

IoT-Pi 6 Channel			
Size: A4	Revision: V1.0	Sheet: 1/4	SB Component Ltd.
Date: 30-09-2022	Time: 14:48:08	DrawnBy: Deepak Singh	Kemp House, 152-160, London EC1V 2NX.

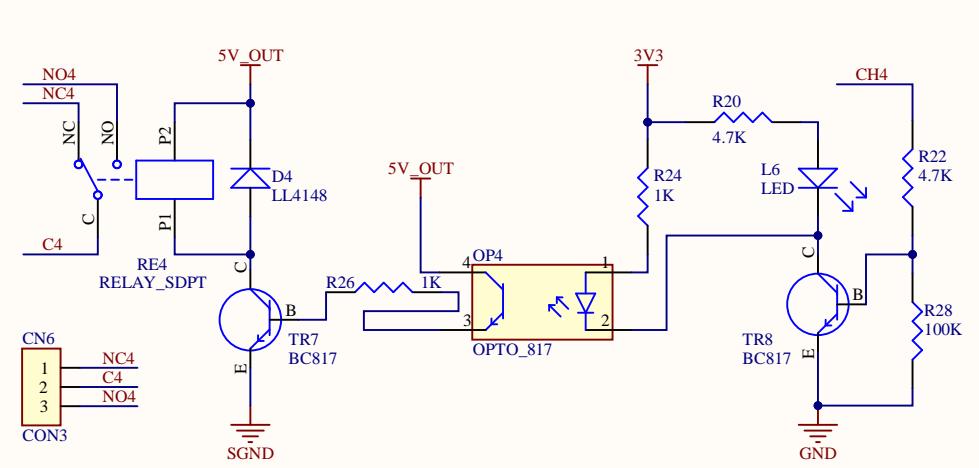
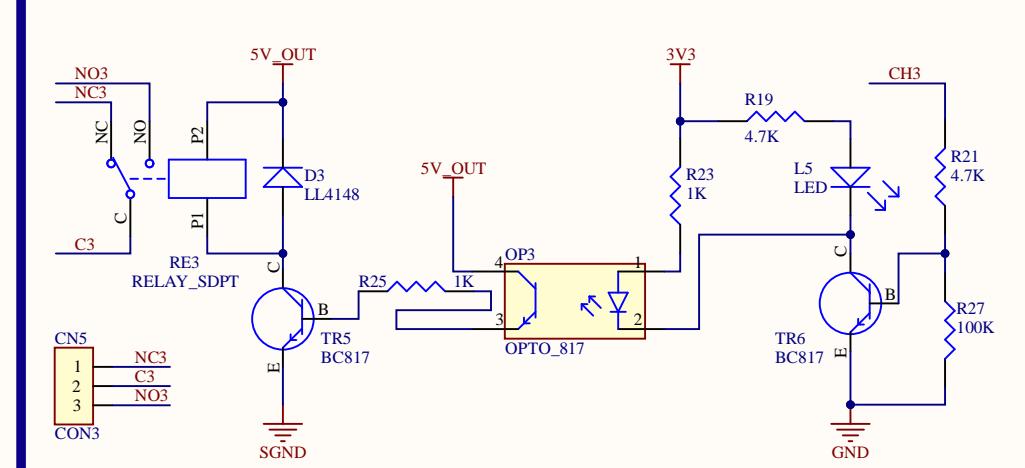
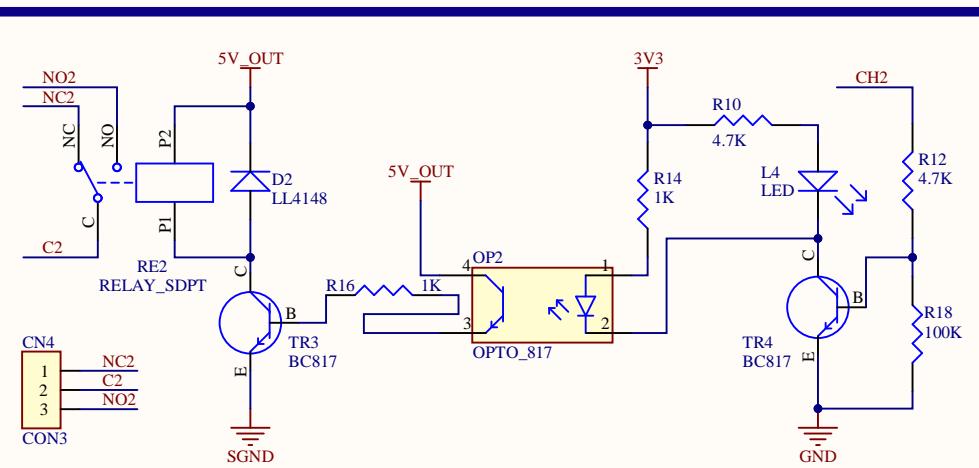
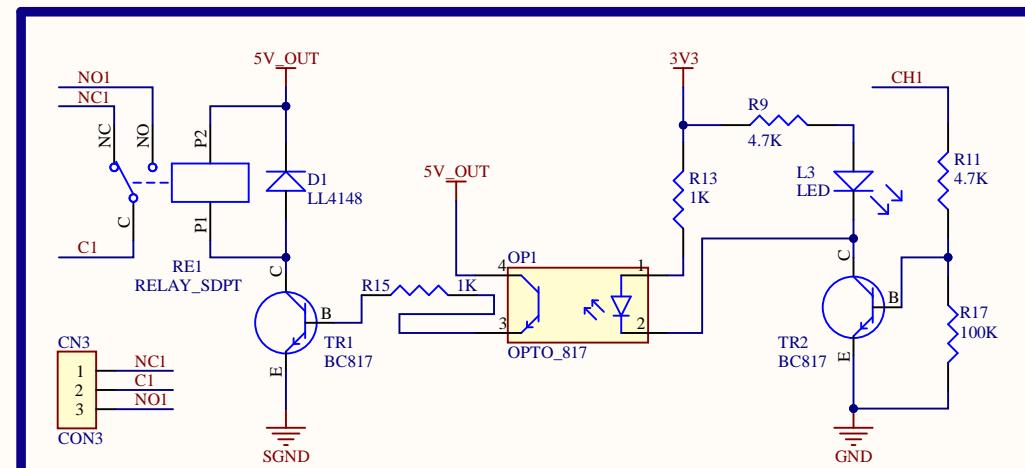
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1

2

3

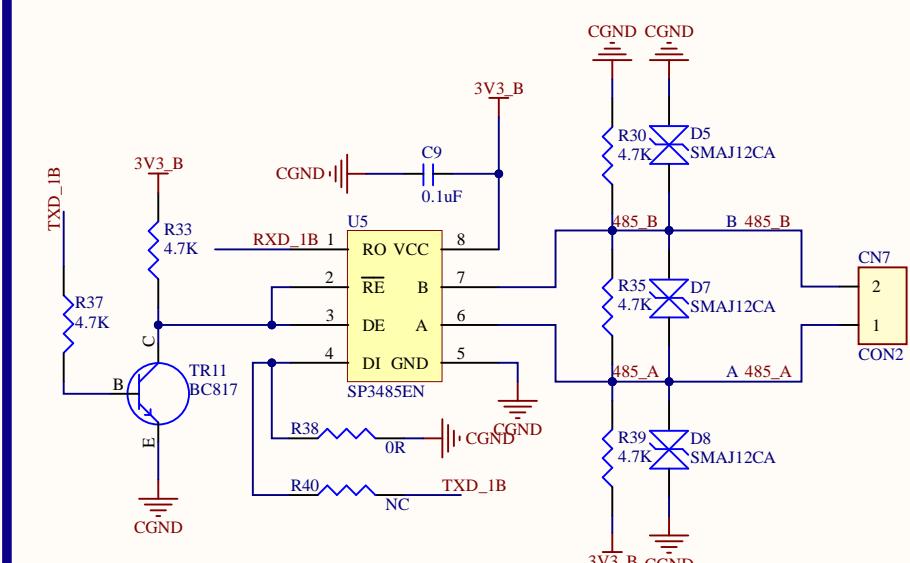
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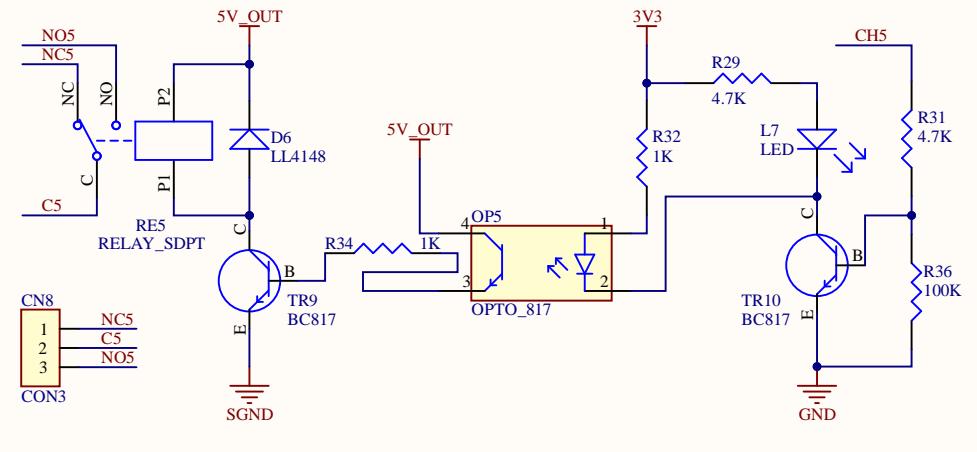
### IoT-Pi 6 Channel

Size: A4	Revision: V1.0	Sheet: 2/4	SB Component Ltd. Kemp House, 152-160, London EC1V 2NX.
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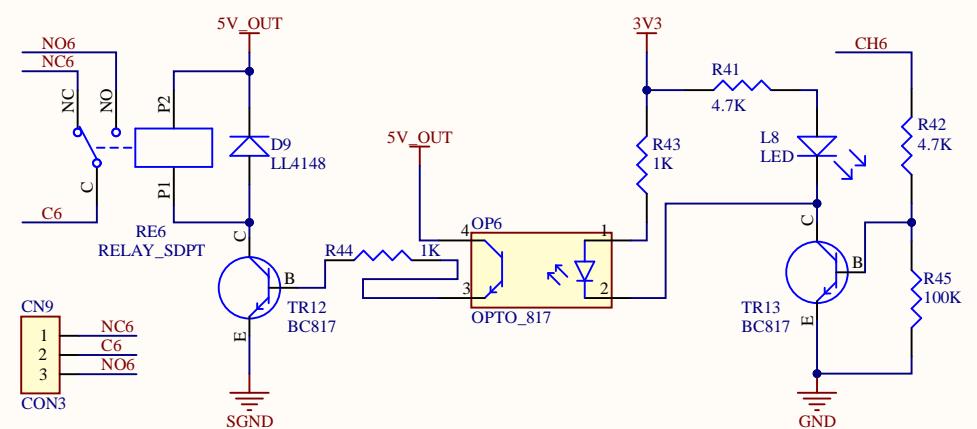
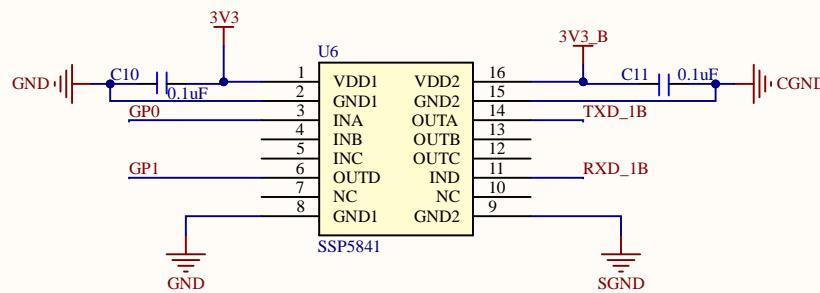
A



B



C



### IoT-Pi 6 Channel

Size: A4	Revision: V1.0	Sheet: 3/4	SB Component Ltd.
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A

B

C

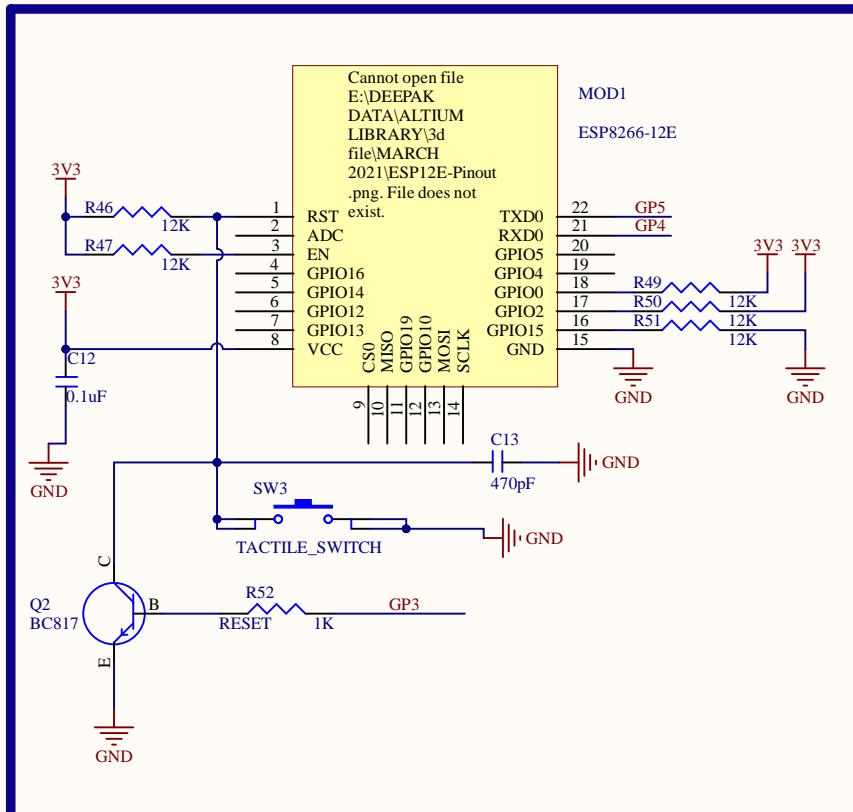
D

A

B

C

D



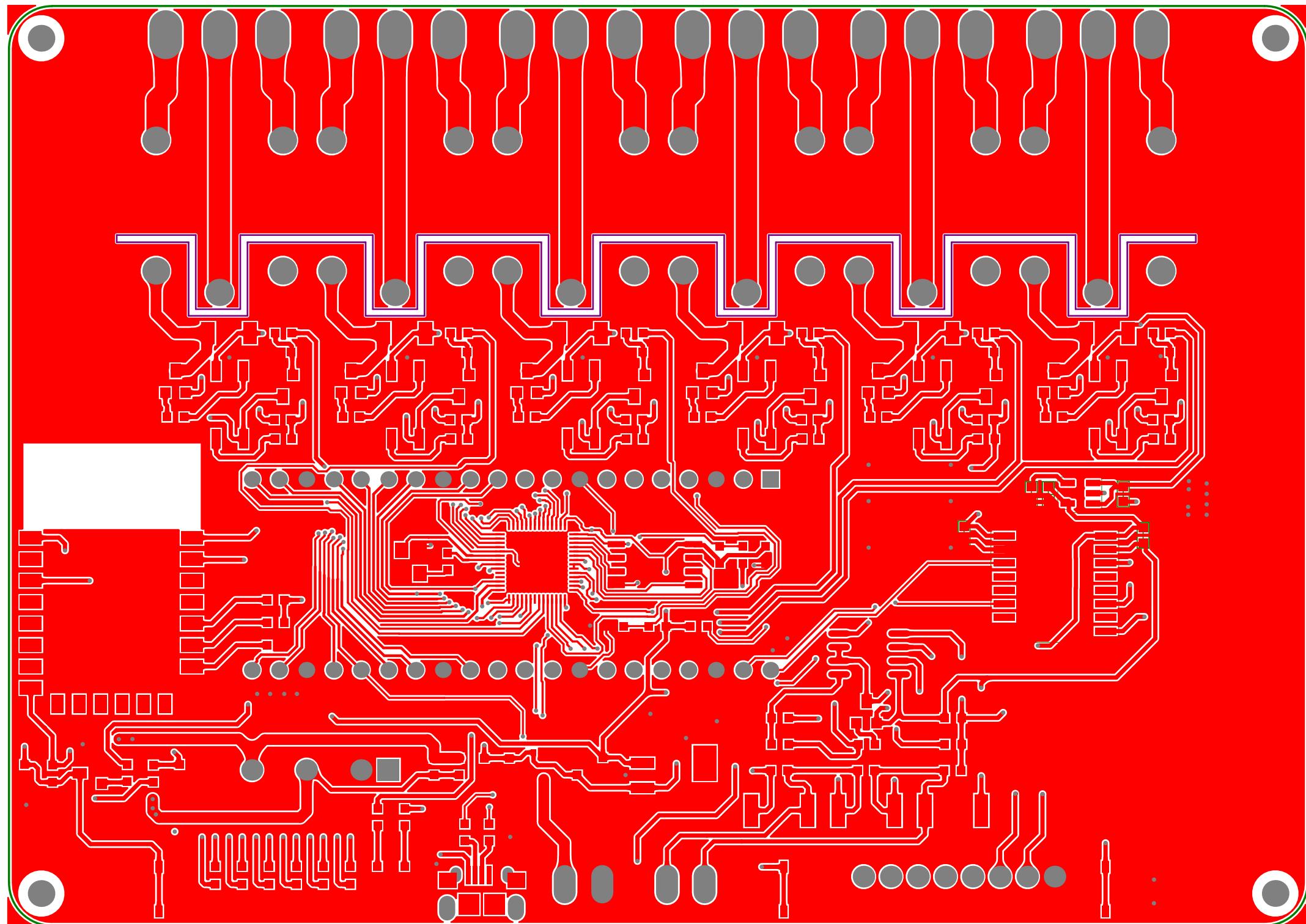
CN10	
GP0	40
GP1	39
GND	38
GP2	37
GP3	36
3V3_EN	3V3(OUT)
GP4	35
GP5	34
GND	33
GP6	32
GND/AGND	
GP7	31
GP8	30
GP9	29
GND	28
GP10	27
GP11	26
GP12	25
GP13	24
GND	23
GP14	22
GP15	21
CON_PICO	
GP0/SPI0_RX/I2C0_SDA/UART0_TX	GP1/SPI0_CSn/I2C0_SCL/UART0_RX
GP2/SPI0_SCK/I2C1_SDA	GP3/SPI0_TX/I2C1_SCL
GP4/SPI0_RX/I2C0_SDA/UART1_TX	GP5/SPI0_CSn/I2C0_SCL/UART1_RX
GP6/SPI0_CSCK/I2C1_SDA	GP7/SPI0_TX/I2C1_SCL
GP8/SPI1_RX/I2C0_SDA/UART1_TX	GP9/SPI1_CSn/I2C0_SCL/UART1_RX
GP10/SPI1_SCK/I2C1_SDA	GP11/SPI1_TX/I2C1_SCL
GP20/I2C0_SDA	GP12/SPI1_RX/I2C0_SDA/UART0_RX
GP19/SPI0_RX/I2C1_SCL	GP13/SPI1_CSn/I2C0_SCL/UART0_RX
GP18/SPI0_SCK/I2C1_SDA	GP14/SPI1_SCK/I2C1_SDA
GND	GP15/SPI1_TX/I2C1_SCL
GP17/SPI0_CSn/I2C0_SCL/UART0_RX	
GP16/SPI0_RX/I2C0_SDA/UART0_TX	

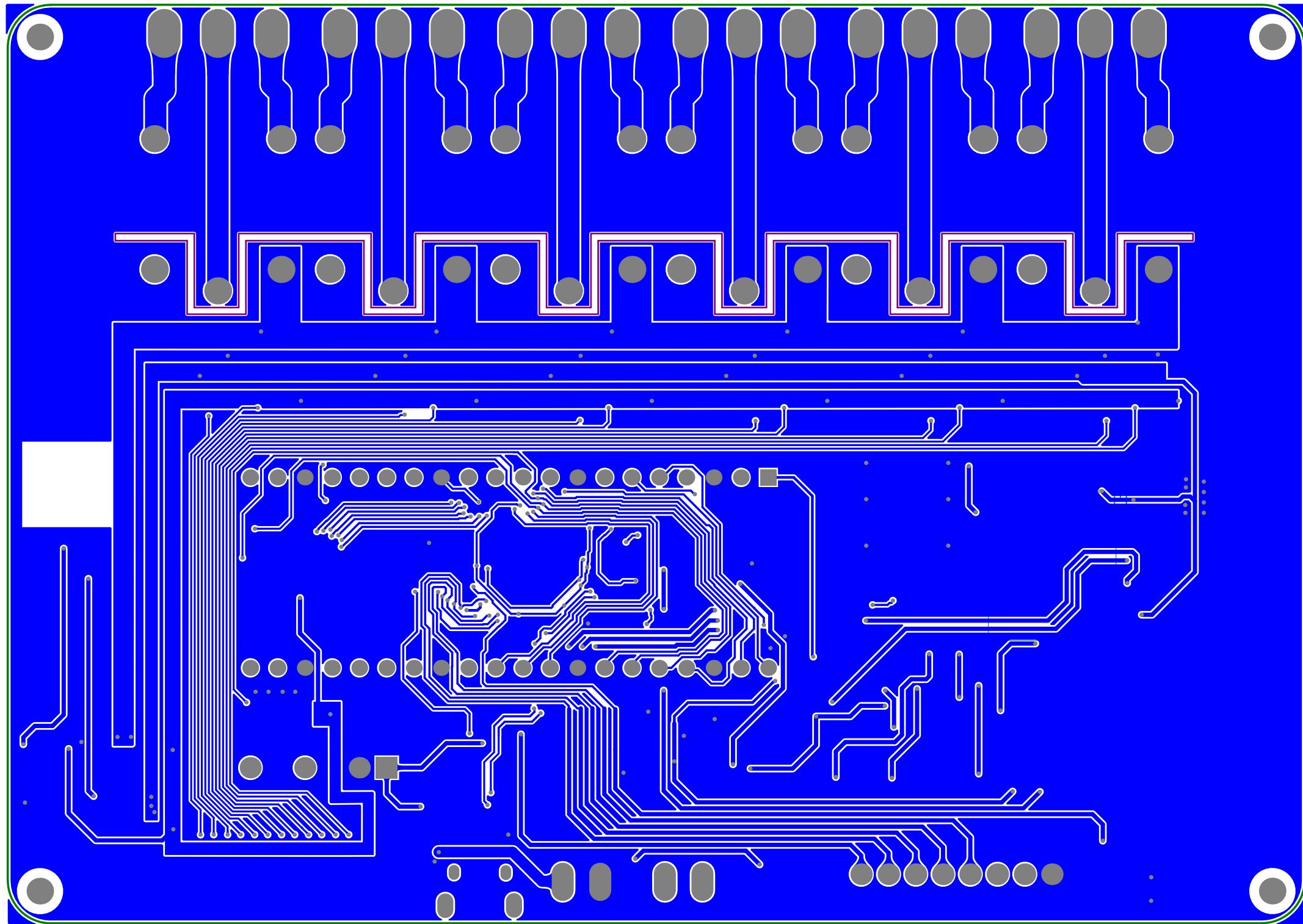
## RASPBERRY PI PICO INTERFACE

### IoT-Pi 6 Channel

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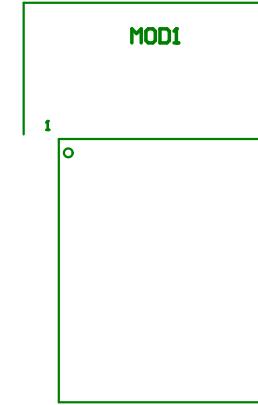
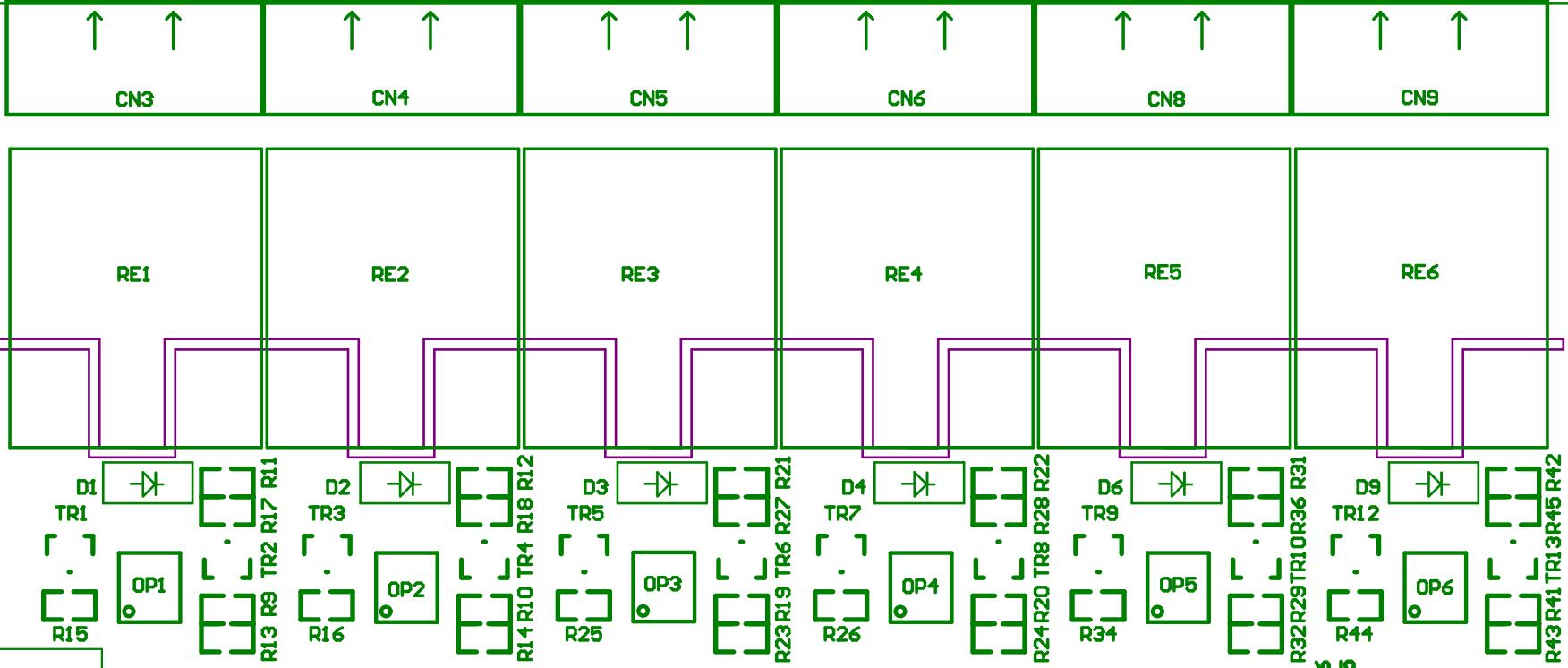
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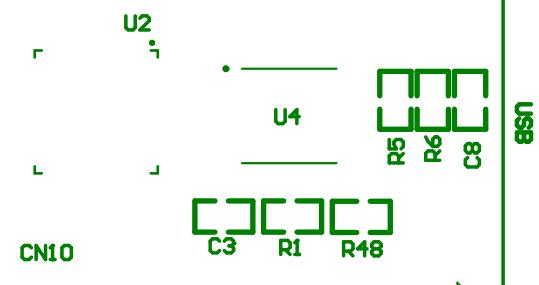


# IoT-Pi Industrial IoT Board Based on RP2040

IoT Enabled



**RP2040**

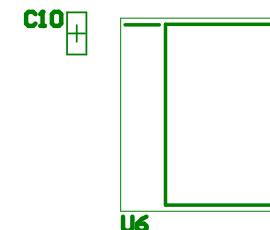


CN10



C3 R1 R48

U5



WIFI RST

EHS

RL1 L3 L4 L5 L6 L7 L8 ST. PWR

RL2 RL3 RL4 RL5 RL6 RL7 RL8

R8 R7 R3 R2

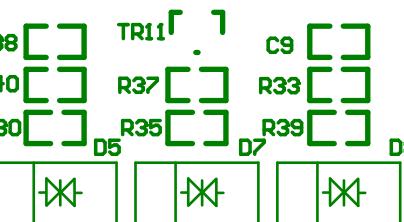
Q1 C1 C2 C3 C4 C5 C6 C7

U1

USB1 + -

CN1

CN7



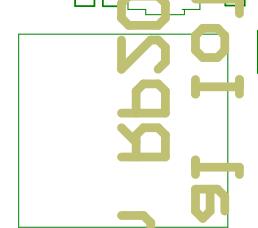
BOOT SW1

CN2

P12 P18 P19 P20 P21 5V0 3V3 GND ADDITIONAL GPIOs

RESET SW2

On Board On Base In Stock In Bulk  
Order Online Order Online Order Online  
Order Online Order Online Order Online

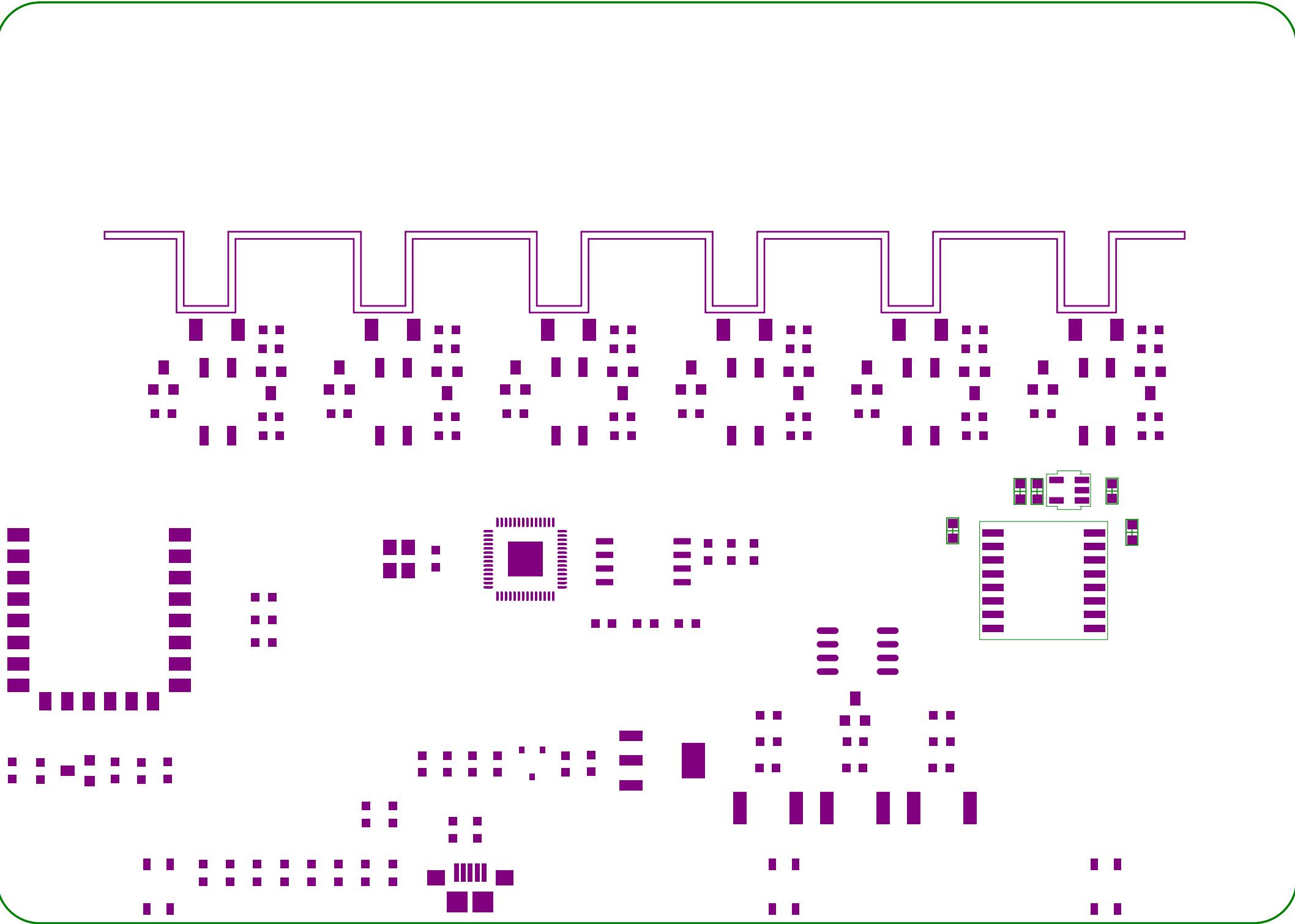


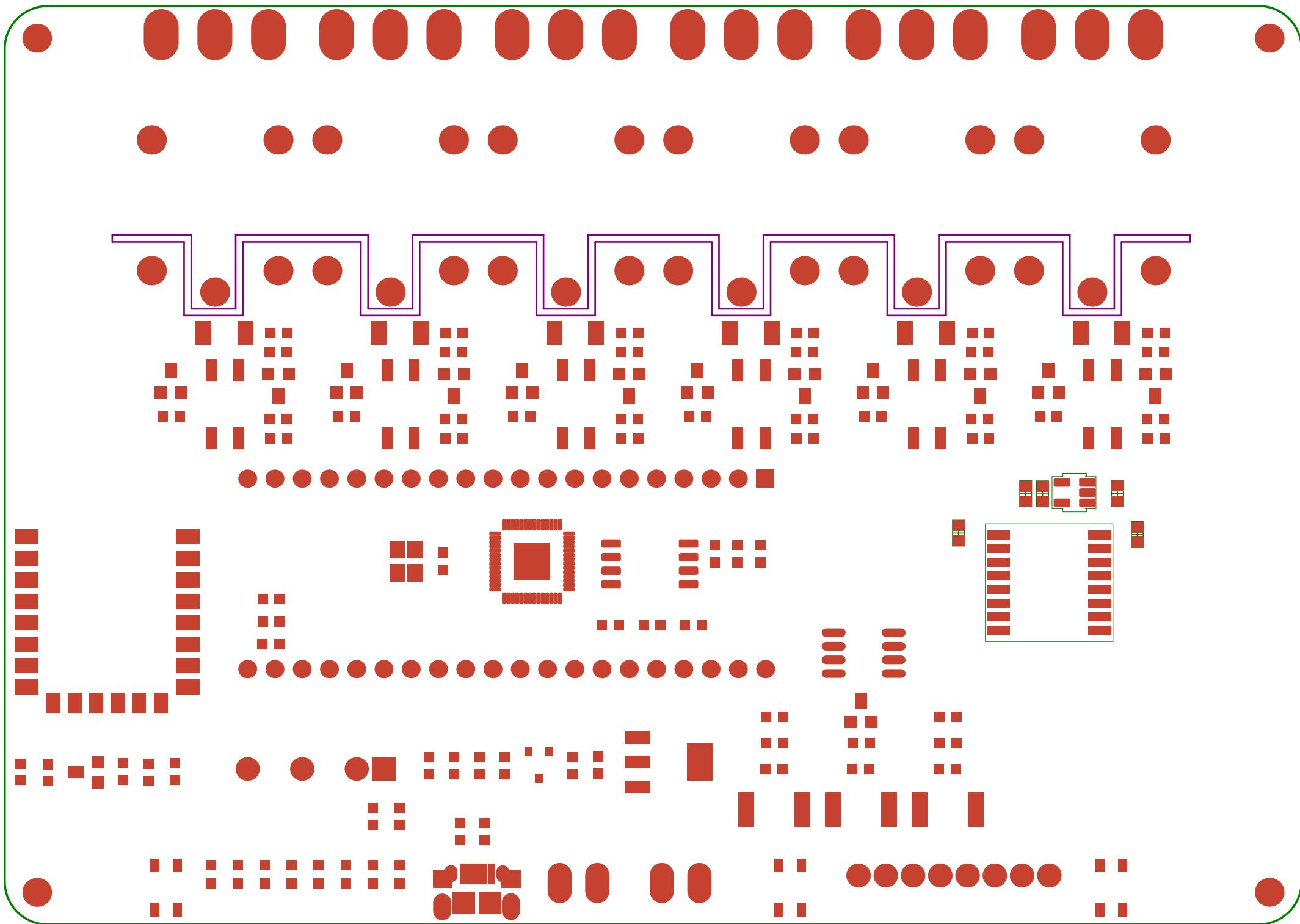
**SD Components**  
We Make Things Intelligible

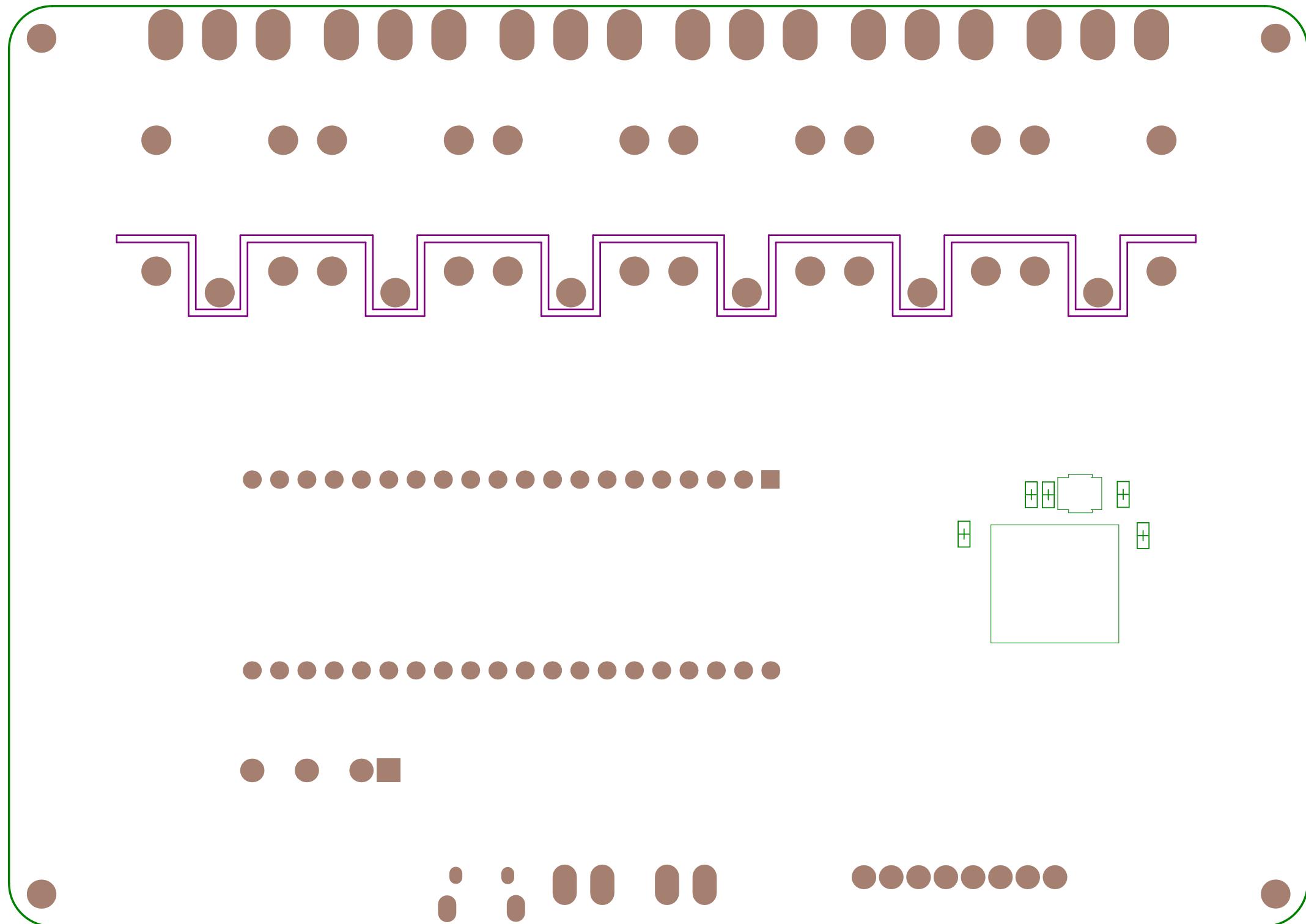
[shop.sdp-components.co.uk](http://shop.sdp-components.co.uk)

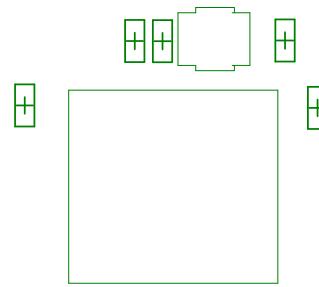


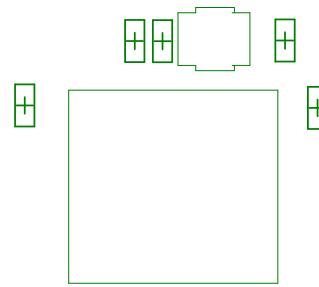
4CH\RS485\MIFI\RPZ040\AC-DC

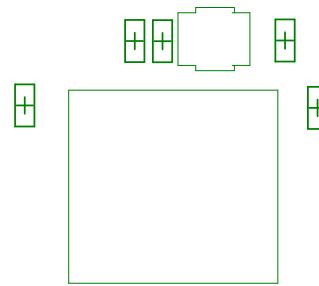


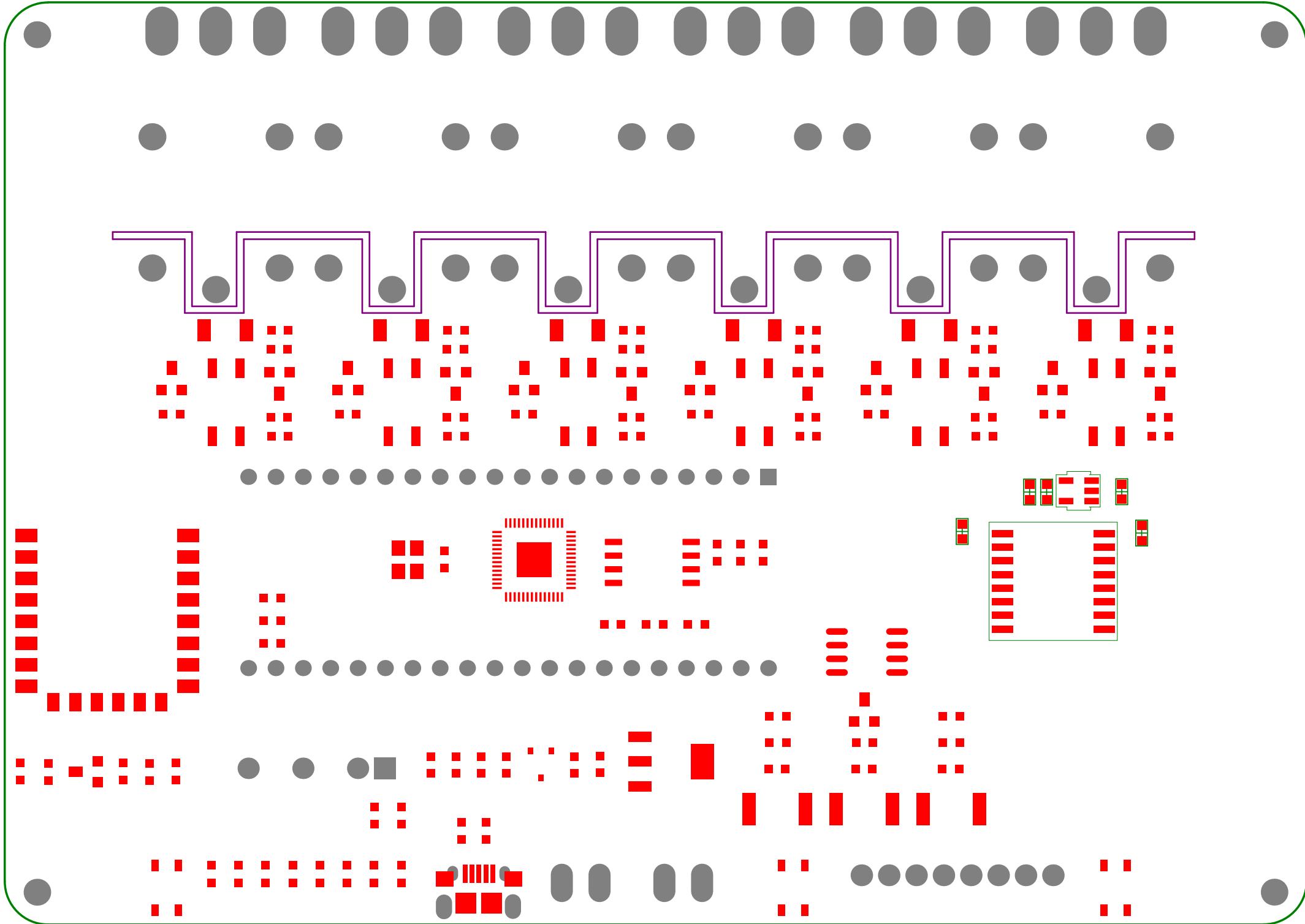


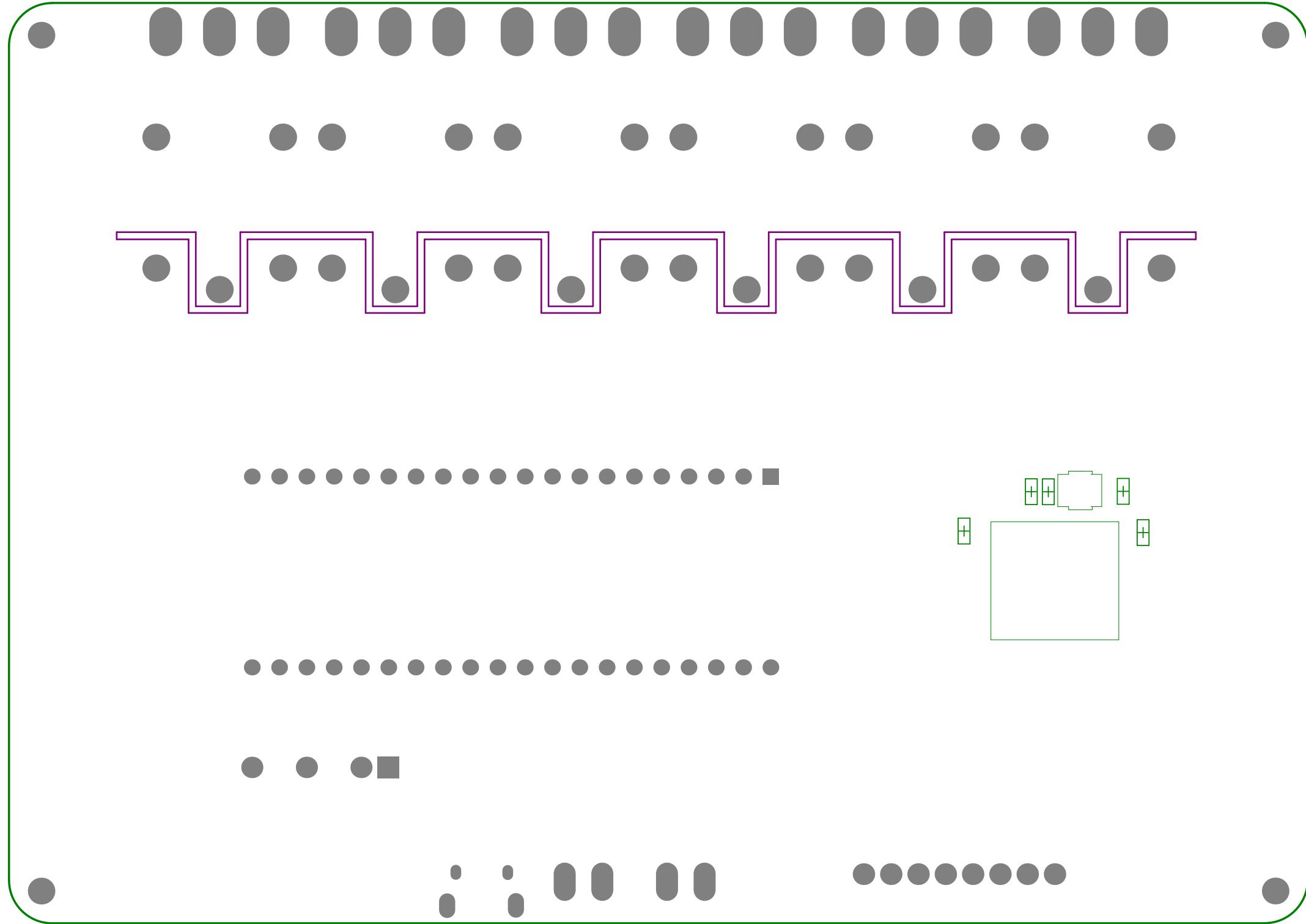


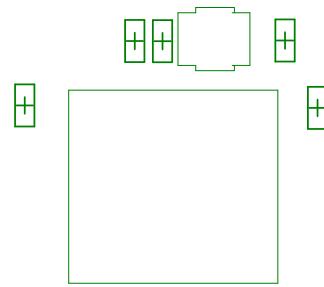


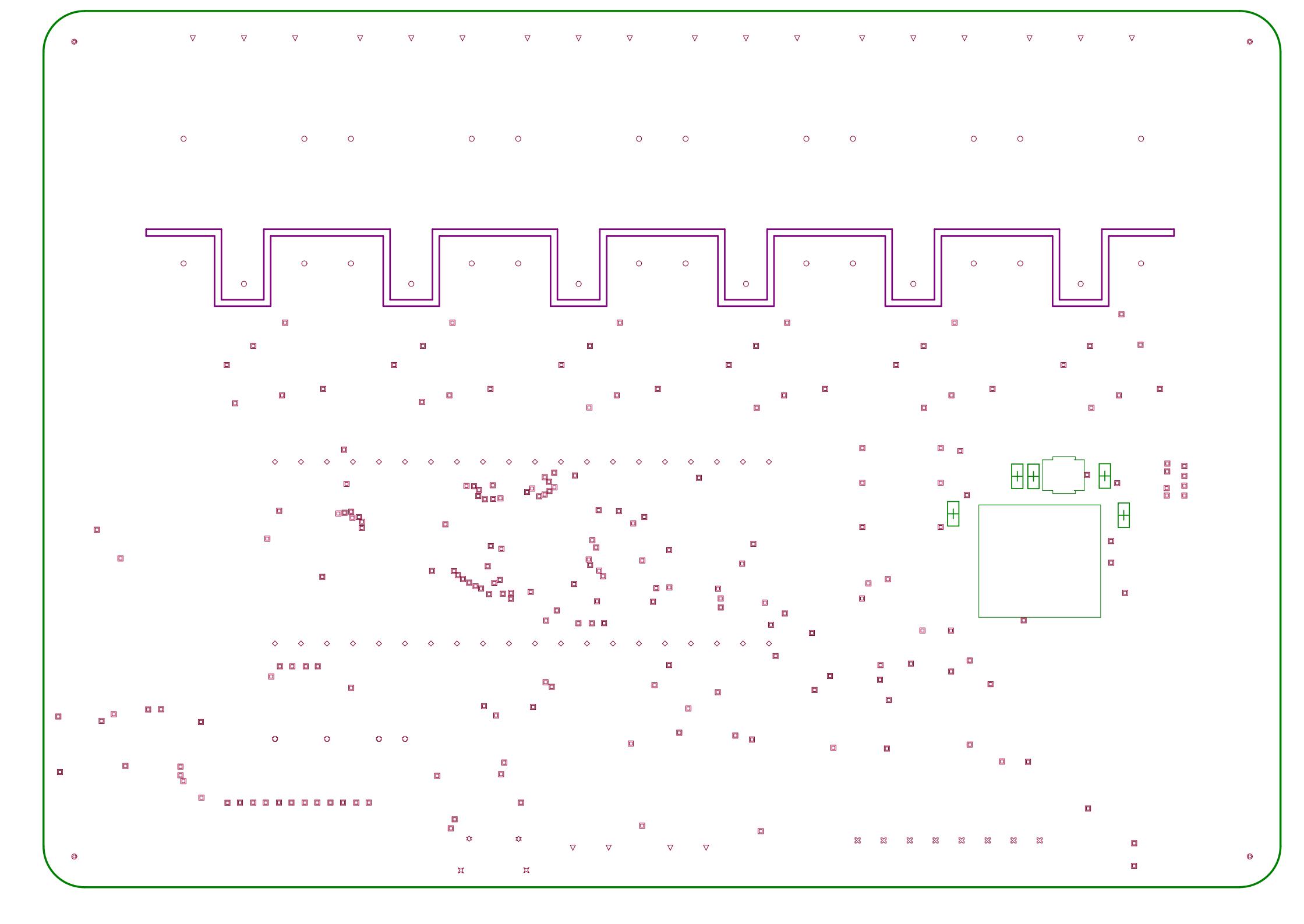


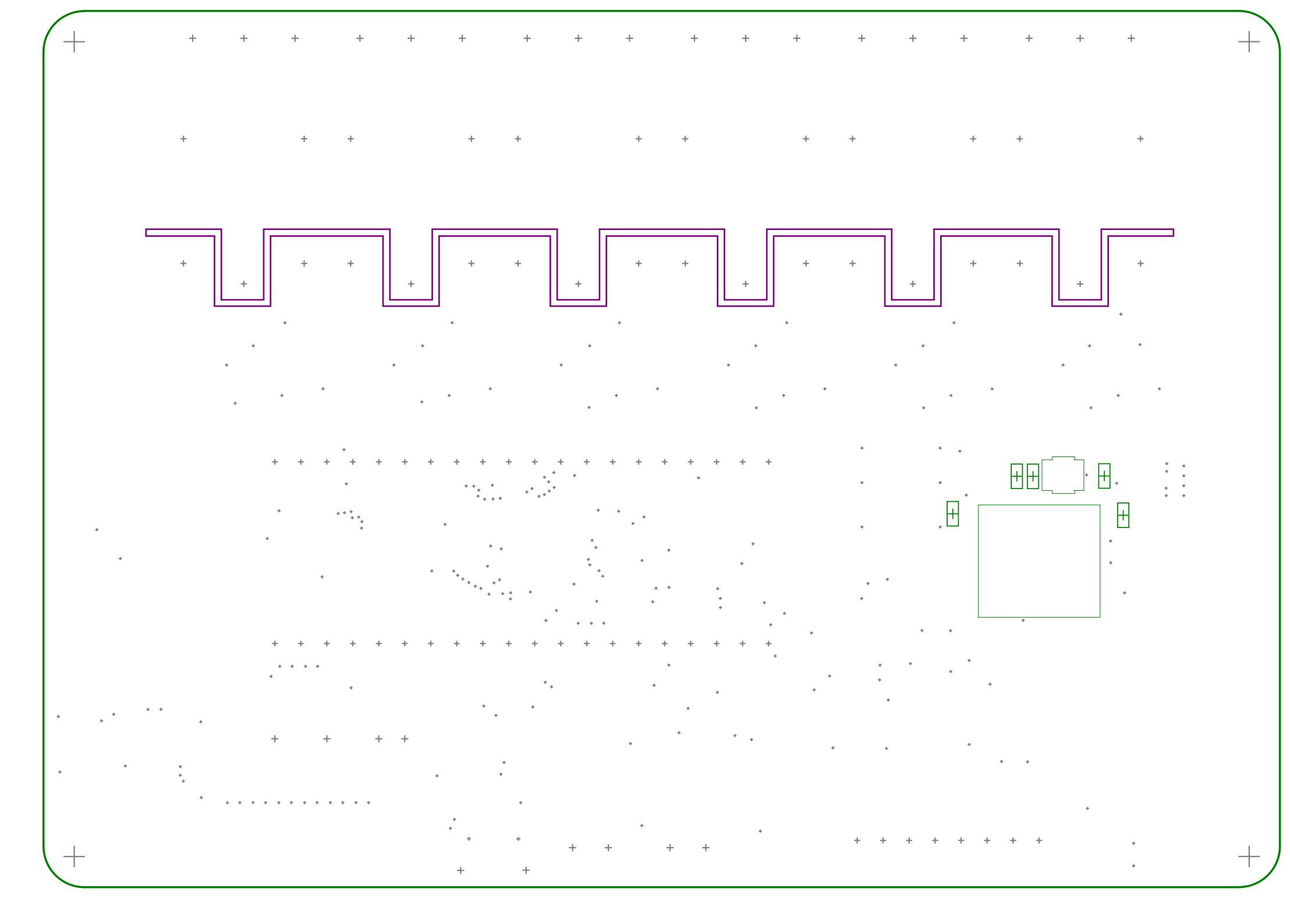












Comment	Description	Designator	Footprint	LibRef	Quantity
0.1uF		C1, C2, C5, C7, C8, C9, C12	CAP_0603_NONPOLAR	CAP_NONPOLAR	7
2.2uF		C3	CAP_0603_NONPOLAR	CAP_NONPOLAR	1
10uF		C4, C6	CAP_0603_NONPOLAR	CAP_NONPOLAR	2
0.1uF		C10, C11, C14, C15	1608[0603]	CAP_NONPOLAR	4
470pF		C13	CAP_0603_NONPOLAR	CAP_NONPOLAR	1
22nF		C16	1608[0603]	CAP_NONPOLAR	1
CON2		CN1, CN7	CON2_3.5	CON2	2
CON8		CN2	con8_bj	CON8	1
CON3		CN3, CN4, CN5, CN6, CN8, CN9	CON3_5.0_R2	CON3	6
CON_PICO		CN10	CON40_PICO_TOP	CON40_PICO	1
U14148		D1, D2, D3, D4, D6, D9	MINI_MELE_SOD80	DIODE	6
SMAJ12CA	Bidirectional 12V 13.3V 19.9V 20.1A SMA(DO-214AC) TVS RoHS	D5, D7, D8	SMO_DO-214AC	TVS DIODE	3
LED		L1, L2, L3, L4, L5, L6, L7, L8	LED_0603_neg	LED	8
ESP8266-12E	WiFi module, 32-bit MCU micro, 80 MHz or 160 MHz, Supports the RTOS and integrated Wi-Fi MAC/BB/RF/PA/LNA, on-board antenna.	MOD1	ESP8266-12E/ESP-12E	ESP8266-12E	1
OPTO_817		OP1, OP2, OP3, OP4, OP5, OP6	OPTO_817_SMD	OPTO_817	6
A03401	P-Channel MosFet 30V 4A (Ta) 1.4W (Ta) Surface Mount SOT-23-3L	Q1	SOT23-3	A03401	1
BC817		Q2, TR1, TR2, TR3, TR4, TR5, TR6, TR7, TR8, TR9, TR10, TR11, TR12, TR13	547_SOT23	TRANSISTER_NPN	14
1K		R1, R4, R6, R7, R8, R13, R14, R15, R16, R23, R24, R25, R26, R32, R34, R43, R44, R52	0603	RES	18
24E		R2, R3	0603	RES	2
10K		R5	0603	RES	1
4.7K		R9, R10, R11, R12, R19, R20, R21, R22, R29, R30, R31, R33, R35, R37, R39, R41, R42	0603	RES	17
100K		R17, R18, R27, R28, R36, R45	0603	RES	6
DR		R38	0603	RES	1
NC		R40	0603	RES	1
12K		R46, R47, R49, R50, R51	0603	RES	5
DE		R48	0603	RES	1
RELAY_SDPT		RE1, RE2, RE3, RE4, RE5, RE6	RELAY_SDPT	RELAY_SDPT	6
TACTILE_SWITCH		SW1, SW2, SW3	SKRPACE010	TACTILE_SWITCH	3
AMS1117		U1	SOT-223	AMS1117	1
RP2040	A MICROCONTROLLER BY RPI	U2	QFN-56	RP2040	1
B0505LS -1W	HENIPER B0505LS-1W 5V 200mA 5.5V 1 Through Hole Power Modules ROHS #C234075	U3	B0505LS-1W	B0505LS -1W	1
W25Q64JVSSIQ	FLASH - NOR Memory IC SPI - Quad I/O, QPI 104MHz 8-SOIC	U4	SOIC-8N	W25Q128FV	1
SP3485EN	SP3485EN - +3.3V low power half-duplex transceivers SOIC8 PACKAGE	U5	SO_8_N	SP3485EN	1
SSP5841		U6	SOIC127P1030X265-16N	SSP5841	1
R19193-33GU5		U7	SOT65P212X110-5N	R19193-33GU5	1
USB	Micro USB Connector SMD – TH Support Legs – 5 Pin – Type B	USB1	USB_MICRO	USB_MICRO	1
12MHz	12MHz ±10ppm 12pf 800 SMD-3225_4P Crystals RoHS #C70565	X1	CRYSTAL OSC SMD	CRYSTAL_OSCILATOR	1