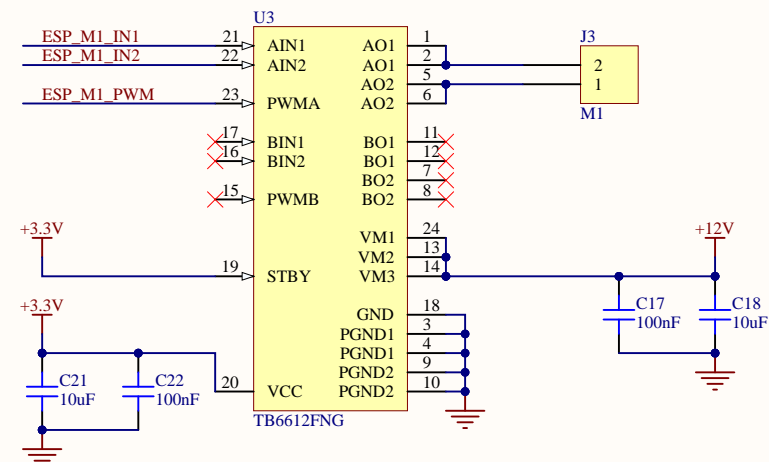
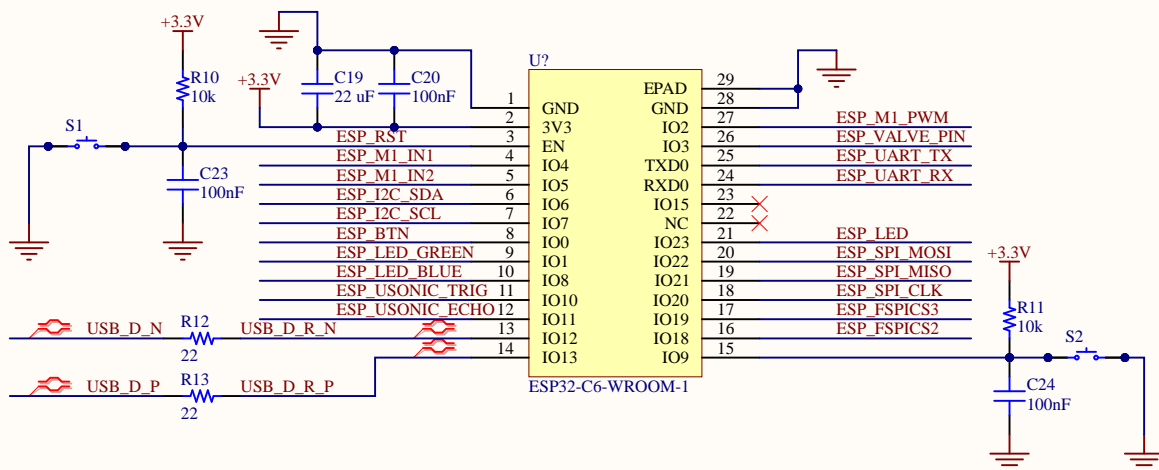


Title Układy zasilania i konektor USB		
Size A4	Number	Revision v1.0.0
Date:	4/15/2025	Sheet of
File:	D:\PIAR_Mainboard\ConnectionsAndPowerOnSchematics	

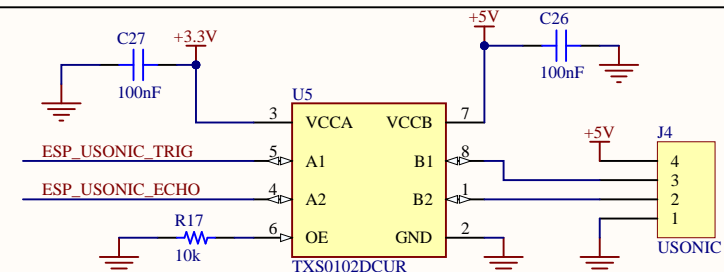
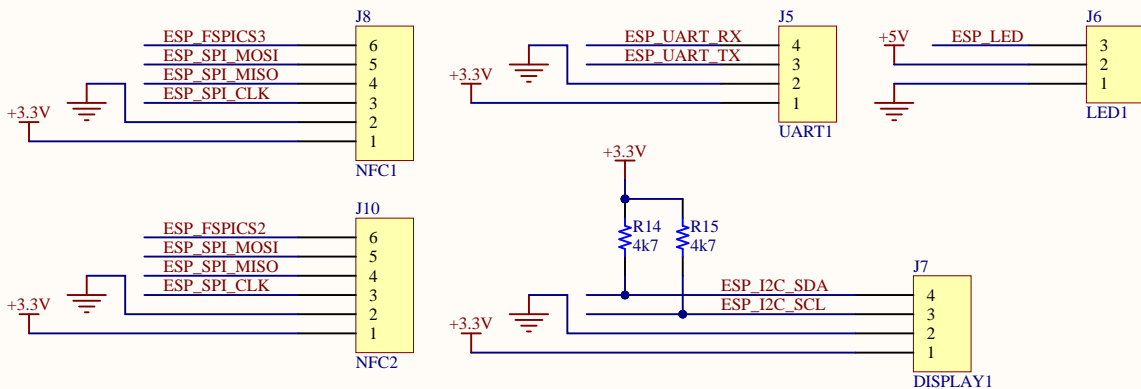
Mostek H



Interfejs elektrozaworu



Mikrokontroler, interfejsy zewnętrzne



Title Mikrokontroler, interfejsy zewnętrzne		
Size A4	Number	Revision v1.0.0
Date: 4/15/2025	Sheet of	
File: D:\PIAR_Mainboard\Motherboard_SchDoc\Drawn By:		

Comment	Description	Designator	Footprint	LibRef	Quantity
47 µF	CAP CER 47UF 6.3V XSR0805	C1, C2, C3, C4	CAP 0805_2012	QL21A476MQNNNNE	4
0.33µF	CAP CER 0.33UF 50V X7R0805	C5	CAP 0805_2012	08055C33AJT2A	1
10µF	CAP ALUM POLY 10UF 20% 10V SMD	C6	CAP ALSMD POLY 4.3MM H5.5MM	10SP10M	1
0.22 µF	CAP CER 0805 220NF 100V X7R5%	C7, C16	CAP 0805_2012	0805C224J1REC7800	2
1µF	CAP CER 1UF 50V X7R 0805	C8	CAP 0805_2012	08055C10K4Z2A	1
0.1 µF	CAP CER 0.1UF 50V X7R0805	C9, C17, C20, C22, C23, C24, C25, C26, C27	CAP 0805_2012	0C0805MR07R8B104	9
22µF	CAP CER 22UF 16V XSR0805	C10, C11, C12, C13, C19	CAP 0805_2012	QL21A22KDCQNNNNE QL21A22KDCQNNNG	5
47 µF	CAP ALUM 47UF 20% 6.3V SMD	C14	CAP ALSMD 4.3MM H5.4MM	ELM46F3ADA470MD5 S5	1
10 µF	CAP CER 10UF 16V X6S 0805	C15, C18, C21	CAP 0805_2012	C2012X6S1C10K125A C	3
STPS2H1002F	DIODE SCHOTTKY 100V 2A SOD123F	D1	SOD123F	STPS2H1002F	1
Green	LED GREEN CLEAR CHIP SMD	D2, D5	LED 0805_2012 GREEN	APH0M2012G0K-FD1	2
STTH4R02UY	DIODE GEN PURP 200V 4A SMB	D3	DO214AA SMB	STTH4R02UY	1
USBLC6-2P6	TVS DIODE 5.25V 17V SOT666	D4	FP-SOT-666-MFG	OMP-12225-000058-1	1
Blue	LED BLUE CLEAR 2012 SMD	D6	LED 0805_2012 BLUE	SMUMIN2BCTT86C	1
RF071MM2STR	DIODE GEN PURP 200V 700MA PMDU	D7	SOD123F	RF071MM2STR	1
120 Ohms @ 100MHz	EMI BEAD FLETER	FB1	FER 0805_2012	EBLUF00201209121Y00	1
BSF202NL6327-HTSA1	MOSFET N-CH 20V 3.9A SC59	IC1	INFINEON SOT-23-3	BSF202NL6327-HTSA1	1
USB4105-GF-A-120	USB socket; SMT; PIN: 18; top board mount; 5A	J1	USB4105-GF-A-120	USB4105-GF-A-120	1
PJ-0024H-SMT-TR	CONN FWR JACK 2X5.5MM SOLDER	J2	CUI PJ-0024H-SMT-TR	PJ-0024H-SMT-TR	1
M1	CONN HEADER VERT 2POS 2.54MM	J3	MOLEX KK 0022272021	0022272021	1
USONIC	CONN HEADER VERT 4POS 2.54MM	J4	MOLEX KK 0022272041	0022272041	1
UART1	CONN HEADER VERT 4POS 2.54MM	J5	MOLEX KK 0022272041	0022272041	1
LED1	CONN HEADER VERT 3POS 2.54MM	J6	MOLEX KK 0022272031	0022272031	1
DISPLAY1	CONN HEADER VERT 4POS 2.54MM	J7	MOLEX KK 0022272041	0022272041	1
NFC1	CONN HEADER VERT 6POS 2.54MM	J8	MOLEX KK 0022272061	0022272061	1
VALVE1	CONN HEADER VERT 2POS 2.54MM	J9	MOLEX KK 0022272021	0022272021	1
NFC2	CONN HEADER VERT 6POS 2.54MM	J10	MOLEX KK 0022272061	0022272061	1
Button	CONN HEADER VERT 2POS 2.54MM	J11	MOLEX KK 0022272021	0022272021	1
8.2uH	Commercial Inductors, High Saturation Series 8.2uH 4A 68mΩ 20%	L1	FP-IHL-2525CZ- FP_2_413x3-MFG	OMP-02424-000673-1	1
M3 Mounting Hole		MH1, MH2, MH3	M3_MOUNTING_HOLE	M3 Mounting Hole	3
5.1k	RES SMD 5.1K OHM 0.5% 1/8W 0805	R1, R2	RES 0805_2012	ERA-6AED512V	2
470	RES 470 OHM 1% 1/3W 0805	R3, R7	RES 0805_2012	ORGPO805F470R	2
100k	RES SMD 100K OHM 0.1% 1/10W 0805	R4, R5	RES 0805_2012	OPFO805B100KE	2
24.9k	RES SMD 24.9K OHM 0.5% 1/4W 0805	R6	RES 0805_2012	RNCF0805DTE24K9	1
47	RES 47 OHM 1% 1/3W 0805	R8	RES 0805_2012	ORGPO805F47R	1
10k	RES 10K OHM 0.1% 1/10W 0805	R9, R10, R11, R17	RES 0805_2012	RNCS0805BKE10K0	4
22	RES SMD 22 OHM 0.1% 1/10W 0805	R12, R13	RES 0805_2012	OPFO805B22RE1	2
4k7	RES SMD 4.7K OHM 5% 1/2W 0805	R14, R15	RES 0805_2012	RCS08054K70JNEA	2
160	RES SMD 160 OHM 0.1% 1/8W 0805	R16	YAGEO RES 0805_2012	RT0805BR007160RL	1
FSM6JMAASTR	SWITCH TACTILE SPST NO 0.05A 24V	S1, S2	TE FSM6JMA	FSM6JMAASTR	2
LD29150DT33R	1.5A, Very-Low Drop Voltage Regulator, 3.3V, 3-Pin DPAK	U1	TO-252_L	OMP-0244-00130-1	1
LMR33630A00AR	IC REG BUCK ADJUSTABLE 3A 830mV	U2	FP-DDA0006J1FC,B	OMP-04918-000184-1	1
TB6612FNG	Driver IC for Dual DC Motor, 15 V, -20 to 85 degC, 24-Pin SSOP, RoHS, Tape and Reel	U3	TOSH SSOP-24_M	OMP-1773-00001-1	1
ESP32-C6-WROOM-1		U4	ESP32-C6-WROOM1	ESP32-C6-WROOM-1	1
TXSD102DQUR	IC TRANSLTR BIDIRECTIONAL USB	U5	FP-DQU0008A-MFG	OMP-0869-00001-2	1