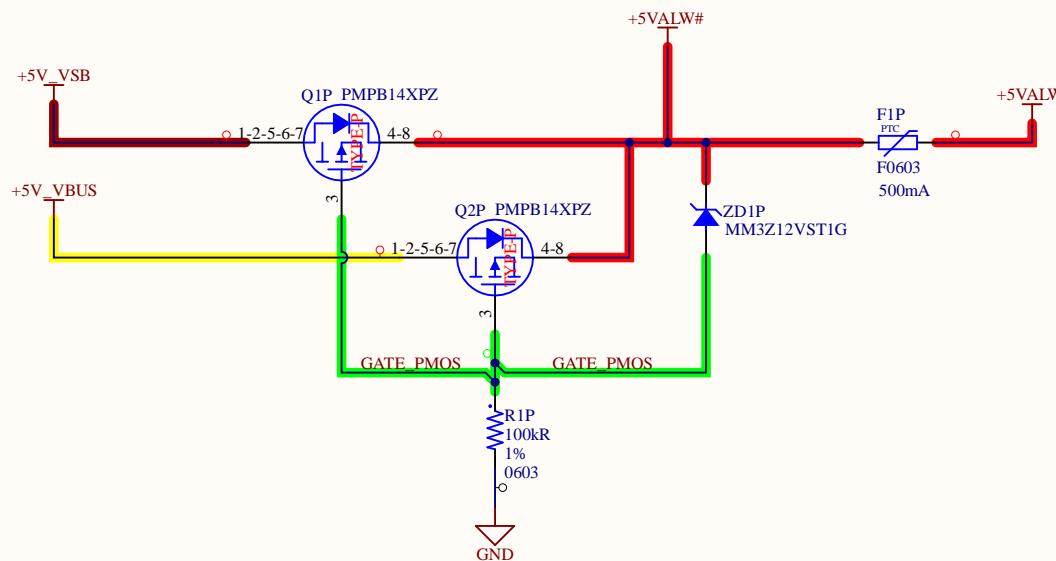


A



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A

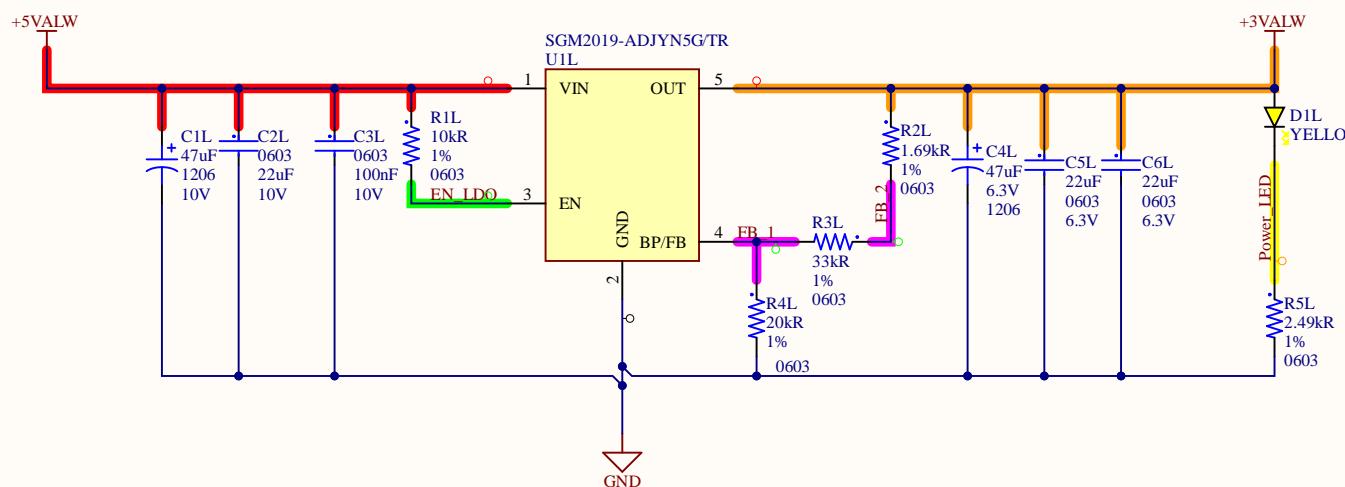
B

C

D

Title: Power_Path		Author: Alcatraz	DHNLAB PVT LTD
Approved: Alcatraz		Edited: PUBLIC	DHANBAD
Size: A4	Prj: ESP8266-Deskop_Power	Variant: [No Variations]	JHARKHAND
Date: 26-12-2024 18:39:55	Sheet 1 of 10	SW Version: 25.1.2.22	INDIA
Git Hash: 12	ASIA		
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Deskop_Power\1_Power_Path.SchDoc			

A



SGM2019-ADJYN5G/TR
Vout = 3.3V
Register Values For R0L, R1L and R2L
R1L=R0B+R1L

Values From Datasheet

Vout (V)	R1 (kΩ)	R2 (kΩ)
1.2	0	63.4
1.5	10.5	42.2
1.8	34	63.4
2.8	84.5	63.4
3.0	63.4	42.2
3.3	73.2	42.2
3.6	84.5	42.2
4.2	105	42.2

NOTE: $V_{out} = (R_1 + R_2) / R_2 \times 1.207$

Here are the calculated values of R1L (in kΩ) for VOUT= 3.3 V with different R2L values:
IF R0L= 0Ω
R2L=10kΩ:R1L≈17.34kΩ
R2L=20kΩ:R1L≈34.68kΩ
R2L=30kΩ:R1L≈52.02kΩ
R2L=40kΩ:R1L≈69.36kΩ
R2L=50kΩ:R1L≈86.70kΩ
R2L=60kΩ:R1L≈104.04kΩ
R2L=70kΩ:R1L≈121.38kΩ
R2L=80kΩ:R1L≈138.72kΩ
R2L=90kΩ:R1L≈156.06kΩ
R2L=100kΩ:R1L≈173.41kΩ

Title: LDO	Author: Alcatraz	DHNLAB PVT LTD
Approved: Alcatraz		DHANBAD
Size: A4	Prj: ESP8266-Desktop_Power	JHARKHAND
Date: 26-12-2024 18:39:55	Edited: 06-12-2024	INDIA
Git Hash: 12	Variant: [No Variations]	ASIA
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\2_LDO.SchDoc	SW Version: 25.1.2.22	



PIN NAMES

GPIO16(D0)
GPIO5(D1)=I2C=SCL=_N
GPIO4(D2)=I2C=SDA=_P
GPIO0(D3)
GPIO2(D4)
GPIO14(D5)
GPIO12(D6)
GPIO13(D7)
GPIO15(D8)
GPIO3(RX)= UART0
GPIO1(TX)= UART0
GPIO9(SD2)
GPIO10(SD3)

PIN IS HIGH ON BOOT

D0 = GPIO16
D2 = GPIO4
RX = GPIO3
TX = GPIO1
SD2 = GPIO9
SD3 = GPIO10

BOOT FAILURE IF PULLED LOW

D3 = GPIO0
D2 = GPIO4
TX = GPIO1

BOOT FAILURE IF PULLED HIGH

D8 = GPIO15

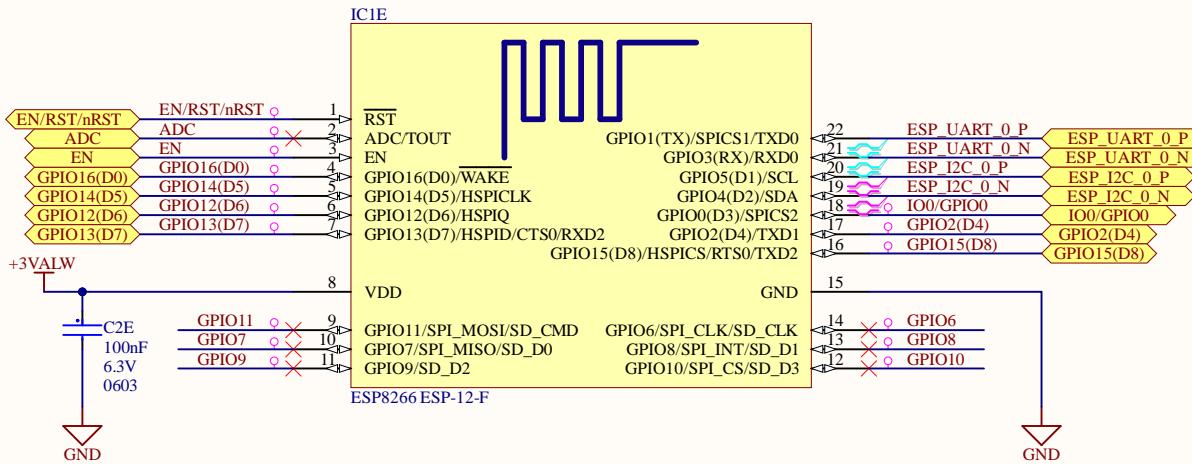
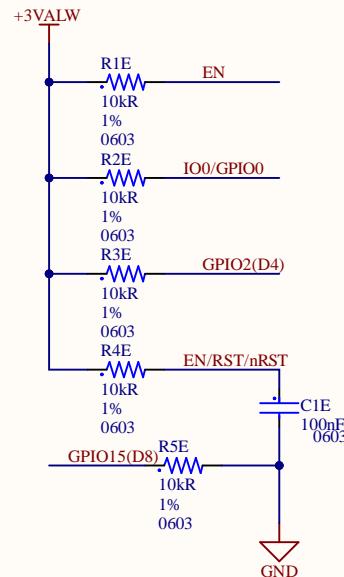
BEST PINS FOR INPUT (BEST TO WORST)

D1 = GPIO5
D2 = GPIO4
D5 = GPIO14
D6 = GPIO12
D7 = GPIO13
*HIGH ON BOOT
D0 = GPIO16
SD2 = GPIO9
SD3 = GPIO10

BEST PINS FOR OUTPUT (BEST TO WORST)

D1 = GPIO5
D2 = GPIO4
D5 = GPIO14
D6 = GPIO12
D7 = GPIO13
*BOOT FAILURE IF PULLED HIGH
D8 = GPIO15

BESP Pins For Smart LED(Pixel)
ESP8266_UART0 = GPIO1(TX)
ESP8266_UART1 = GPIO2(D4)
ESP8266_DMA = GPIO3(RX)
ESP8266_ASYNC_UART0 = GPIO1(TX)
ESP8266_ASYNC_UART1 = GPIO2(D4)
ESP8266_SPI_DATA = GPIO13(D7)
ESP8266_SPI_CLOCK = GPIO14(D5)



D

Title: ESP8266_Core	Author: Alcatraz	DHNLAB PVT LTD
Approved: Alcatraz		DHANBAD
Size: A4	Prj: ESP8266-Desktop_Power	JHARKHAND
Date: 26-12-2024 18:39:55	Edited: 26-12-2024	INDIA
Git Hash: 28	Variant: [No Variations]	ASIA
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\3_ESP8266_Core.SchDoc	SW Version: 25.1.2.22	



A

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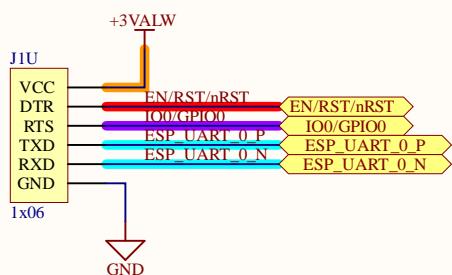
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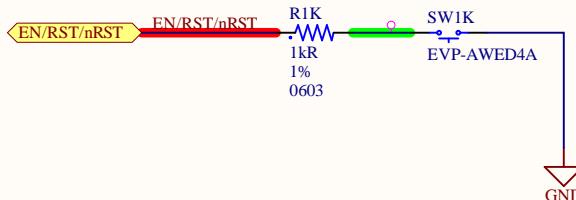
D



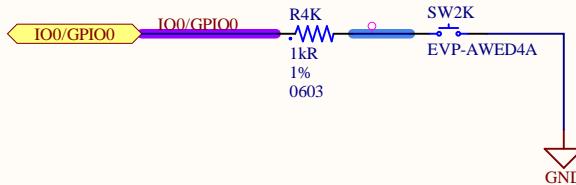
Title: <i>UART</i>		Author: Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Size: A4	Prj: ESP8266-Deskop_Power	Approved: Alcatraz	
		PUBLIC	
Date: 26-12-2024	18:39:55	Edited: 17-12-2024	
Git Hash: 12		Variant: [No Variations]	
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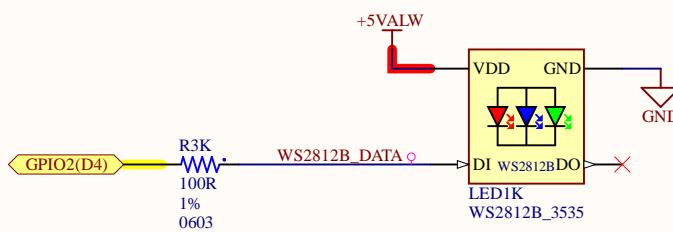
A



B



C



D

Title: KEYS AND STATUS		Author: Alcatraz	DHNLAB PVT LTD
Approved: Alcatraz		Edited: 18-12-2024	DHANBAD JHARKHAND
Size: A4 Prj: ESP8266-Desktop_Power		Variant: [No Variations]	INDIA
Date: 26-12-2024 18:39:55 Sheet 5 of 10		SW Version: 25.1.2.22	ASIA
Git Hash: 12		File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\5_Keys_And_Status.schDoc	



A

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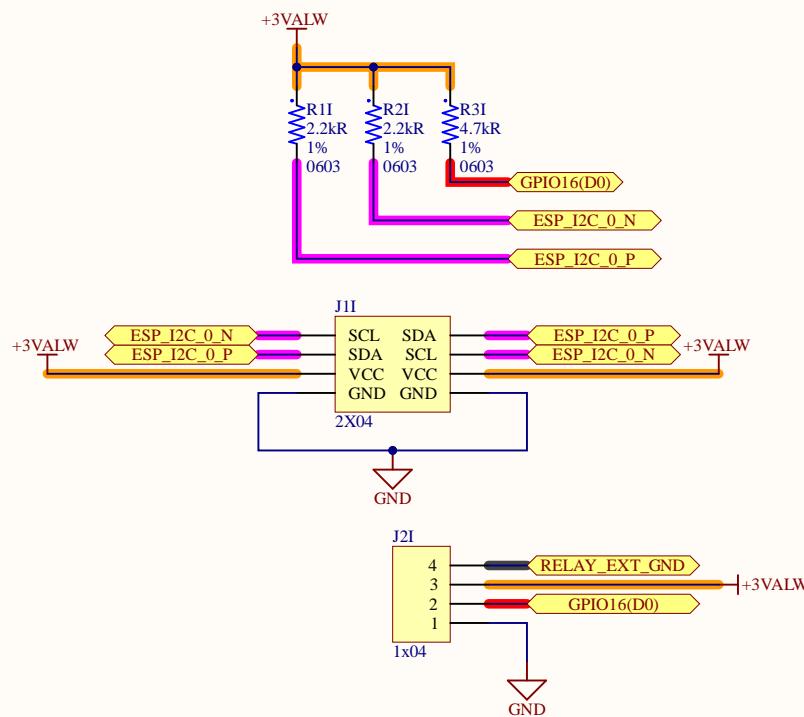
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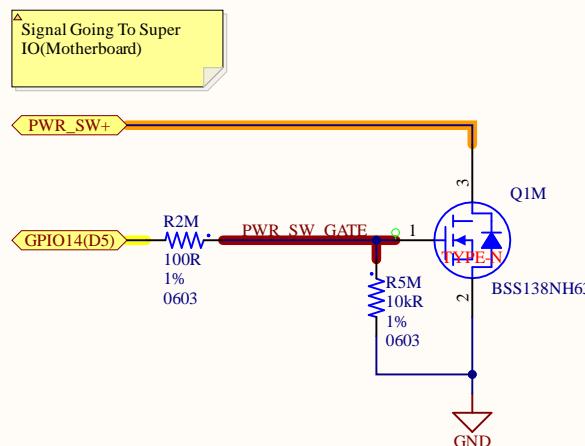
D



Title: I2C_Sensors	Author: Alcatraz	DHNLAB PVT LTD
Approved: Alcatraz	PUBLIC	DHANBAD
Size: A4	Edited: 18-12-2024	JHARKHAND
Prj: ESP8266-Desktop_Power	Variant: [No Variations]	INDIA
Date: 26-12-2024 18:39:55	SW Version: 25.1.2.22	ASIA
Git Hash: 12		
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\6_I2C_Sensors.SchDoc		

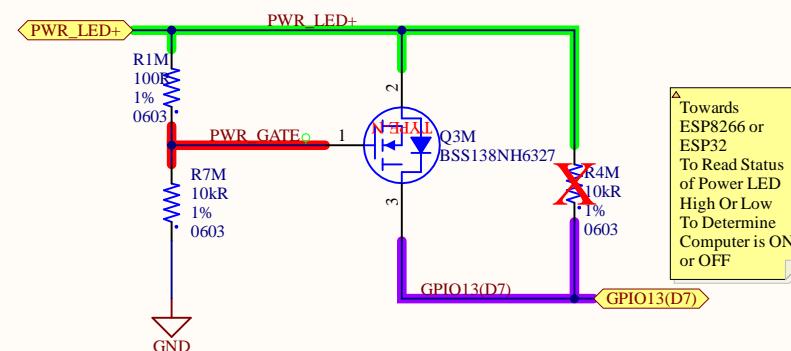


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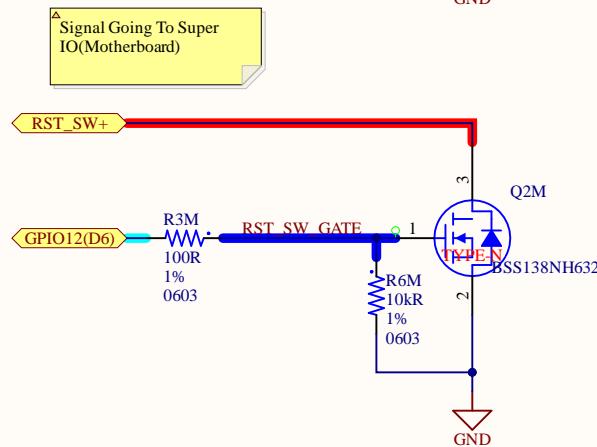


Power LED
High Or Low
V= +3V3, I= 10mA(Max)
Or 20mA Depends on motherboard brand

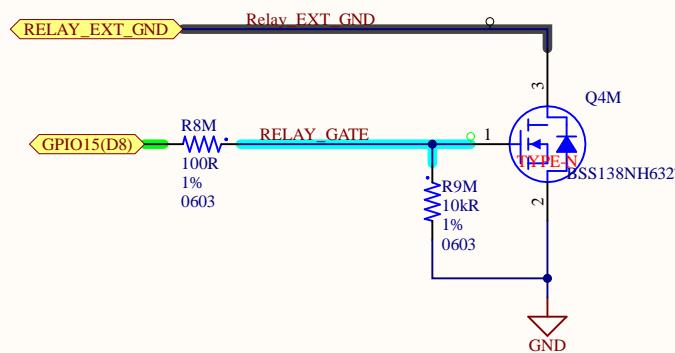
Signal Coming From Super IO(Motherboard)



B



EXTERNAL Relay GND (-VE)



C

D

Title: Mosfets		Author: Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Size: A4 Prj: ESP8266-Desktop_Power		Approved: Alcatraz	
Date: 26-12-2024 18:39:55 Sheet: 7 of 10		Edited: 19-12-2024	
Git Hash: 12		Variant: [No Variations]	
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\7_Mosfets.SchDoc		SW Version: 25.1.2.22	



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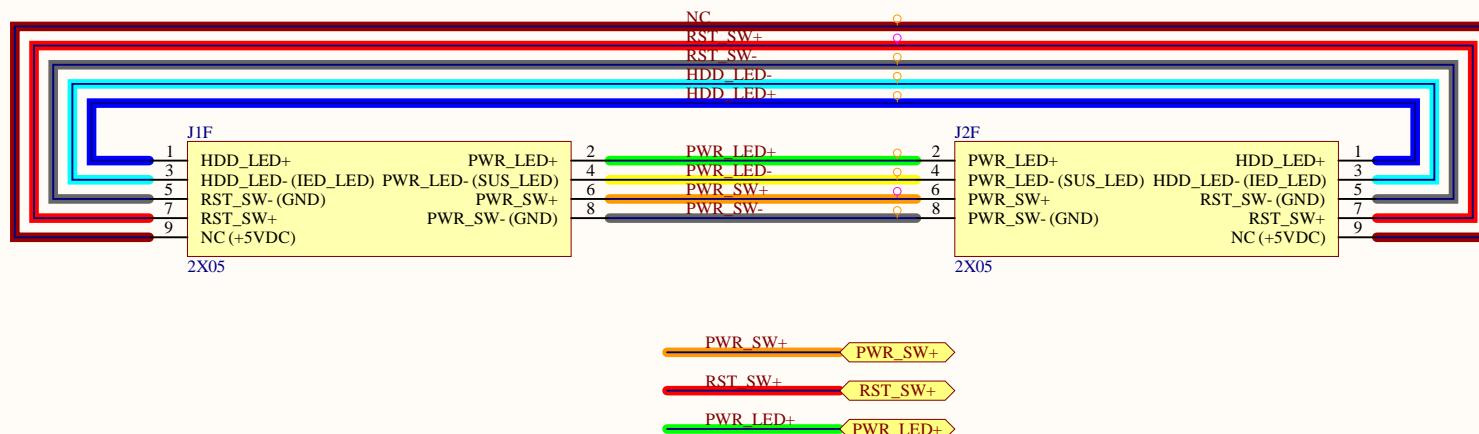
E

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1



Title: <i>Front Pannel Con</i>		Author: Alcatraz	DHNLAB PVT LTD
		Approved: Alcatraz	DHNABAD
size: A4	Prj: ESP8266-Deskop_Power	PUBLIC	JHARKHAND
Date: 26-12-2024	18:39:55	Edited: 17-12-2024	INDIA
Git Hash: 12	Sheet 8 of 10	Variant: [No Variations]	ASIA
		SW Version: 25.1.2.22	
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A

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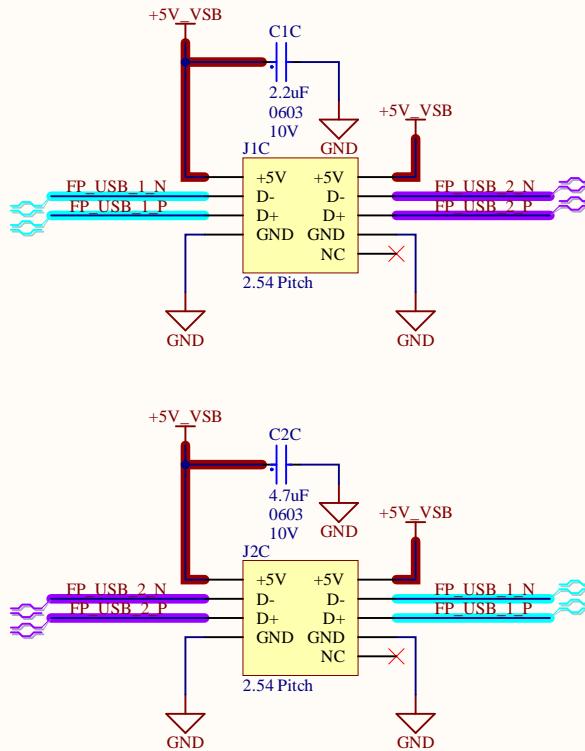
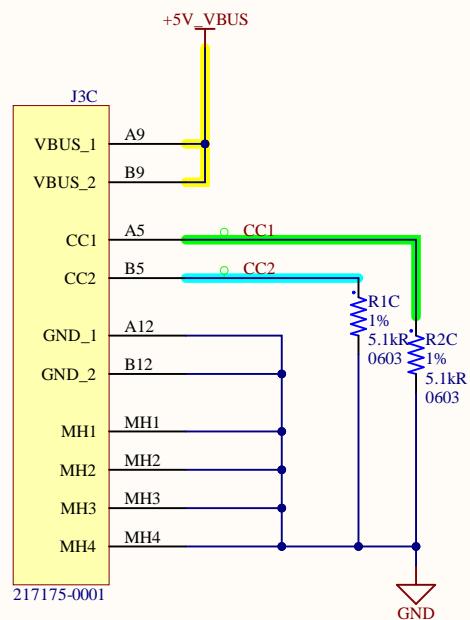
D

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Title: Front Pannel USB Con		Author: Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Size: A4 Prj: ESP8266-Desktop_Power		Approved: Alcatraz	
Date: 26-12-2024 18:39:55 Sheet: 9 of 10		Edited: 17-12-2024	
Git Hash: 12		Variant: [No Variations]	
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A

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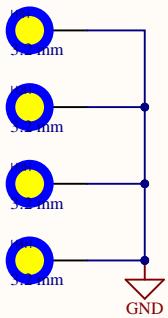
B

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D



Title: MountingHoles		Author: Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Size: A4 Prj: ESP8266-Desktop_Power		Approved: Alcatraz	
Date: 26-12-2024 18:39:55		Edited: 23-11-2024	
Git Hash: 12		Variant: [No Variations]	
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\10_MountingHoles.SchDoc		SW Version: 25.1.2.22	



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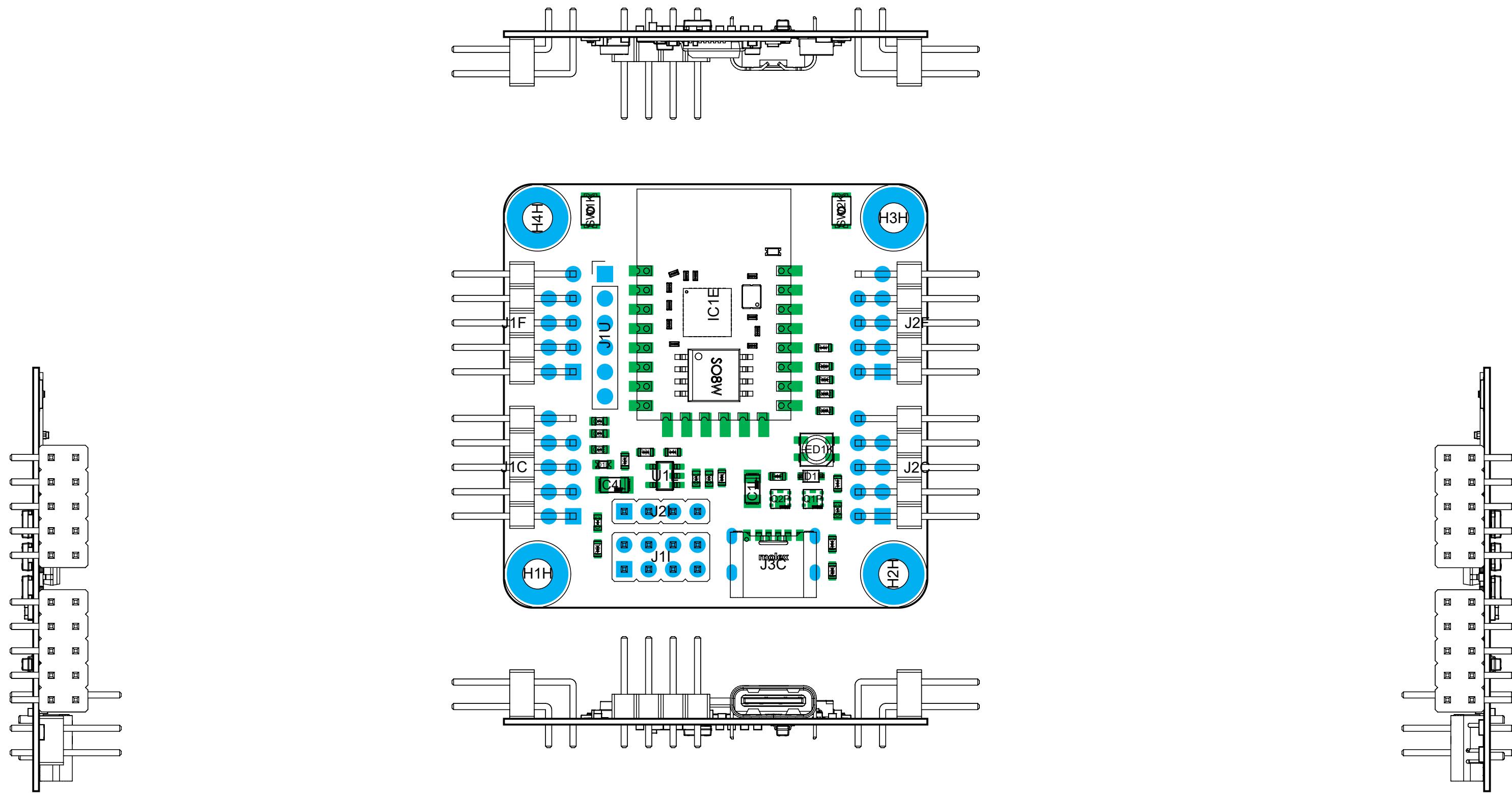
B

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Note:

- (1) Text element with square border.
- (2) Text element with no border
- (3) Text element with circle border

THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF
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AS A WHOLE WITHOUT THE
WRITTEN PERMISSION OF IS
PROPRIETARY AND CONFIDENTIAL

		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES	NAME	DATE	TITLE
		TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	DRAWN	26-12-2024	
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		COMMENTS:
			MATERIAL		
			FINISH		
NEXT ASSY	USED ON	APPLICATION	DO NOT SCALE DRAWING	SCALE: 1:1	SIZE DWG NO.
				WEIGHT:	SHEET 1 OF 1

PCB MANUFACTURING SPECIFICATIONS

"=ProjectTitle"

SPECIFICATIONS

NOTE #	NOTE
1	ALL SPECIFICATIONS REFERENCED ARE OF THE REVISION SPECIFIED IN THE TITLE BLOCK
2	SUPPLIER SHALL NOT MODIFY THE DESIGN OR APPROVED STACK-UP WITHOUT WRITTEN PERMISSION
3	ALL MATERIALS SHALL BE RoHS COMPLIANT AND FINAL PRODUCT SHALL BE ACCEPTABLE TO USE IN RoHS ASSEMBLY. RoHS LOGO SHALL BE MARKED IN SILKSCREEN INK BY THE SUPPLIER WHERE INDICATED BY THE TEXT "PLACE MARKINGS HERE"
4	COPPER FOIL: REFER TO LAYER STACK LEGEND FOR Cu THICKNESS DETAILS. ALL Cu THICKNESSES ARE FINISHED AND INCLUDE BASE FOIL PLUS Cu PLATING ON PLATED LAYERS
5	ELECTRICAL TEST: ALL PRINTED CIRCUITS SHALL BE 100% ELECTRICALLY TESTED FOR OPENS/SHORTS USING PROVIDED NETLIST. REJECTED PRINTED BOARDS MUST BE CLEARLY MARKED WITH NON-CONDUCTIVE, PERMANENT INK.
6	MARKINGS: VENDOR MARKING AND DATE/LOT CODES SHALL BE LOCATED ON THE BOARD IN THE RESERVED AREA AS SPECIFIED IN THE GERBER LAYER "PCBM_NOTES" BY THE TEXT "PLACE MARKINGS HERE".
7	MARKINGS: THE SIDE ONTO WHICH PLACE THE MARKINGS IS AT THE SUPPLIER DISCRETION UNLESS OTHERWISE NOTED ONTO THE LAYER "PCBM_NOTES"
8	SUPPLIER SHALL CHECK PCBM_NOTES LAYER BEFORE ASKING FOR CLARIFICATIONS
9	MANUFACTURE TENTED/PLUGGED VIAS AS SPECIFIED IN THE GERBER FILES

SPECIFICATIONS

LENGTH	44.00mm
WIDTH	44.00mm
LAYERS	2
MATERIAL	FR-4
MATERIAL MIN TG	130-140
TRACK WIDTH/CLEARANCE	10 mils / 10 mils
THICKNESS	0.6mm
COPPER THICKNESS	35um (1oz)
SOLDERMASK	YES, TOP AND BOTTOM
SOLDERMASK COLOR	GREEN
SILKSCREEN	YES, TOP AND BOTTOM
SILKSCREEN COLOR	WHITE
SURFACE FINISH	HASL LEAD FREE
GOLD FINGERS	NO
CHAMFERING	YES
IMPEDANCE CONTROL	YES
HALF-CUT/CASTELLATED HOLES	NO
BURIED/BLIND VIAS	NO
VIAS FILLED WITH RESIN	NO
CARBON MASK	NO
COUNTERSINKS/COUNTERBORES	NO
Z-AXIS MILLING	NO
PEELABLE SOLDERMASK	NO

Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
	Surface Material	0.02mm	Solder Resist	Solder Mask	GTS
Copper	Top Layer	0.04mm		Signal	GTL
	Core	0.50mm	FR-4	Dielectric	
Copper	Bottom Layer	0.04mm		Signal	GBL
	Surface Material	0.02mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 0.60mm

NON-COPPER LAYER THICKNESS FOR REFERENCE ONLY
LAYERS OF TYPE "INTERNAL PLANE" ARE NEGATIVE

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Size: A3	Approved:	My Company
Unit: mm	Edited: 26-12-2024	Address Line 1
Prj: =ProjectTitle	Variant: [No Variations]	Address Line 2
Date: 26-12-2024 06:39	FMSheet 1 of 3	Address Line 3
Git Hash: 27 [No modification]	SW version: 25.1.2.22	Address Line 4
File:C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\PCB_MANUFACTURING_E		

[YOUR LOGO HERE]

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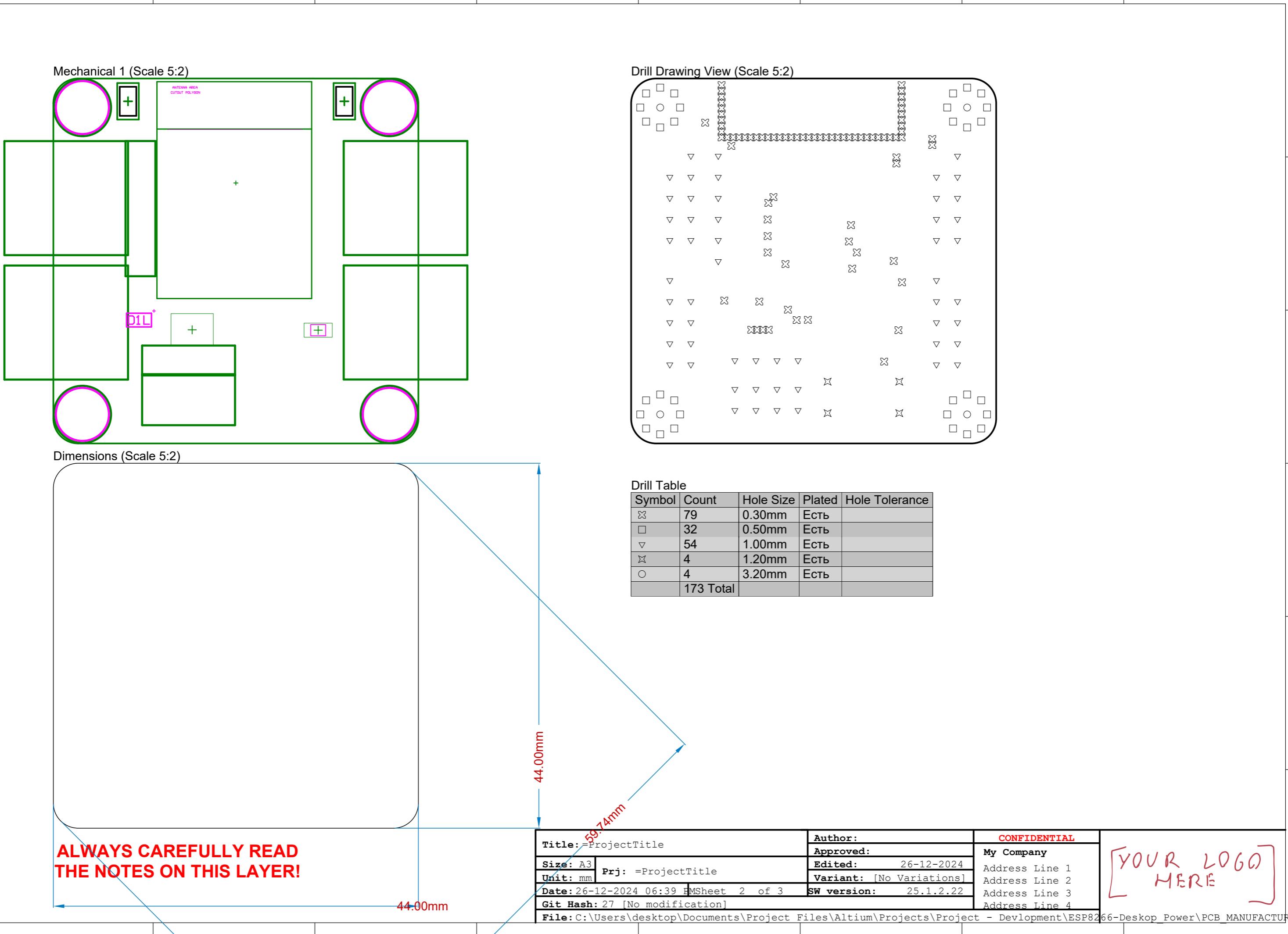
D

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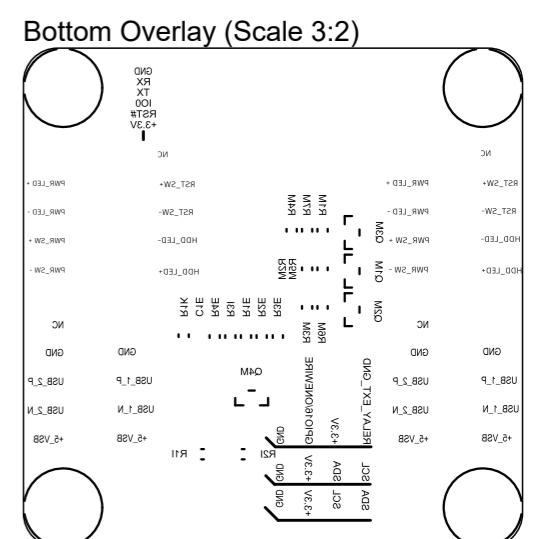
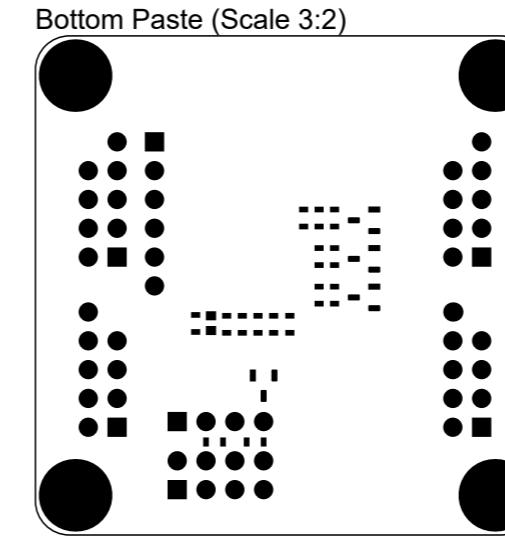
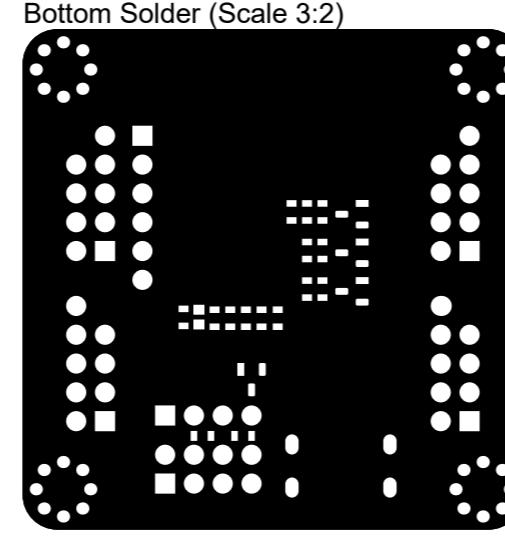
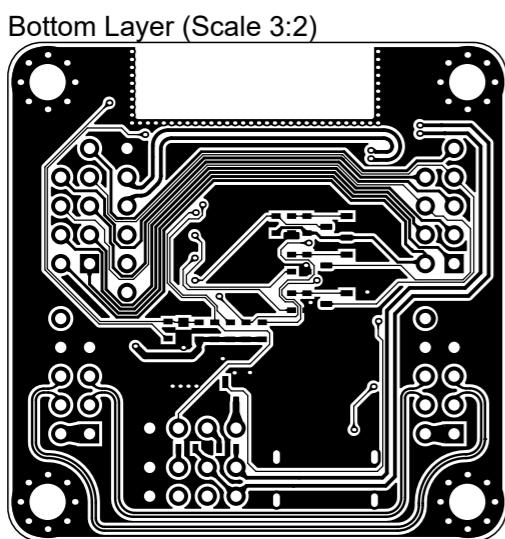
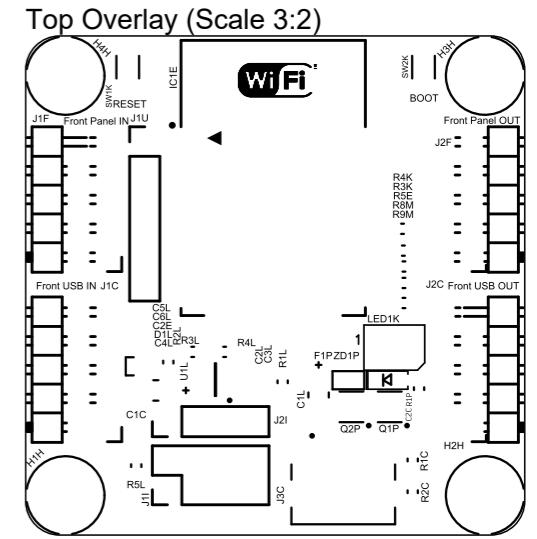
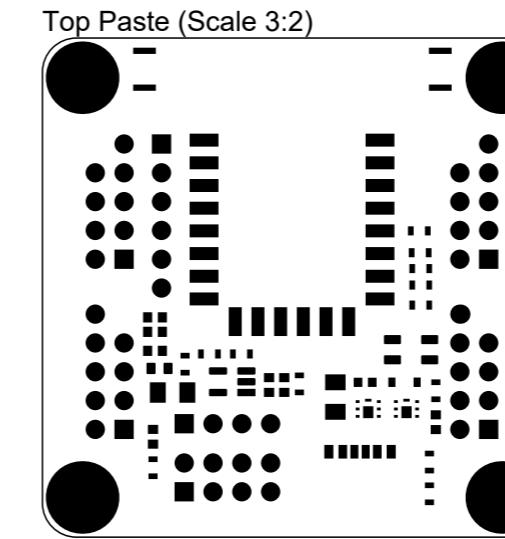
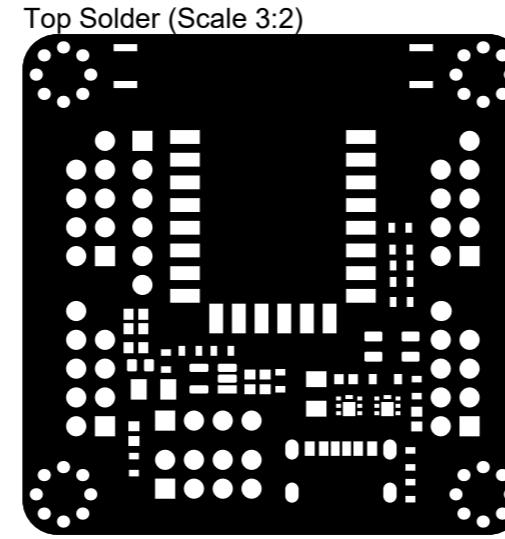
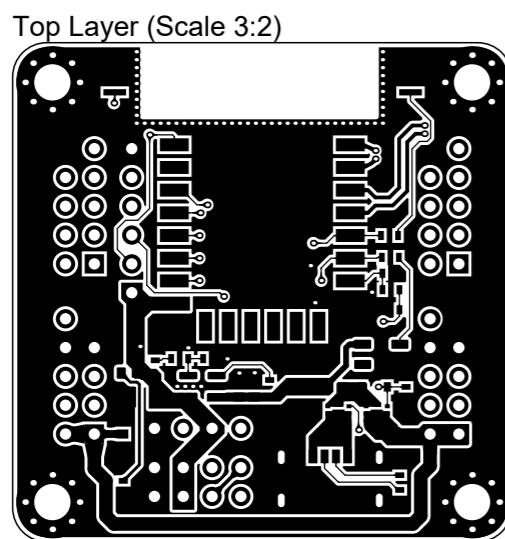
D

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Title: =ProjectTitle	Author:	CONFIDENTIAL
Size: A3	Approved:	
Unit: mm	Edited: 26-12-2024	
Date: 26-12-2024 06:39	Variant: [No Variations]	
Git Hash: 27 [No modification]	SW version: 25.1.2.22	
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\PCB MANUFACTURING_E		

[YOUR LOGO
HERE]

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PCB ASSEMBLY SPECIFICATIONS

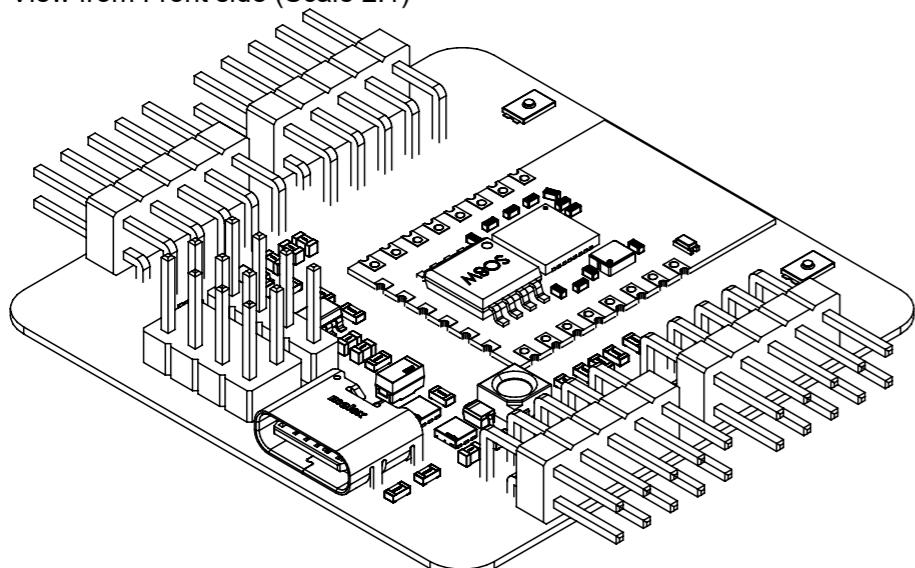
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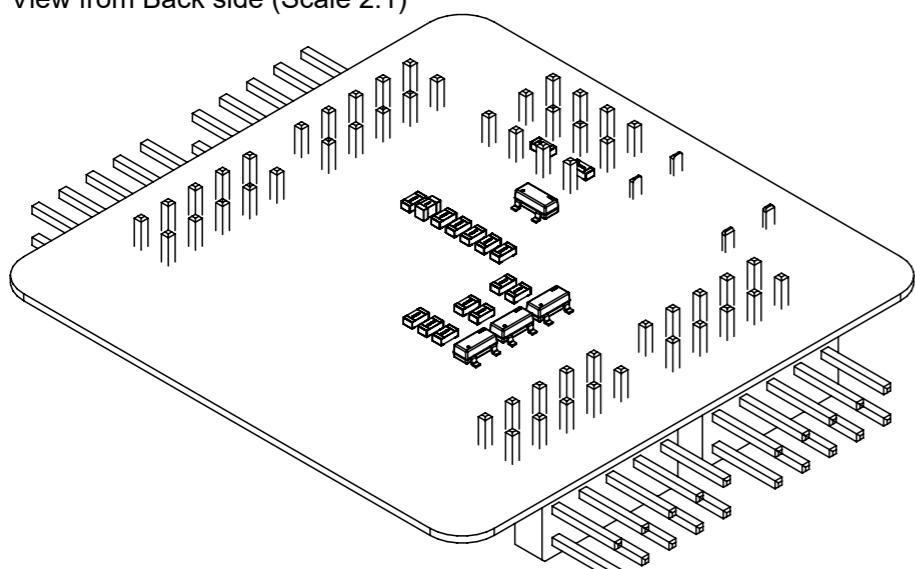
SPECIFICATIONS

NOTE #	NOTE
1	ALL SPECIFICATIONS REFERENCED SHALL BE OF THE LATEST REVISION UNLESS OTHERWISE NOTED
2	SUPPLIER SHALL NOT MODIFY THE DESIGN WITHOUT WRITTEN PERMISSION
3	REFER TO EXCEL BOM FOR UP-TO-DATE INFORMATION
4	THE BOM IN THIS DOCUMENT IS PURELY AN AID TO ASSEMBLY OPERATIONS AND MAY NOT HAVE THE MOST UP-TO-DATE DATA OR ALL APPROVED COMPONENT ALTERNATIVE.

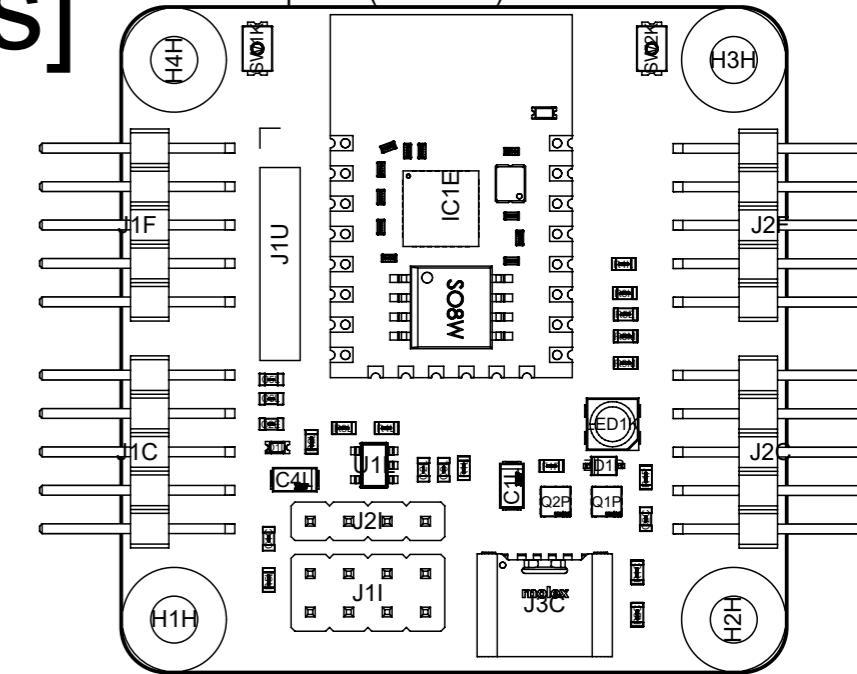
View from Front side (Scale 2:1)



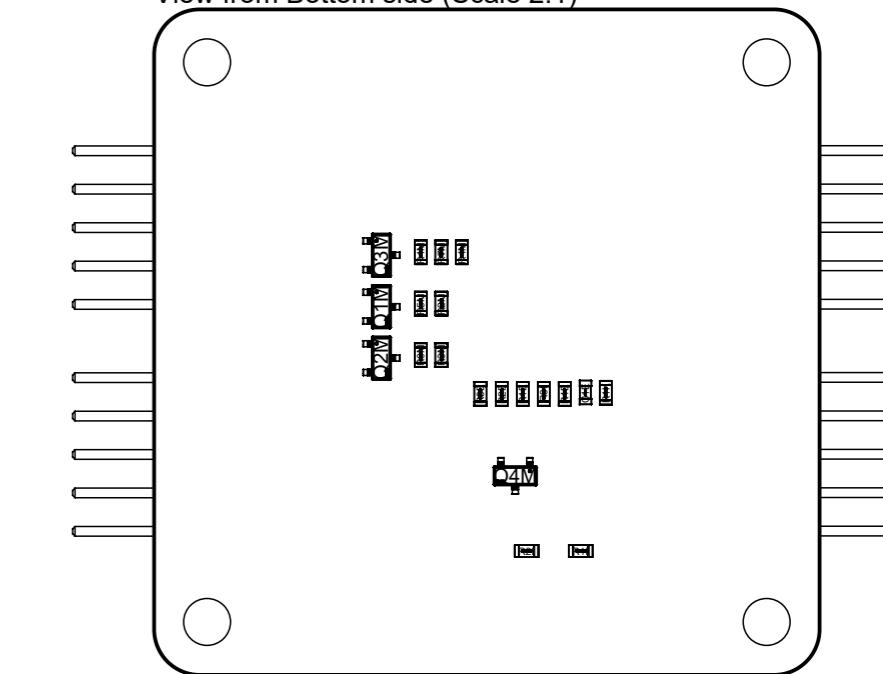
View from Back side (Scale 2:1)



View from Top side (Scale 2:1)



View from Bottom side (Scale 2:1)



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Size: A3	Approved:	My Company
Prj: =ProjectTitle	Edited: 26-12-2024	Address Line 1
Unit: mm	Variant: [No Variations]	Address Line 2
Date: 26-12-2024 06:39	FMSheet 1 of 9	Address Line 3
Git Hash: 27 [No modification]	SW version: 25.1.2.22	Address Line 4
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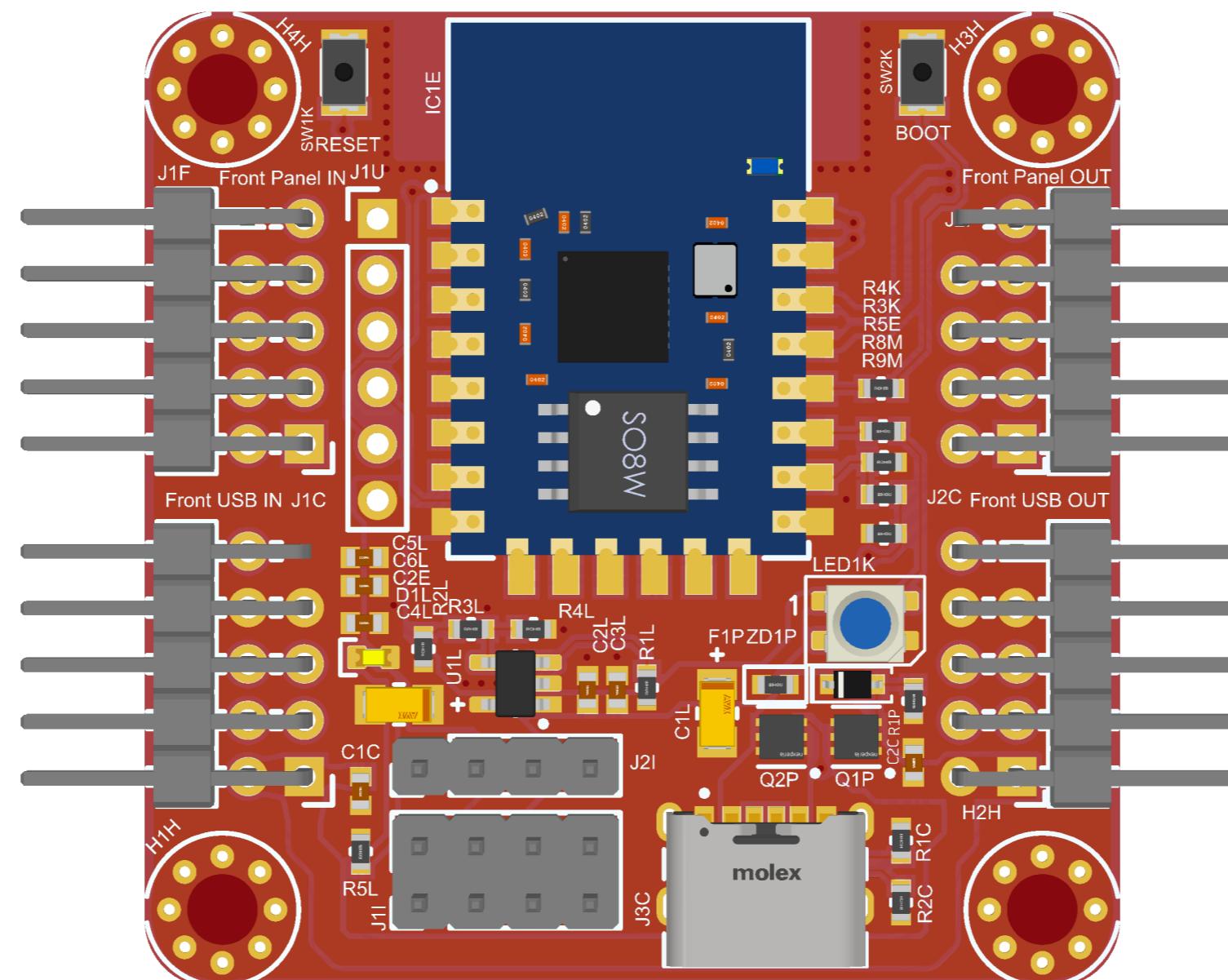
5

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6

Realistic View TOP



Title: =ProjectTitle	Author:	CONFIDENTIAL
Size: A3	Approved:	My Company
Unit: mm	Edited: 26-12-2024	Address Line 1
Prj: =ProjectTitle	Variant: [No Variations]	Address Line 2
Date: 26-12-2024 06:39	FMSheet: 2 of 9	Address Line 3
Git Hash: 27 [No modification]	SW version: 25.1.2.22	Address Line 4
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\PCB ASSEMBLY\ESP8266-Desktop_Power\PCB ASSEMBLY.FP		

YOUR
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LOGO

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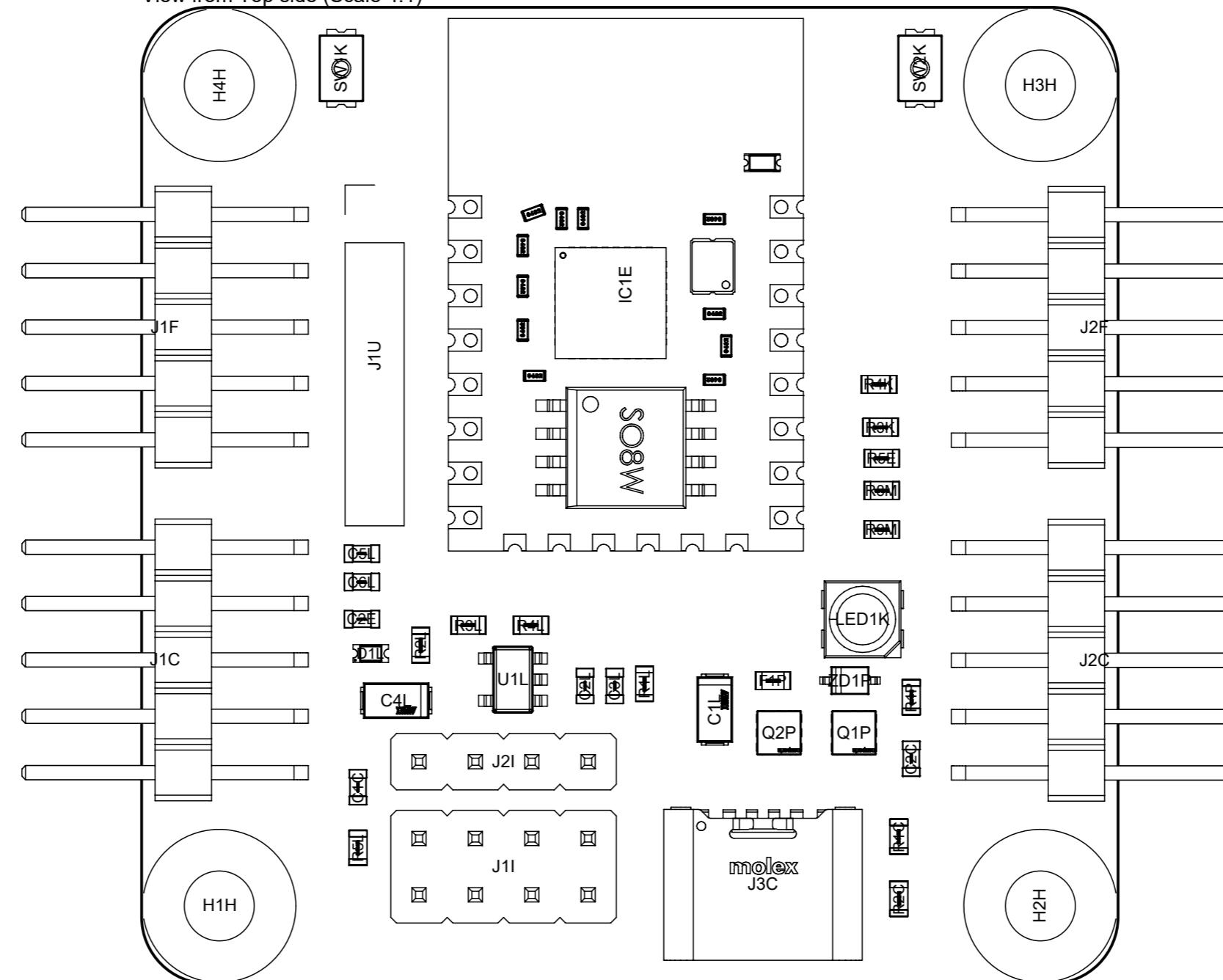
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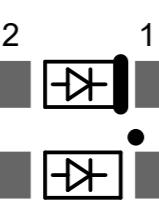
6

6

View from Top side (Scale 4:1)

**DIODE ORIENTATION**

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot ()



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot (•)

Title: =ProjectTitle

Author:

CONFIDENTIAL

Size: A3 Prj: =ProjectTitle

Approved: Edited: 26-12-2024

My Company

Unit: mm Date: 26-12-2024 06:39 FMSheet 3 of 9

Variant: [No Variations] SW version: 25.1.2.22

Address Line 1

Git Hash: 27 [No modification]

Address Line 2

File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\PCB_ASSEMBLY_ESP8266

Address Line 3

Address Line 4

[YOUR LOGO HERE]

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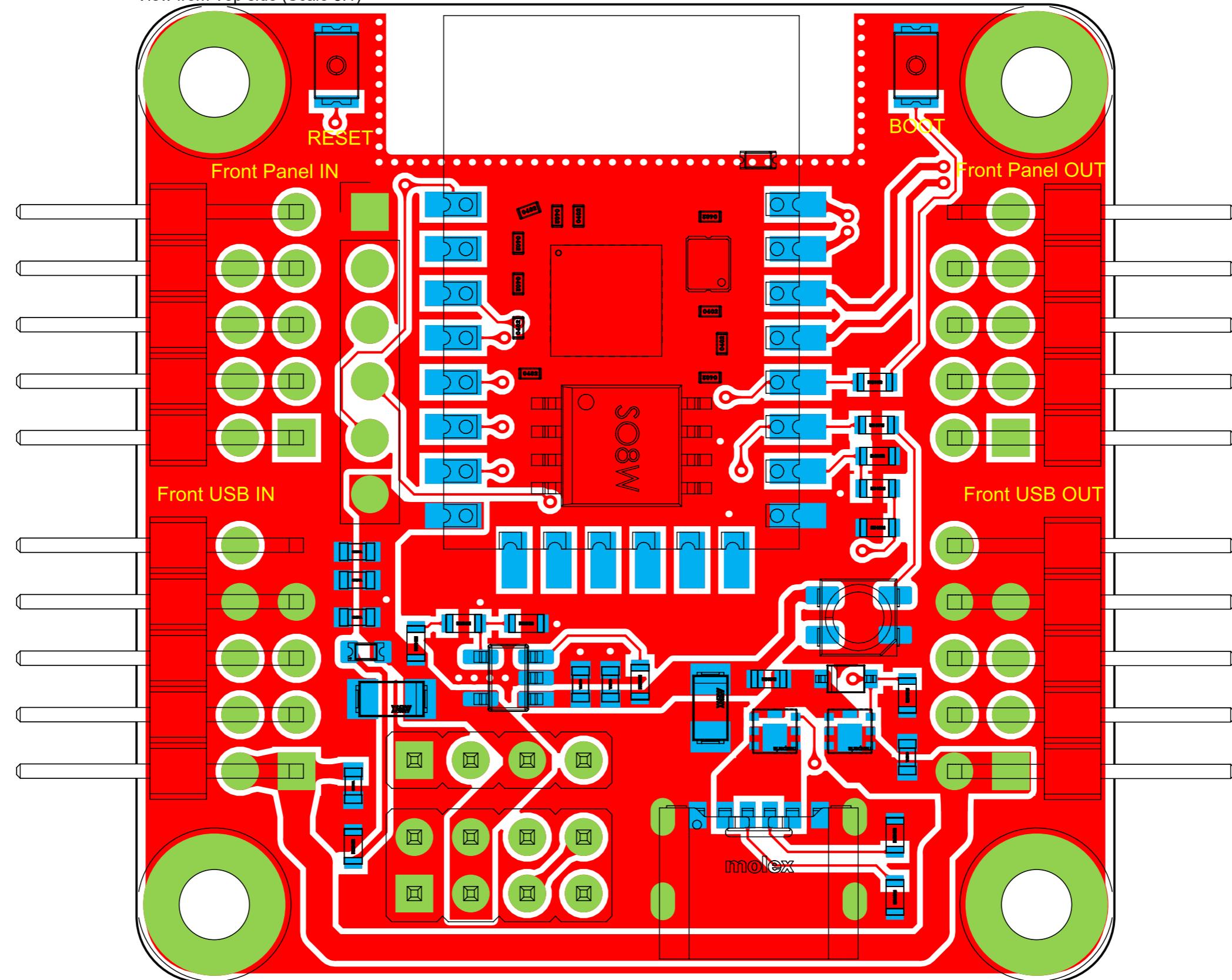
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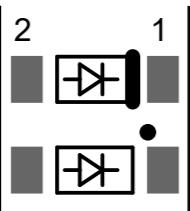
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View from Top side (Scale 5:1)

**DIODE ORIENTATION**

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot ()



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot (•)

Title: =ProjectTitle

Author:

CONFIDENTIAL

Approved:

My Company

Edited: 26-12-2024

Address Line 1

Unit: mm Prj: =ProjectTitle

Address Line 2

Variant: [No Variations]

Address Line 3

Date: 26-12-2024 06:39 FMSheet 4 of 9

Address Line 4

Git Hash: 27 [No modification]

SW version: 25.1.2.22

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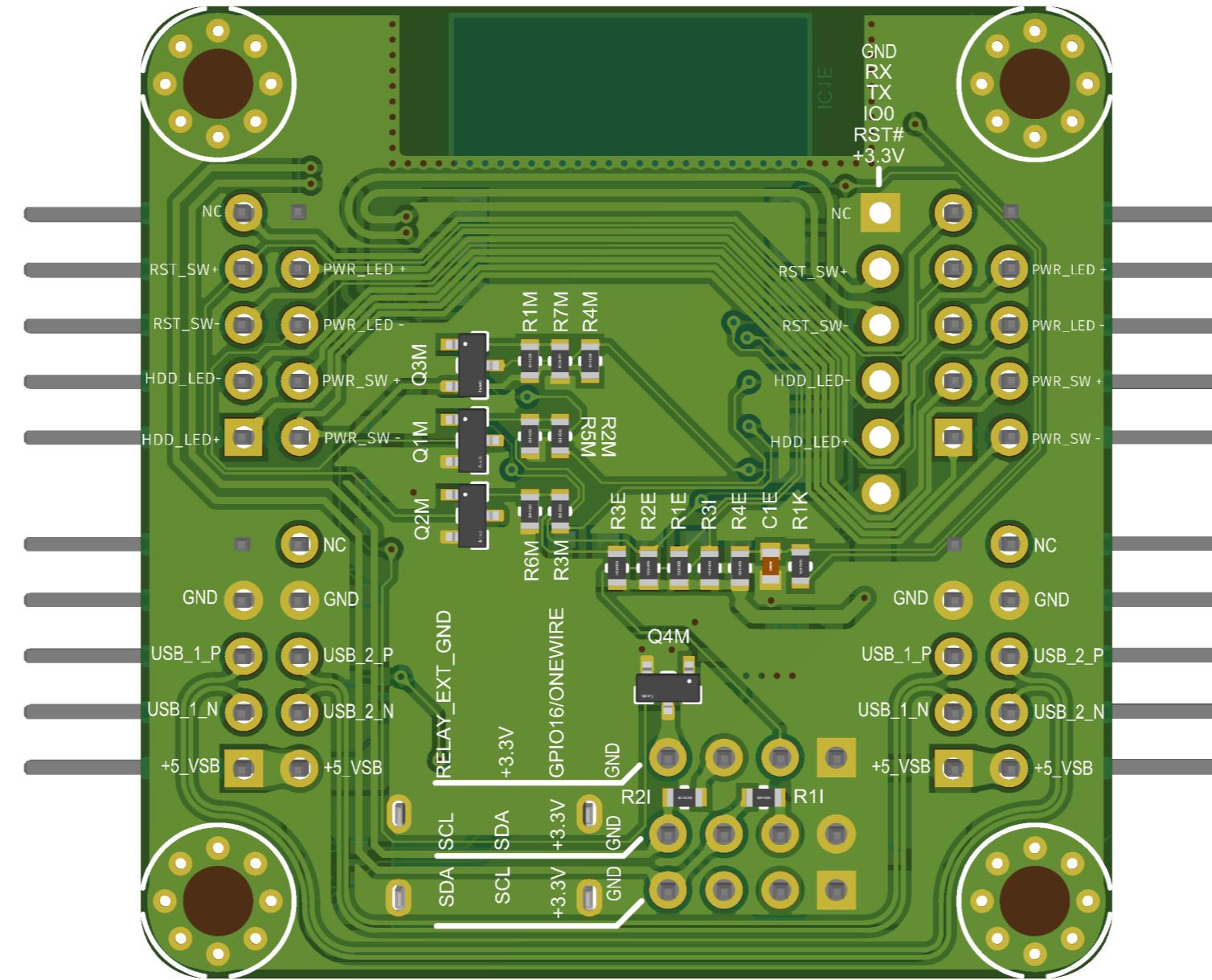
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Realistic View BOTTOM



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Size: A3	Approved:	My Company
Unit: mm	Edited: 26-12-2024	Address Line 1
Prj: =ProjectTitle	Variant: [No Variations]	Address Line 2
Date: 26-12-2024 06:39	MSheet: 5 of 9	Address Line 3
Git Hash: 27 [No modification]	SW version: 25.1.2.22	Address Line 4
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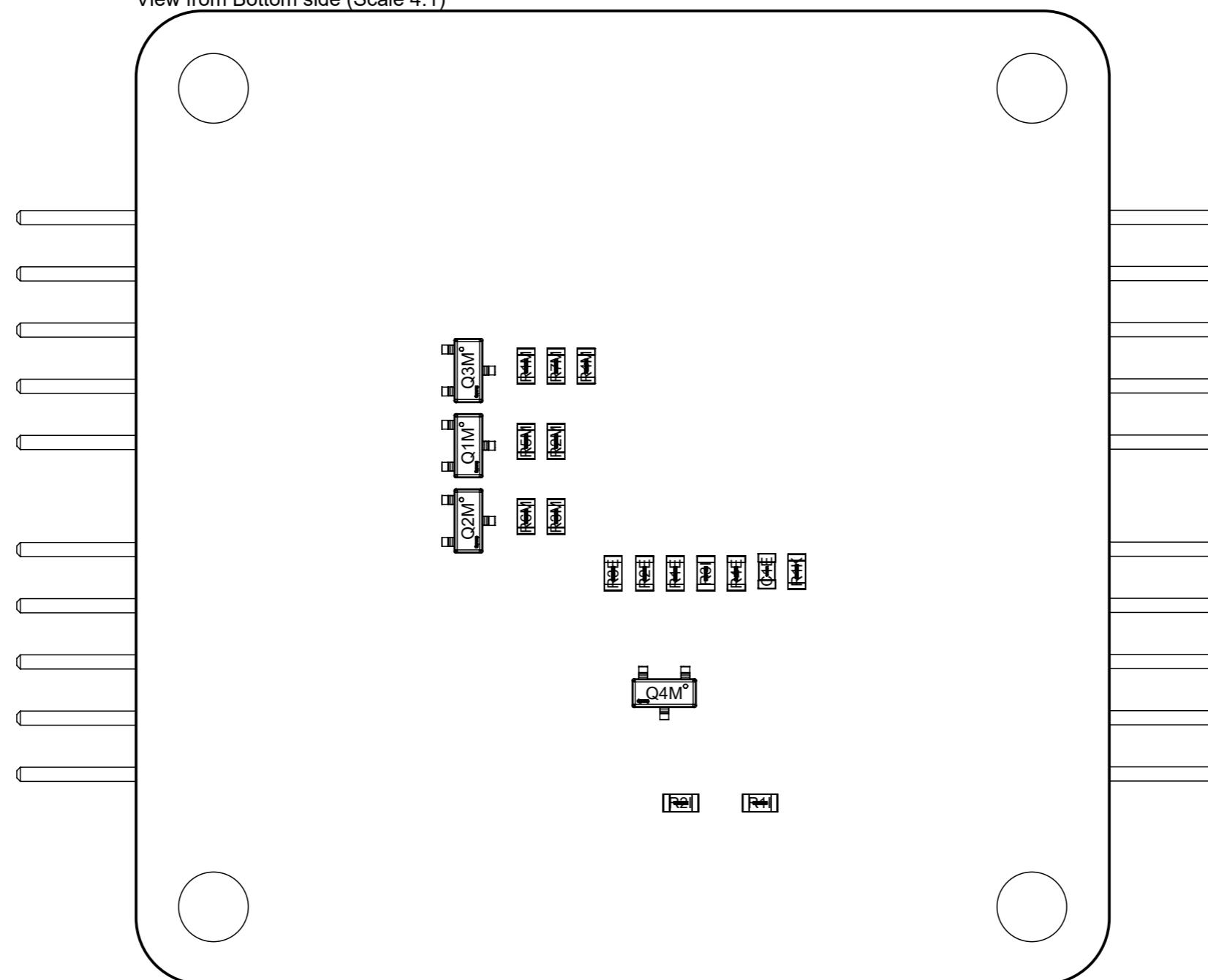
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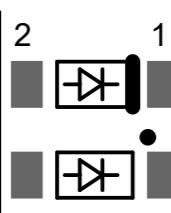
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View from Bottom side (Scale 4:1)

**DIODE ORIENTATION**

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot ()



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot (•)

Title: =ProjectTitle	Author:	CONFIDENTIAL
Approved:		
Size: A3	Edited: 26-12-2024	My Company
Unit: mm	Prj: =ProjectTitle	Address Line 1
Date: 26-12-2024 06:39	FMSheet 6 of 9	Address Line 2
Git Hash: 27	[No modification]	Address Line 3
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\PCB ASSEMBLY	ESP8266	Address Line 4

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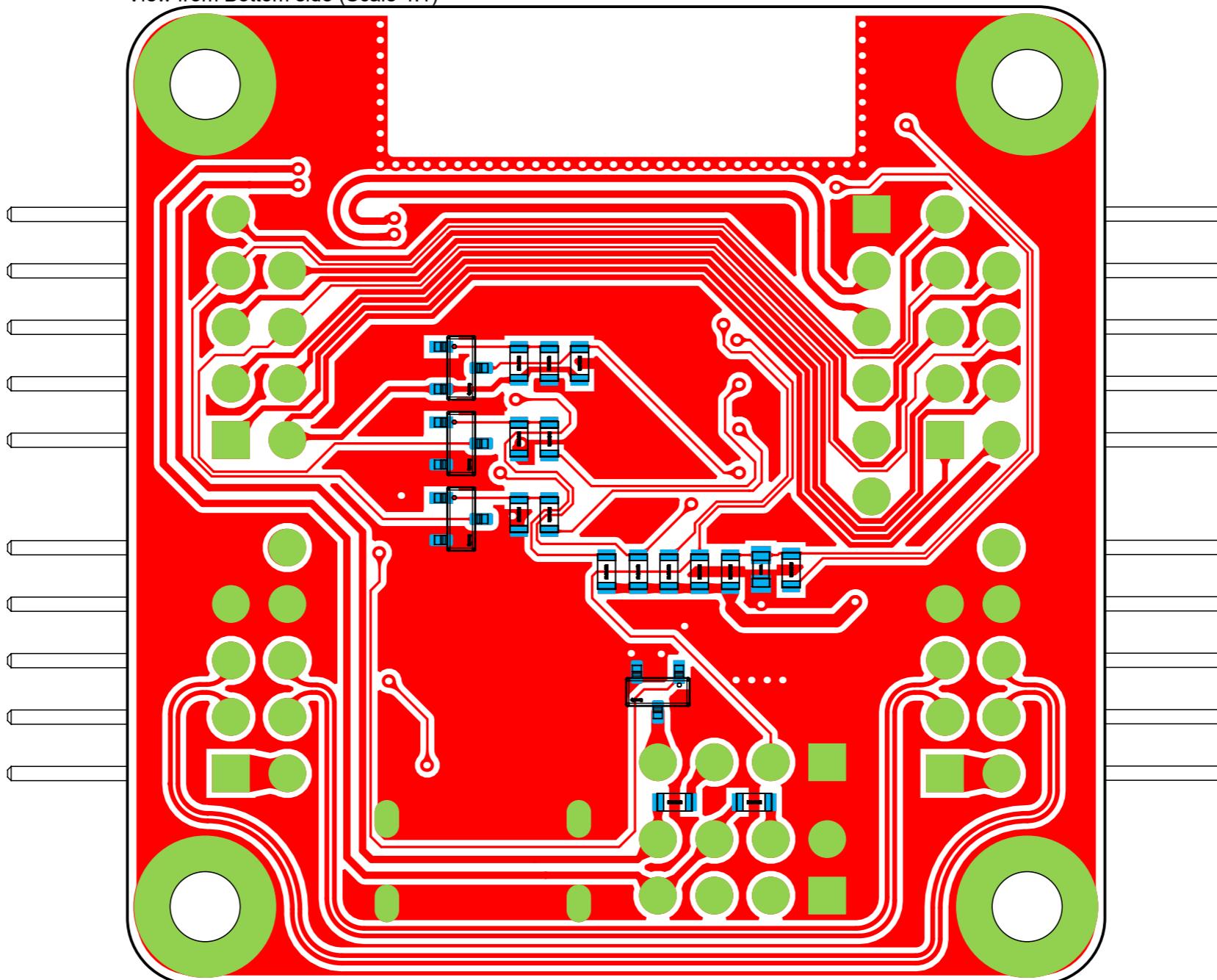
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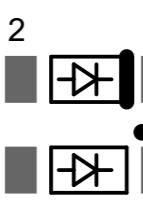
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View from Bottom side (Scale 4:1)

**DIODE ORIENTATION**

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot ()



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot (•)

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Approved:		
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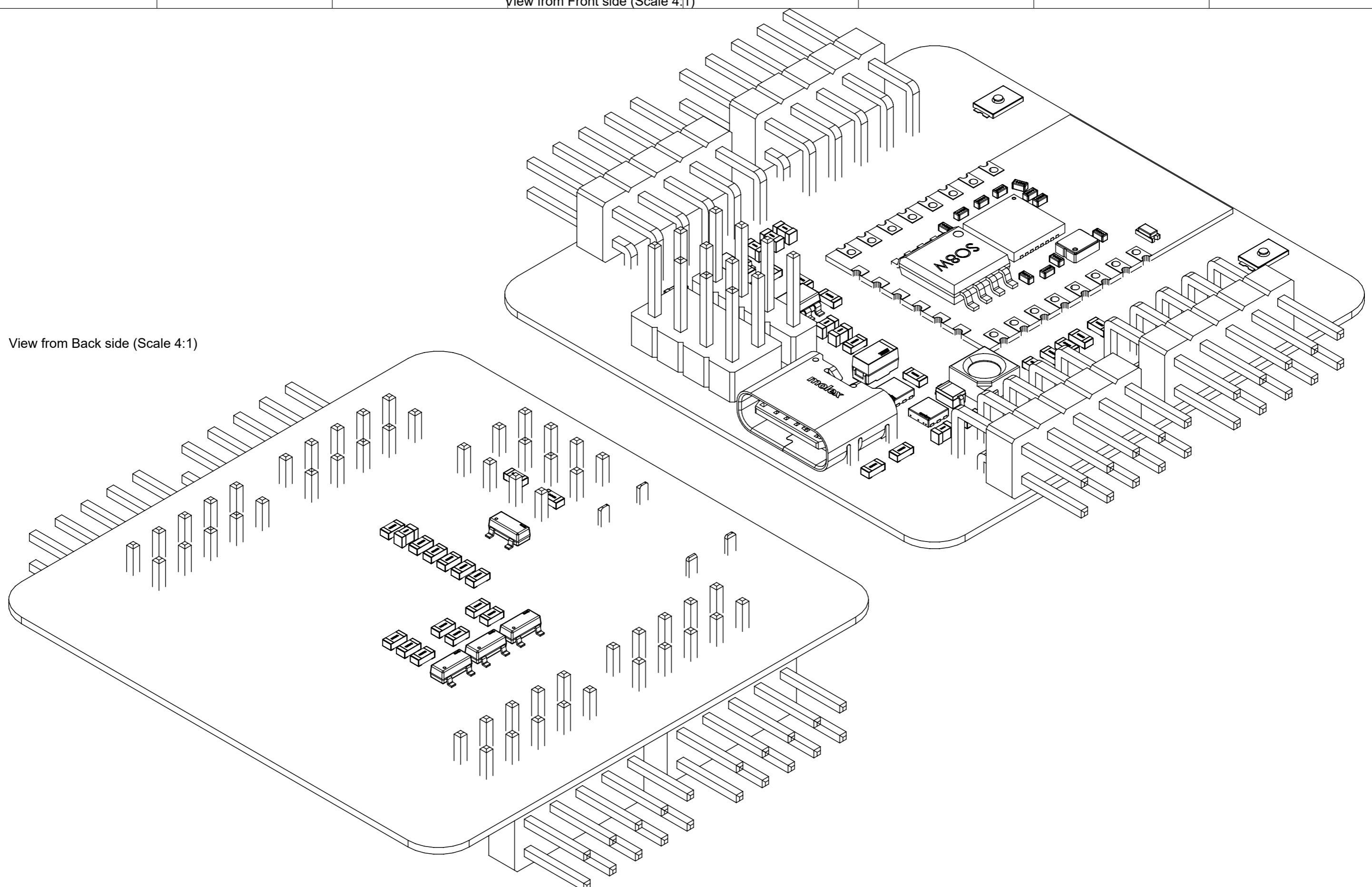
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View from Front side (Scale 4:1)

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Bill Of Materials

Line #	Description	Designator	Quantity	Manufacturer Part Number 1	Part Number	Layer
1	Multilayer Ceramic Capacitor, 2.2 uF, 10 V, ± 10%, X7R, 0603 [1608 Metric] Cap Cer 0.1UF 6.3V X7R 0603	C1C C1E, C2E	1 2	KGM15AR70J104KM		
	Surface Mount Tantalum Capacitor, 47 uF, 10 V, ± 20%, -55 °C, 125 °C, 1206 [3216-12 Metric]	C1L	1			
2	Multilayer Ceramic Capacitor, 4.7 uF, 10 V, ± 10%, X5R, 0603 [1608 Metric]	C2C	1	CL10A475KP8NNNC		
	Multilayer Ceramic Capacitor, 22 uF, 10 V, ± 20%, X5R, 0603 [1608 Metric]	C2L	1	GRM188R61A226ME1 5D		
	Multilayer Ceramic Capacitor, 0.1 uF, 10 V, ± 10%, X7R, 0603 [1608 Metric]	C3L	1	C0603C104K8RAC786 7		
	47uF Solid MnO2 Tantalum Electrolytic Capacitor; 6.3 V dc +/-20%; T491 Series	C4L	1	T491A476M006AT		
	Multilayer Ceramic Capacitor, 22 uF, 6.3 V, ± 20%, X5R, 0603 [1608 Metric]	C5L, C6L	2	GRM188R60J226MEA 0D		
	LED 0603 YELLOW SMD	D1L	1			
	Fuse PPTC SMD 0603	F1P	1			
		H1H, H2H, H3H, H4H	4			
	ESP8266 ESP-12-F	IC1E	1			
		J1C, J2C	2			
		J1F, J2F	2			
		J1L	1			
		J1U	1			
		J2I	1			
3	Connector USB Type C Female 6Positions 0.5mm Right Angle SMT Embossed T/R - Tape and Reel	J3C	1			
	4 PIN SMART LED WS2812 BODY 3.5MM X 3.5MM	LED1K	1			
	Single N-Channel 60 V 3.5 Ohm 1 nC SIPMOS® Small Signal Mosfet - SOT-23	Q1M, Q2M, Q3M, Q4M	4	BSS138N		
	PMPB14XPZ	Q1P, Q2P	2	PMPB14XPZ		
	SMD Chip Resistor, 5.1 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R1C, R2C	2	CRCW06035K10FKEA		
	SMD Chip Resistor, 10 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R1E, R1L, R2E, R3E, R4E, R4M, R5E, R5M, R6M, R7M, R9M	11	RC0603FR-0710KL		
	SMD Chip Resistor, 2.2 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R1I, R2I	2	RC0603FR-072K2L		
	SMD Chip Resistor, 1 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R1K, R4K	2	RC0603FR-101KL		
	SMD Chip Resistor, 100 Ohm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R1M, R2M, R3K, R3M, R8M	5	AC0603FR-07100RL		
	SMD Chip Resistor, 100 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R1P	1	AC0603FR07100KL		
	Surface Mount Thick Film Chip Resistor 0603 Case 1.69K Ohms 1% Tolerance 100 PPM	R2L	1	MCR03EZPFX1691		
	SMD Chip Resistor, 4.7 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R3I	1	AC0603FR-074K7L		
	Res Thick Film 0603 33K Ohm 1% 0.1W(1/10W) ±100ppm/C Pad SMD Automotive T/R	R3L	1	ERJ-3EKF3302V		
	SMD Chip Resistor, 20 kOhm, ± 1%, 100 mW, 0603 [1608 Metric], Thick Film, General Purpose	R4L	1	CR0603-FX-2002ELF		
	Res Thick Film 0603 2.49K Ohm 1% 1/10W ±100ppm/°C Molded SMD SMD Paper T/R	R5L	1			
	3.0MM X 2.0MM / 3.3N / 0.15MM ST LDO U-Reg Adj 0, 3A SOT23-5	SW1K, SW2K U1L	2 1	EVP-AWED4A	EVP-AWED4A	
	MM3Z12VST1G Zener Diode, 12V 2% 200 mW SMT 2-Pin SOD-323 ON Semiconductor MM3Z12VST1G	ZD1P	1			

Please consider LCSC (立创商城) as our first supplier
 BOM FOR REFERENCE ONLY
 ALWAYS REFER TO THE LATEST EXCEL BOM PROVIDED

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Prj: =ProjectTitle	Variant: [No Variations]	
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Git Hash: 27 [No modification]		
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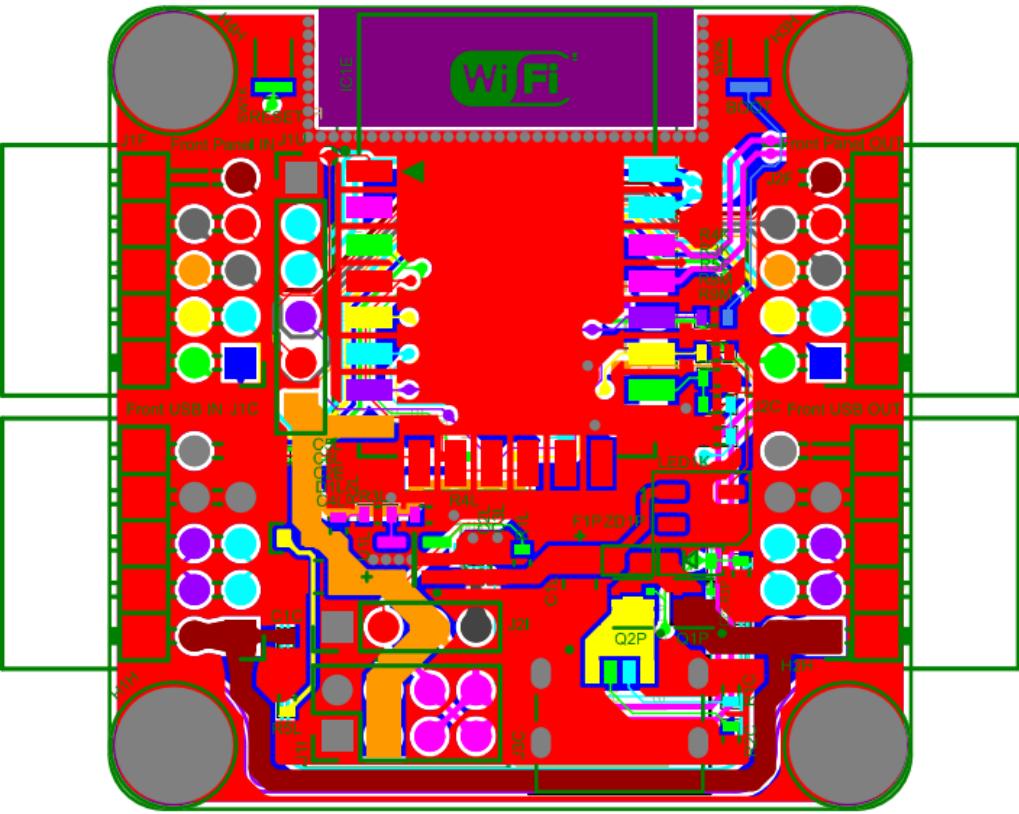
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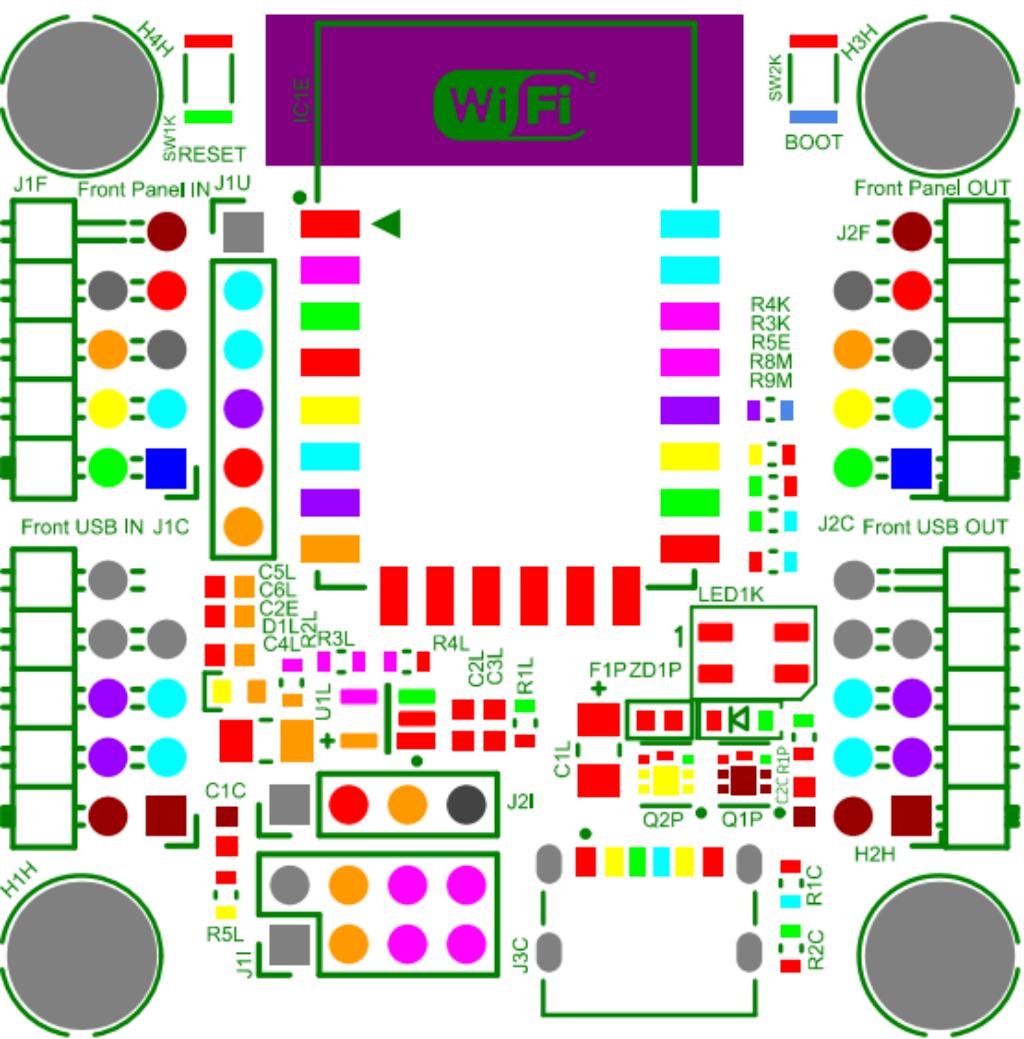
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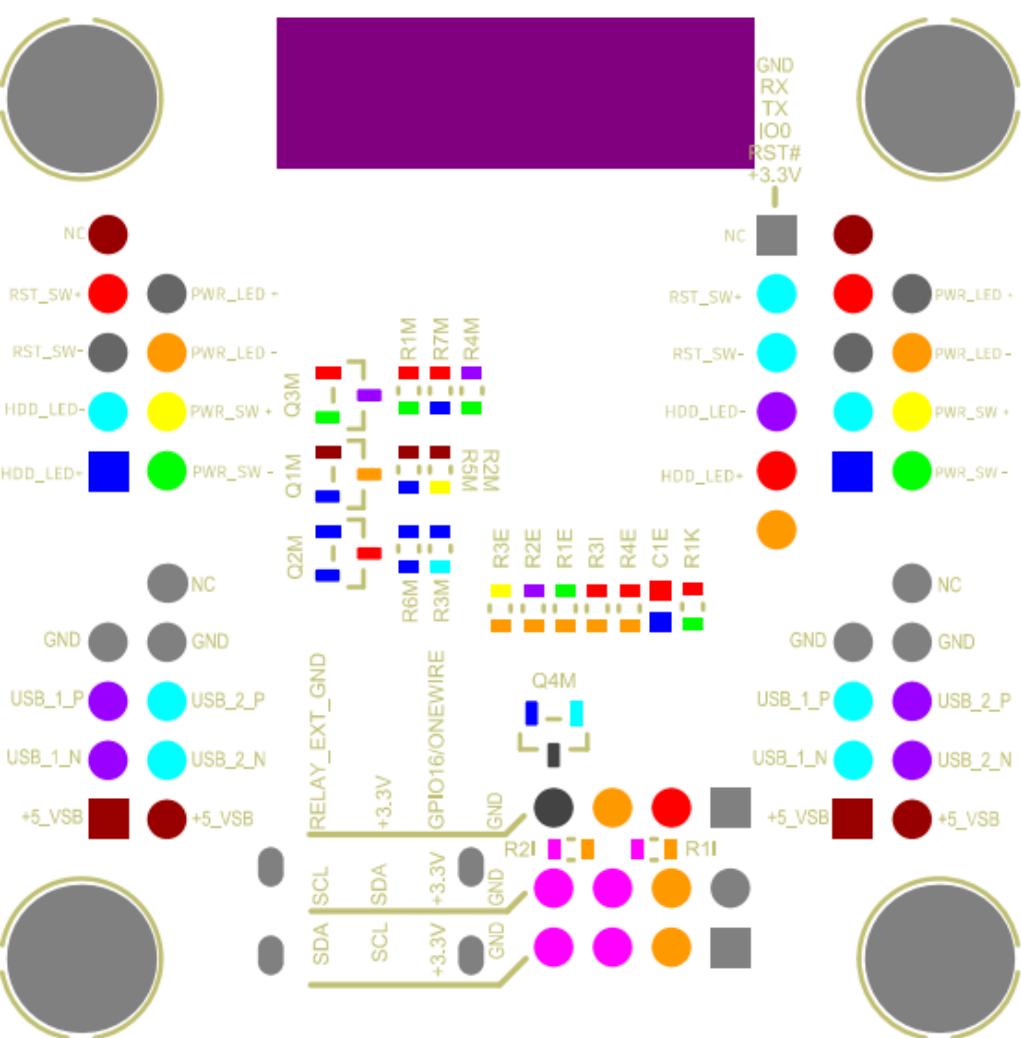
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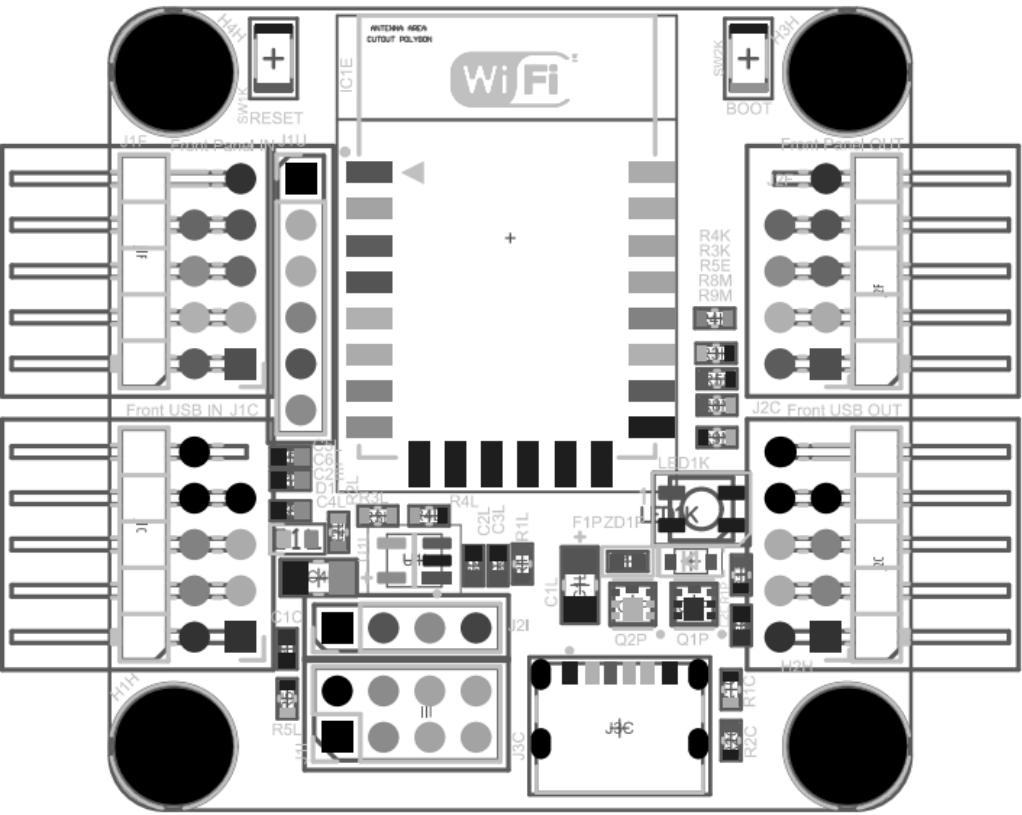


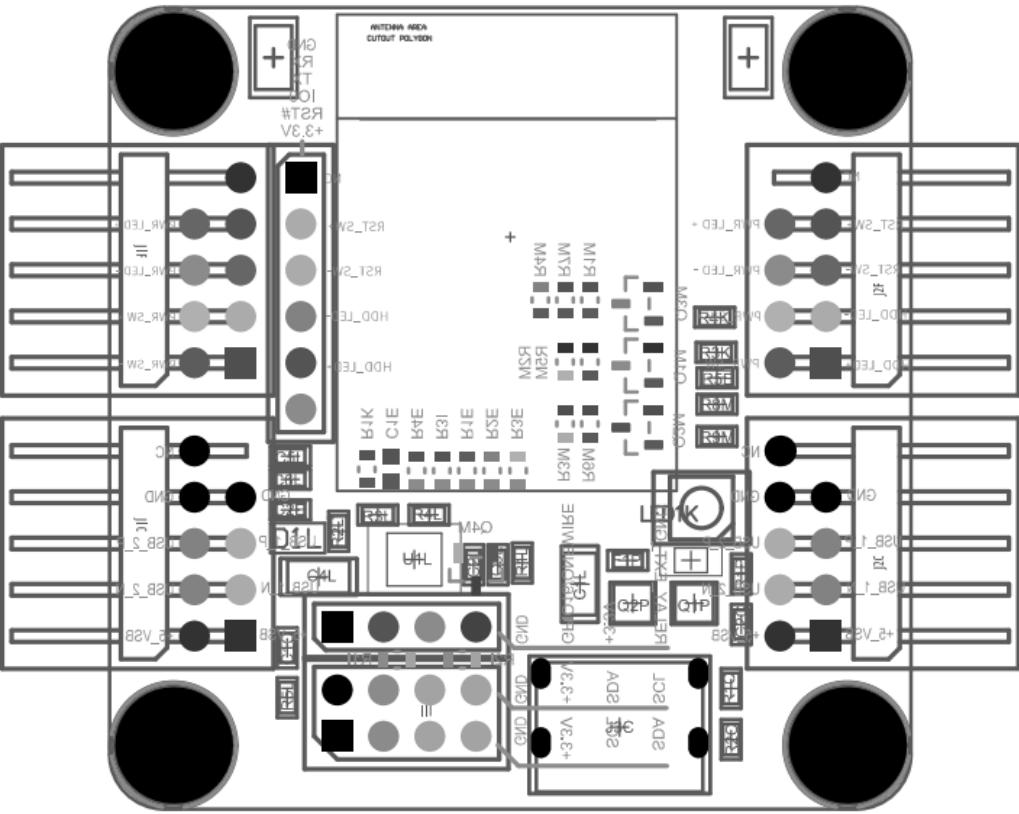
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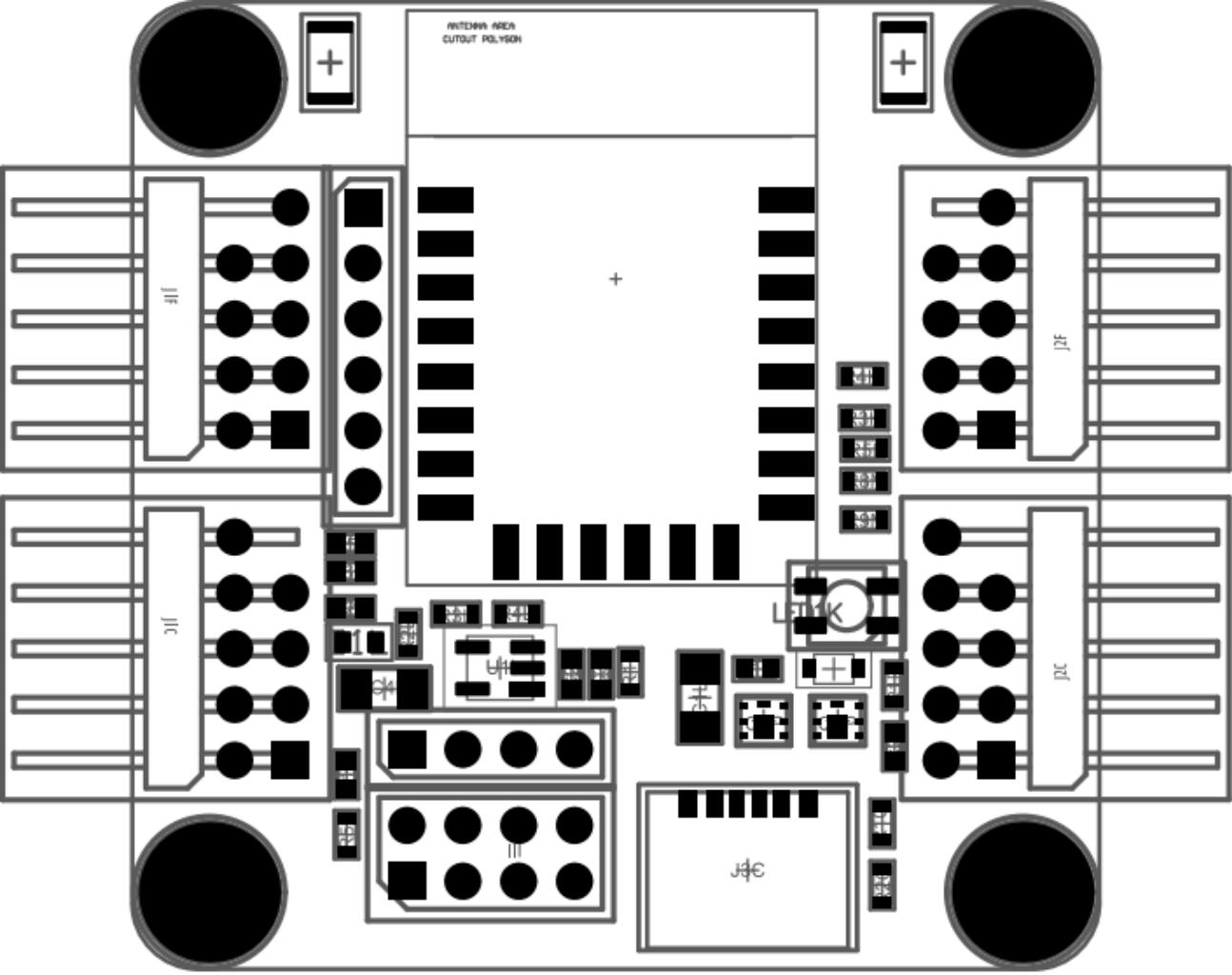


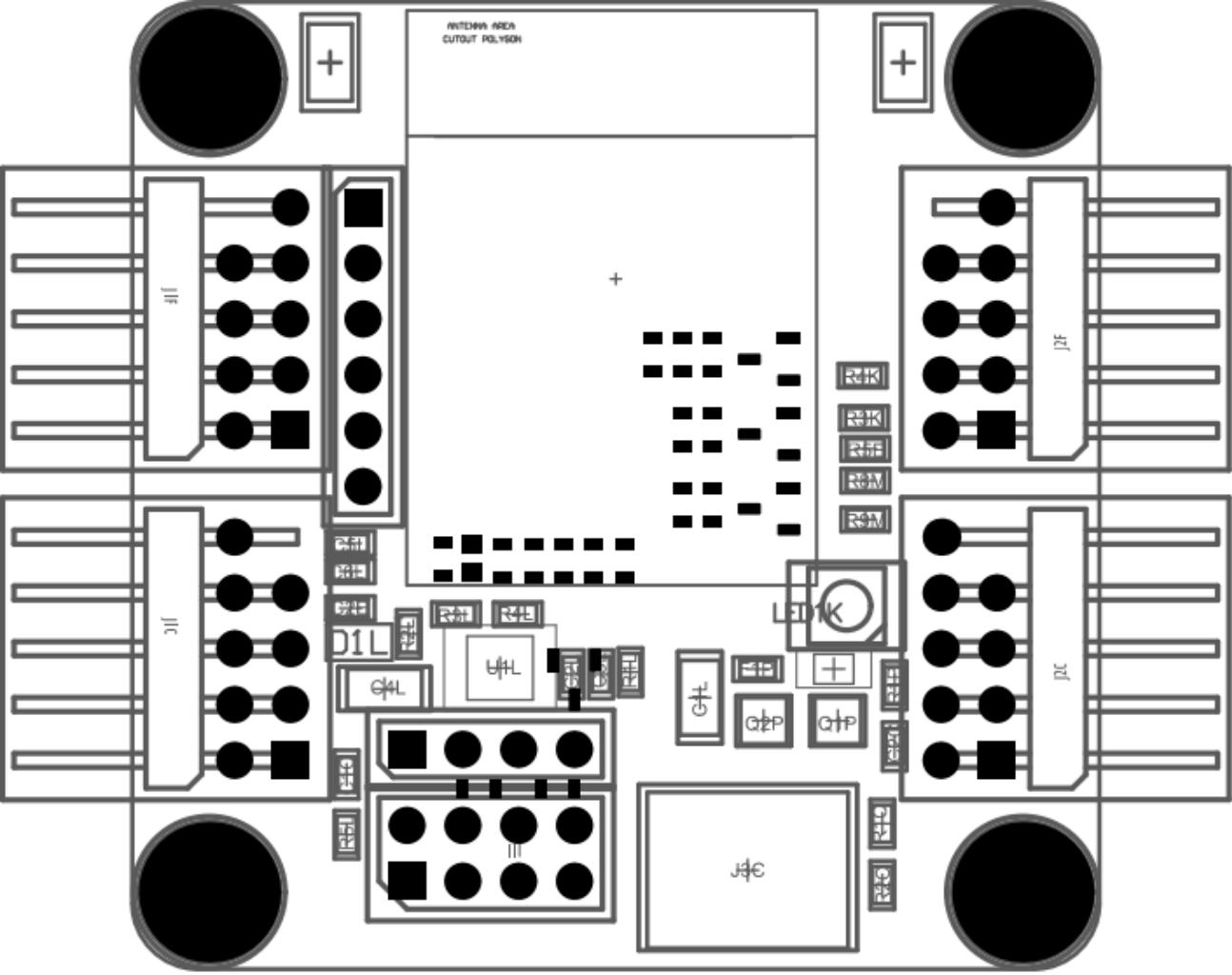


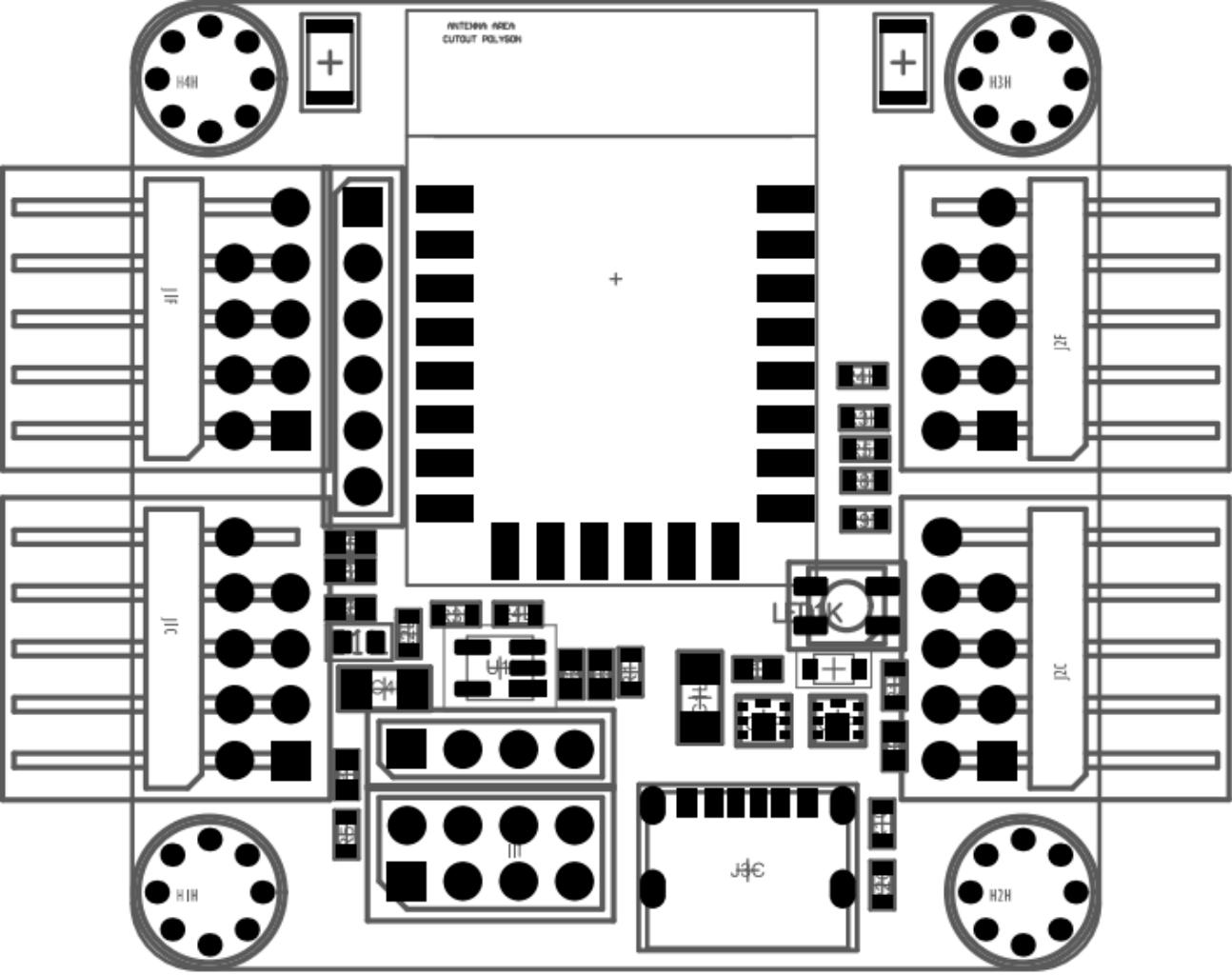
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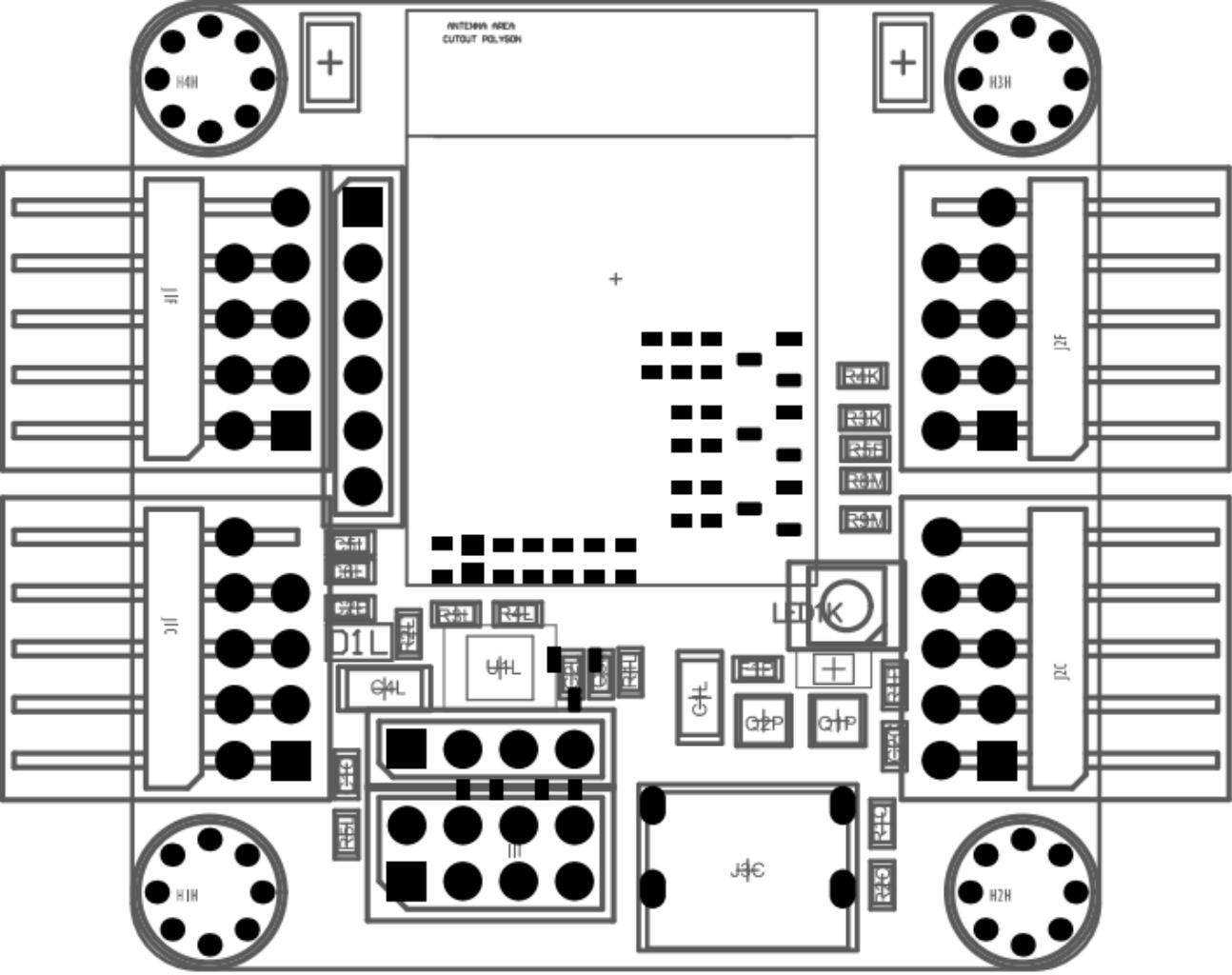


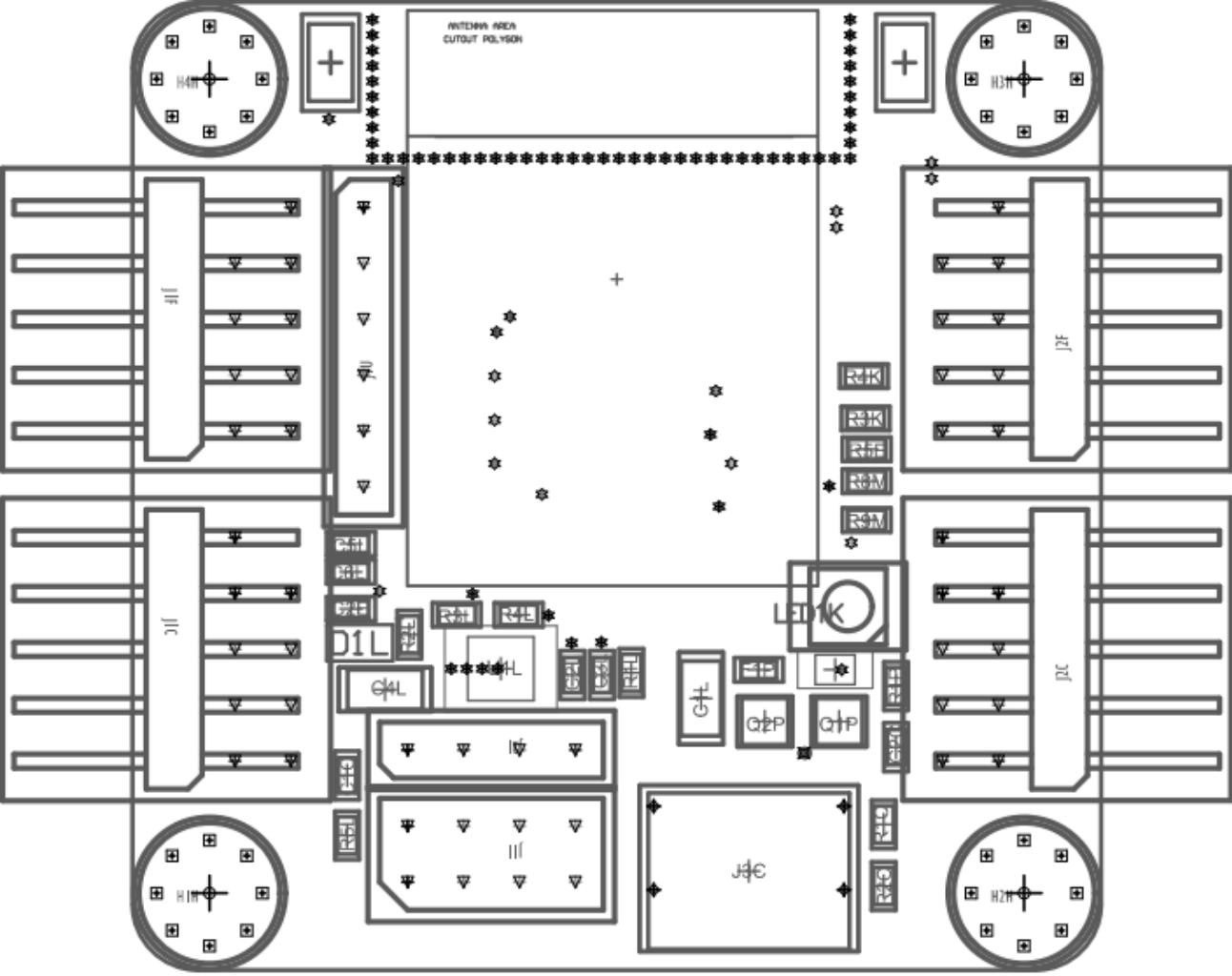


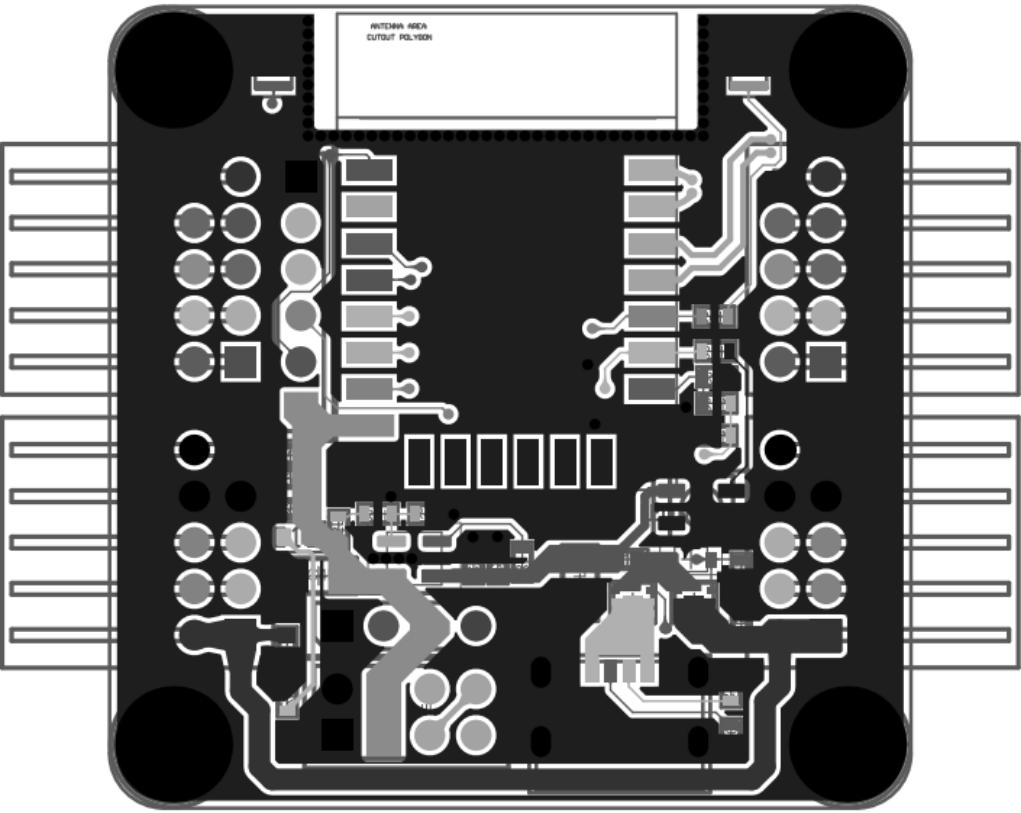


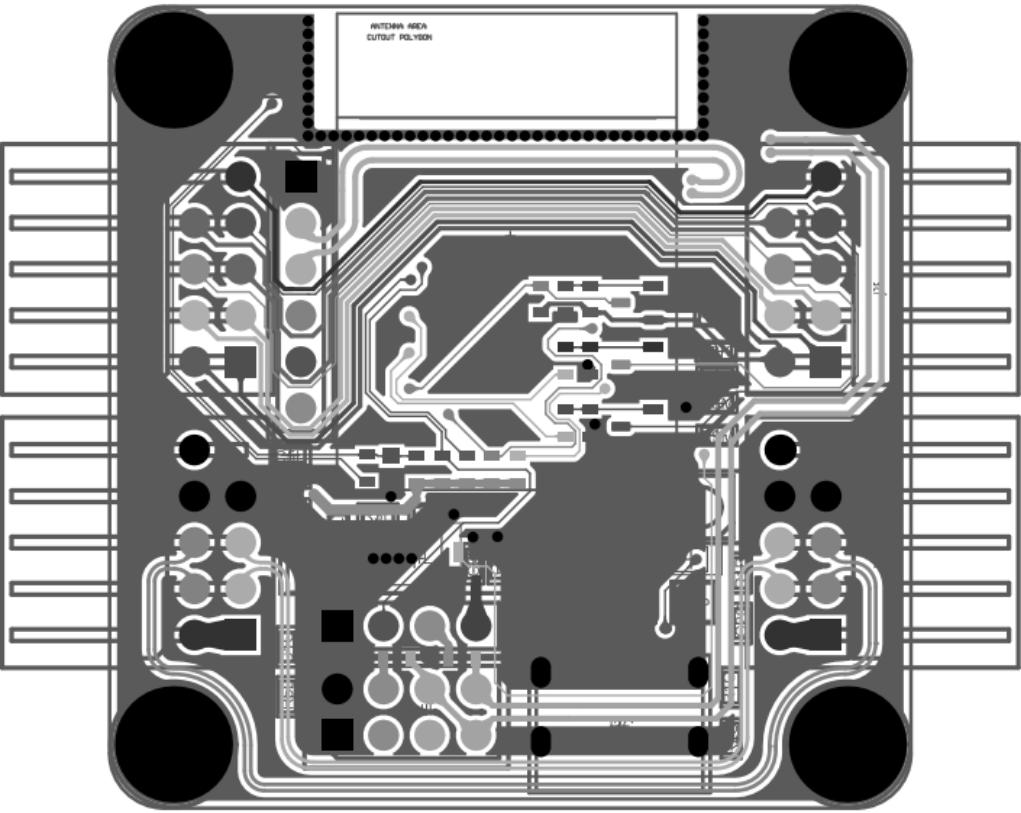




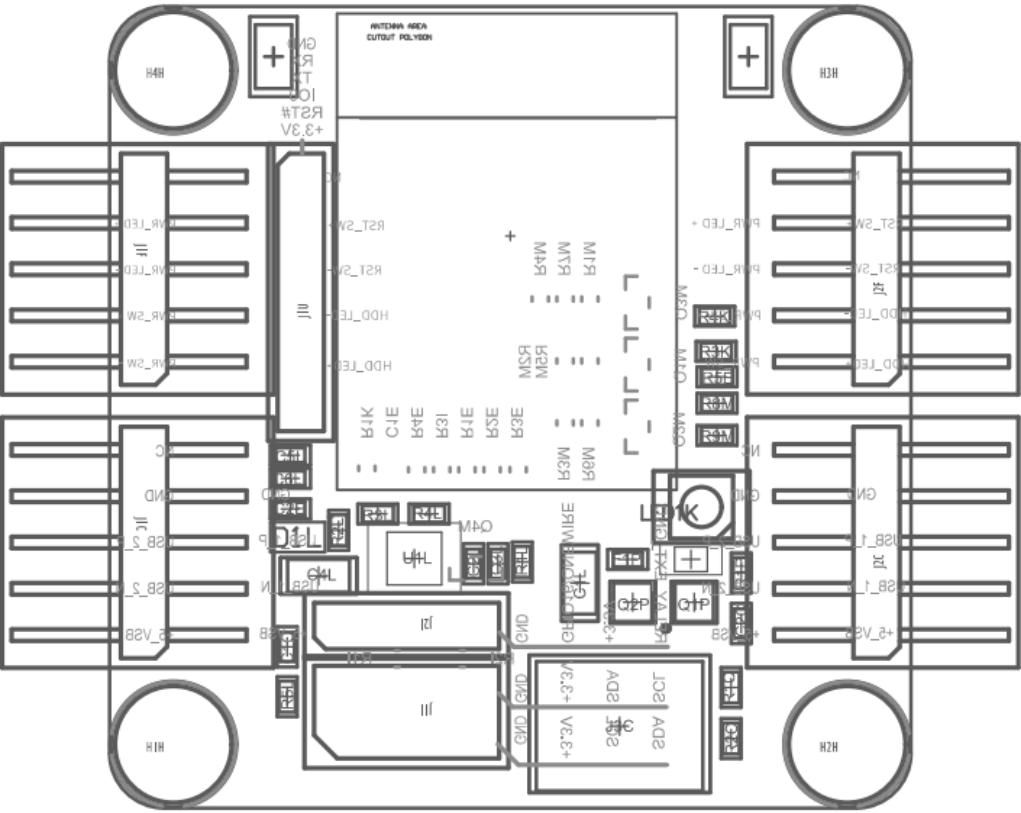


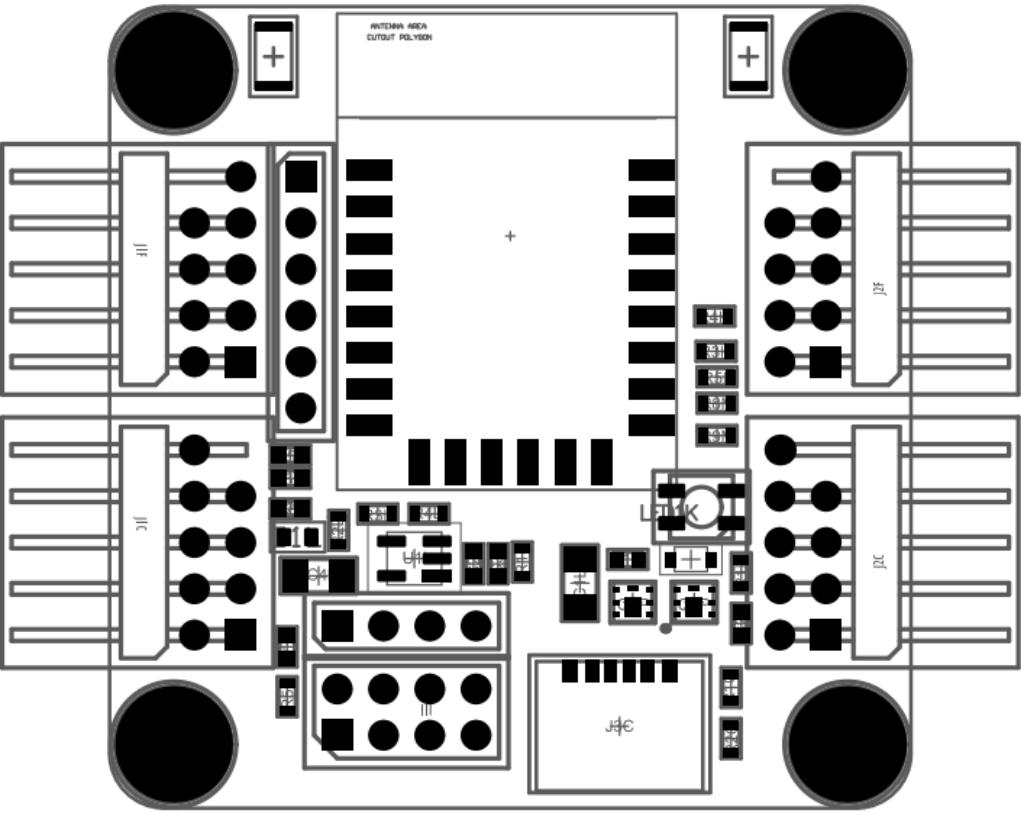


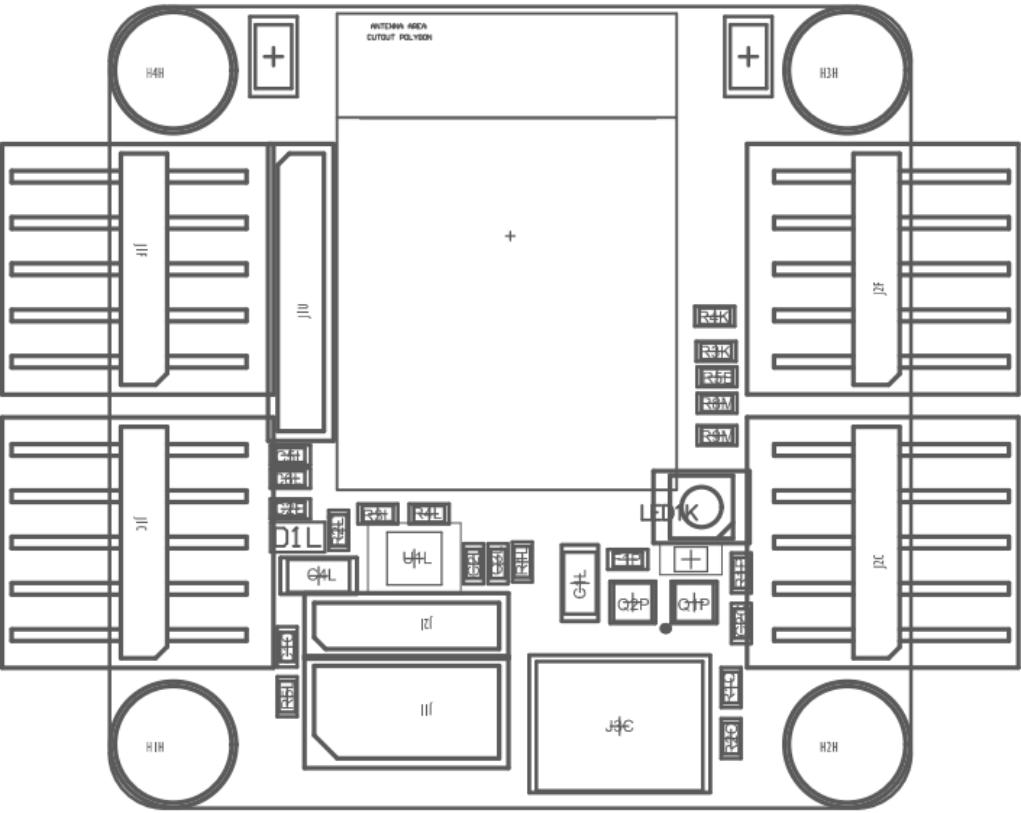


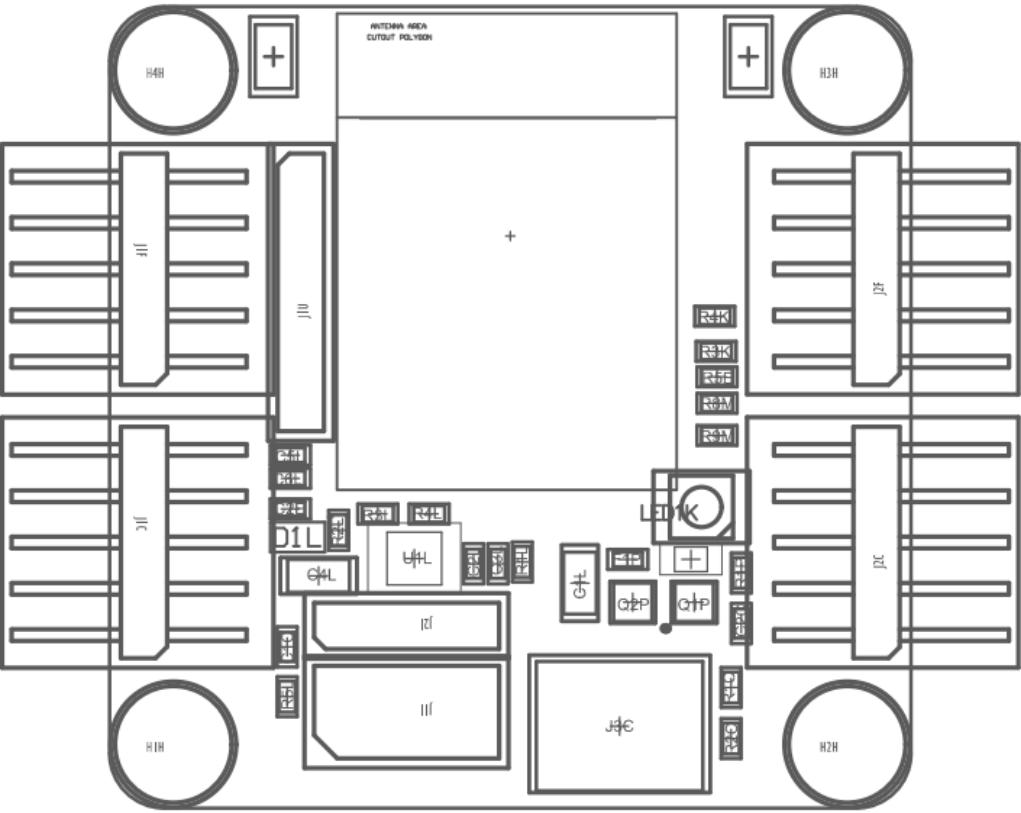


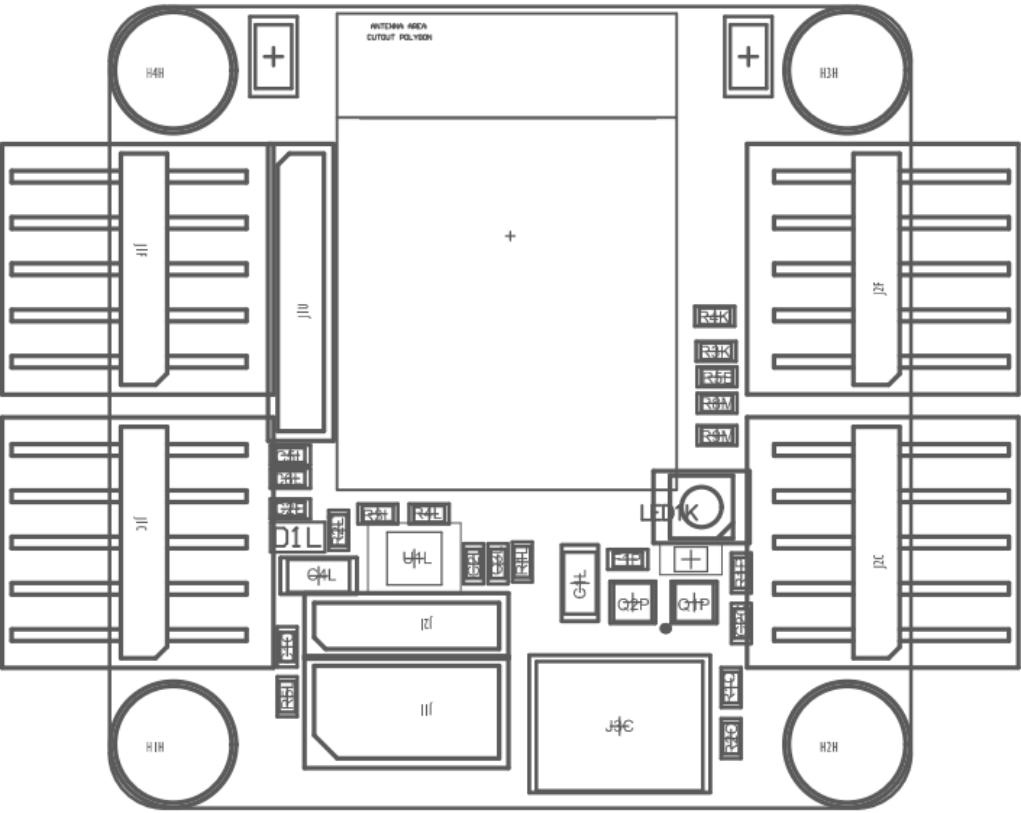


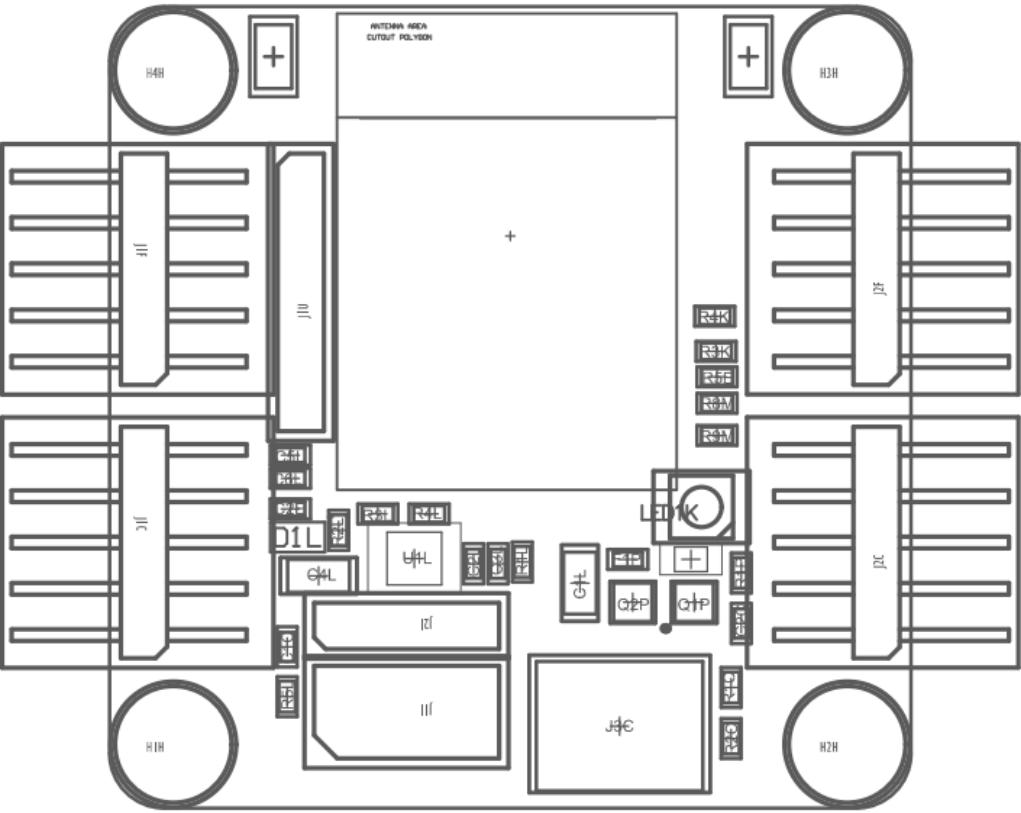


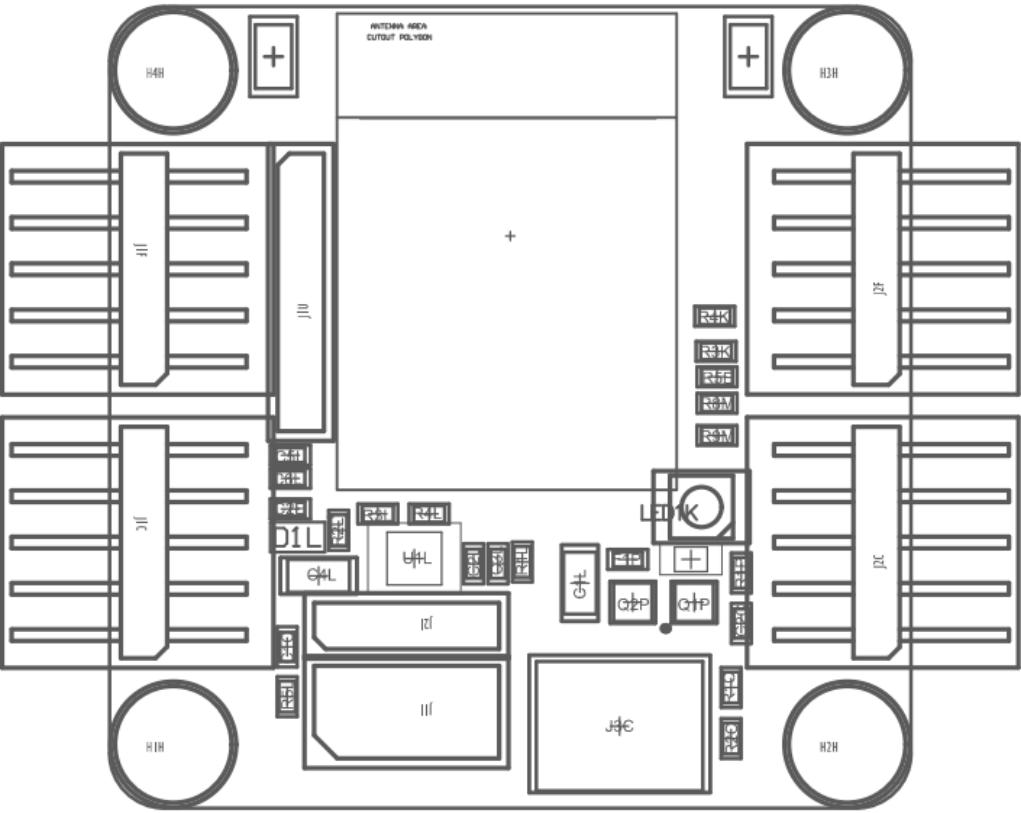


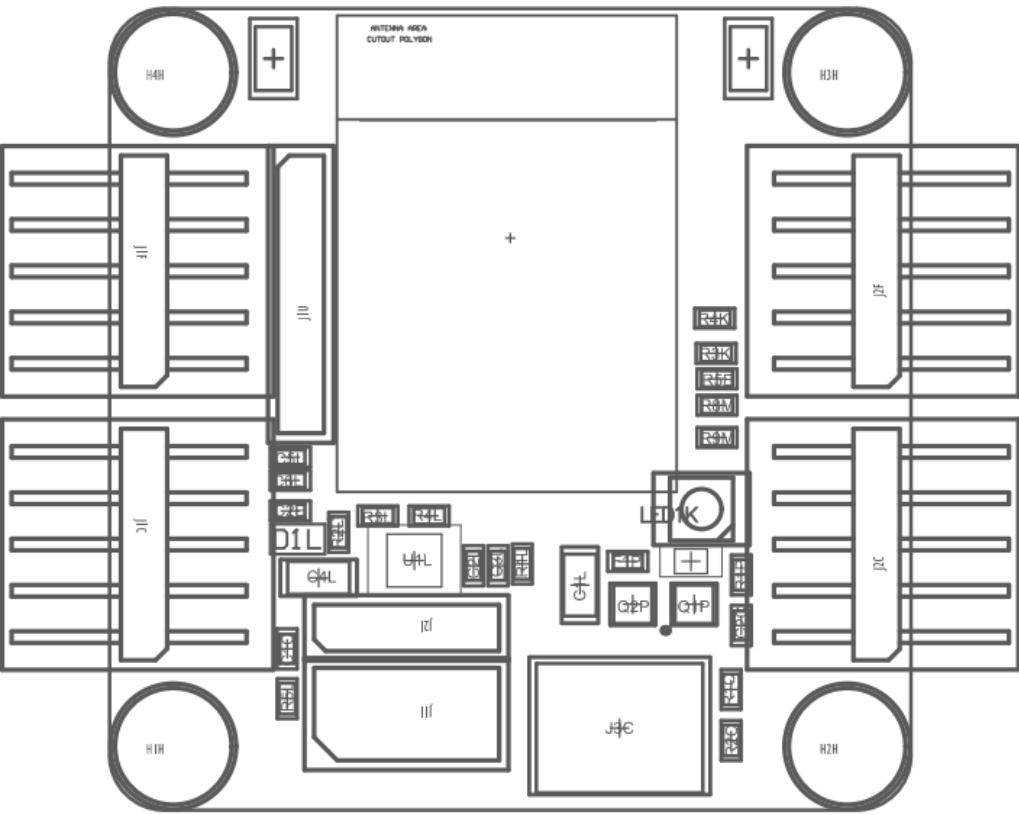


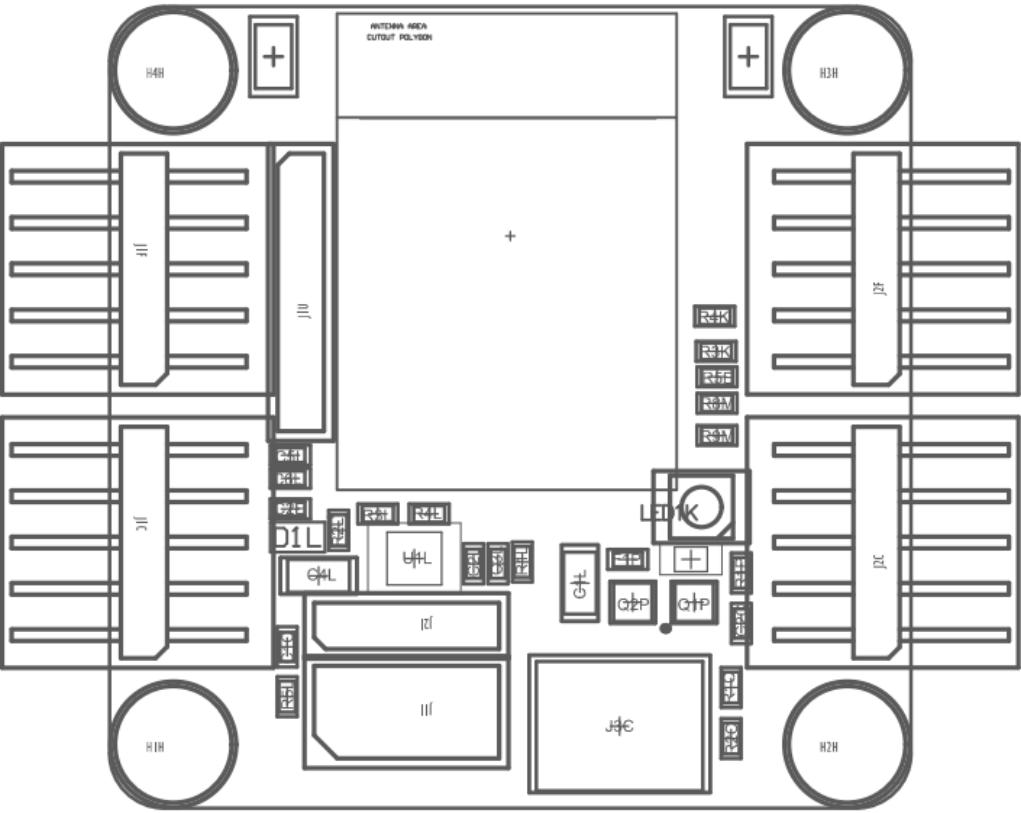


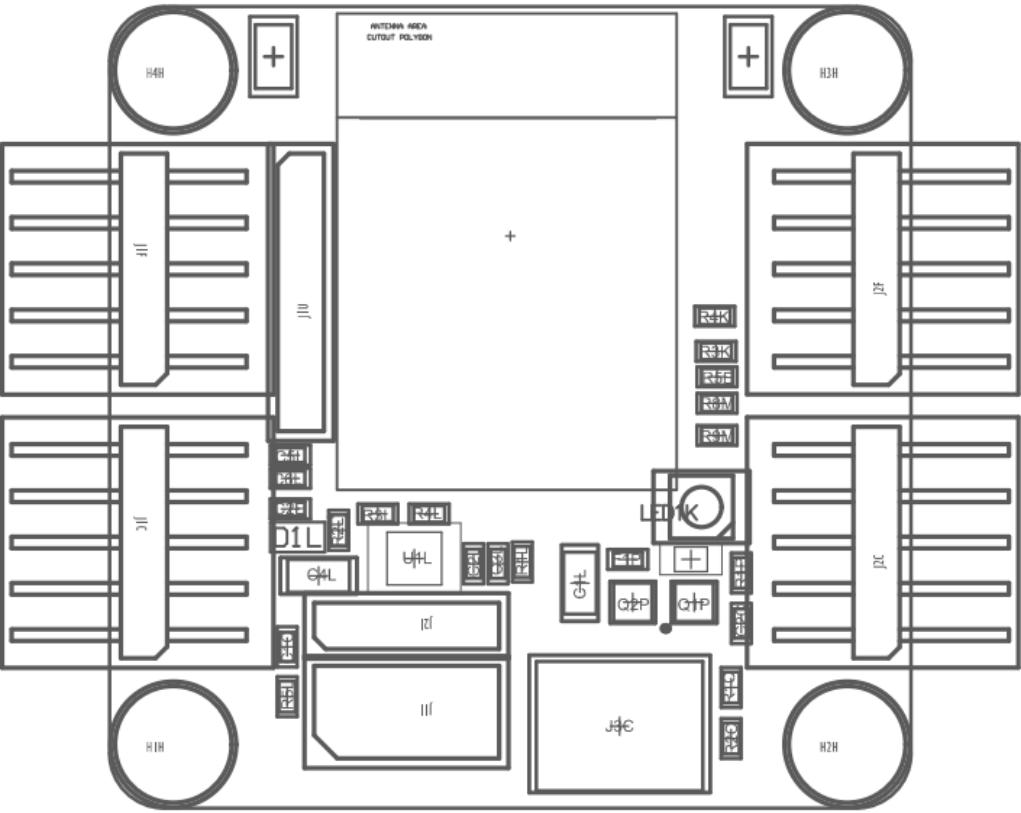


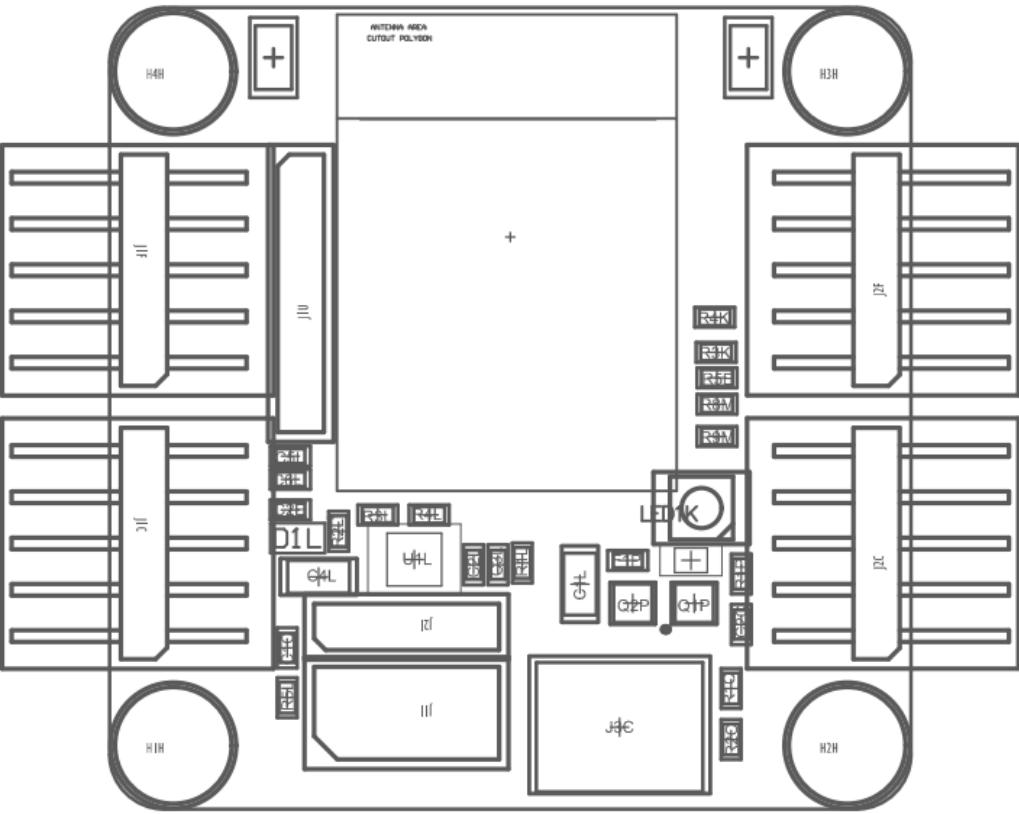


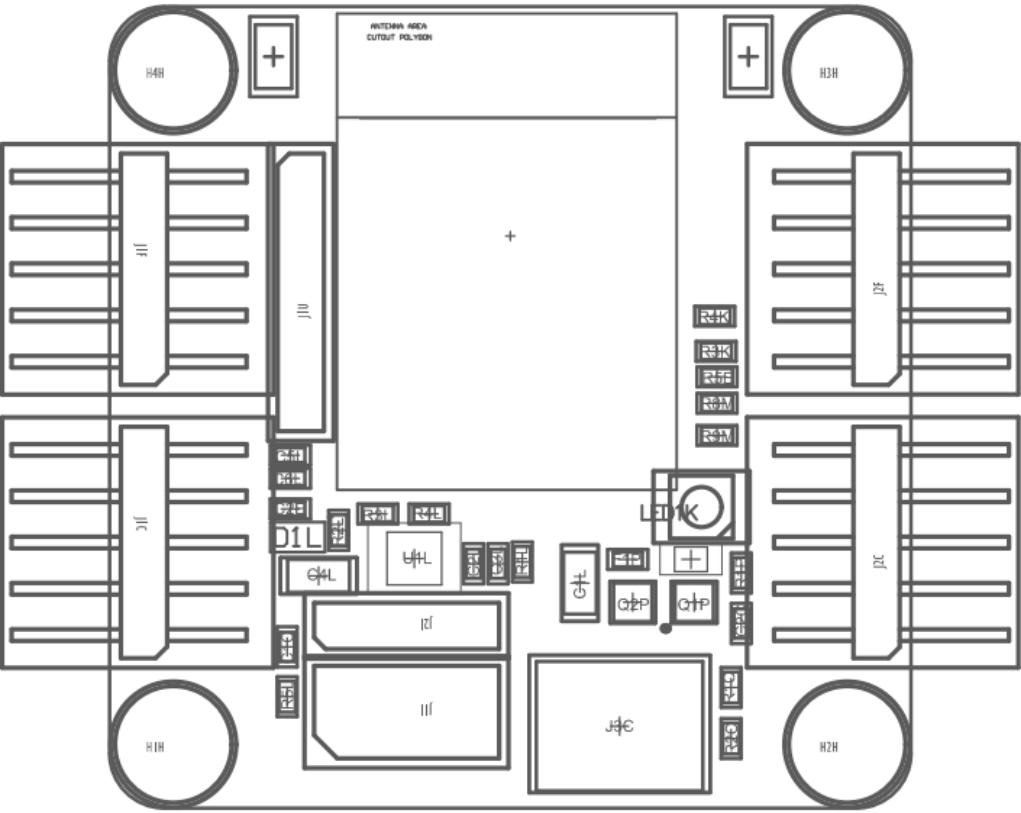


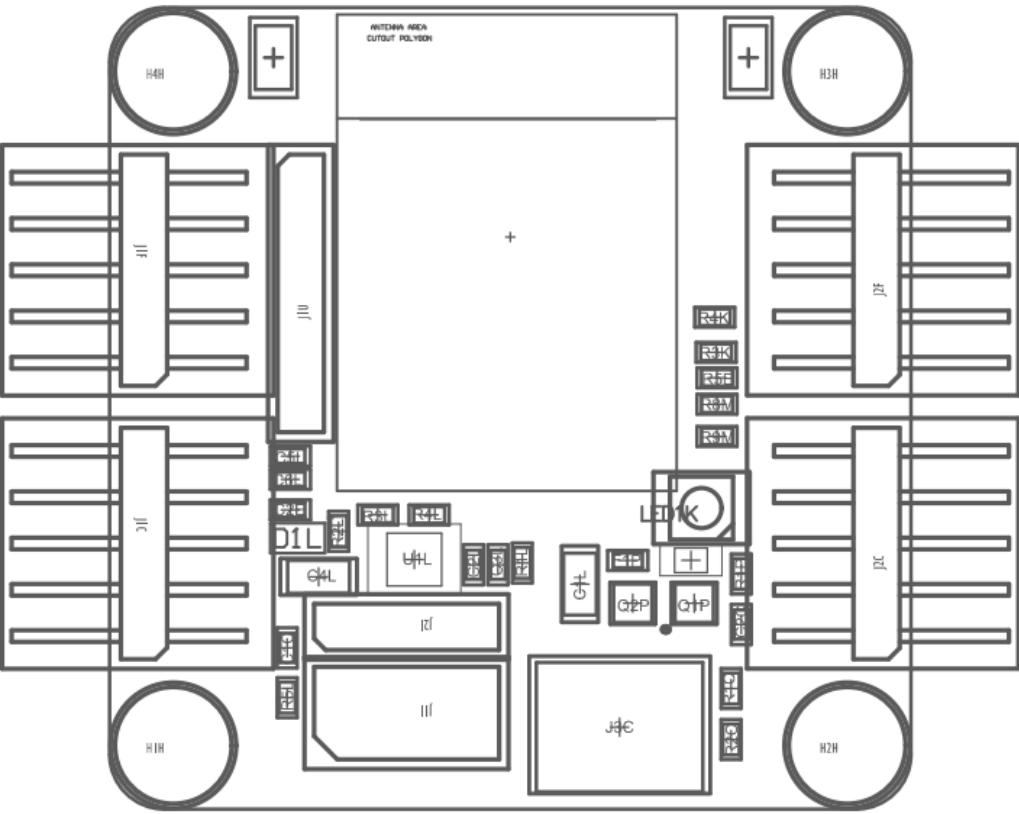


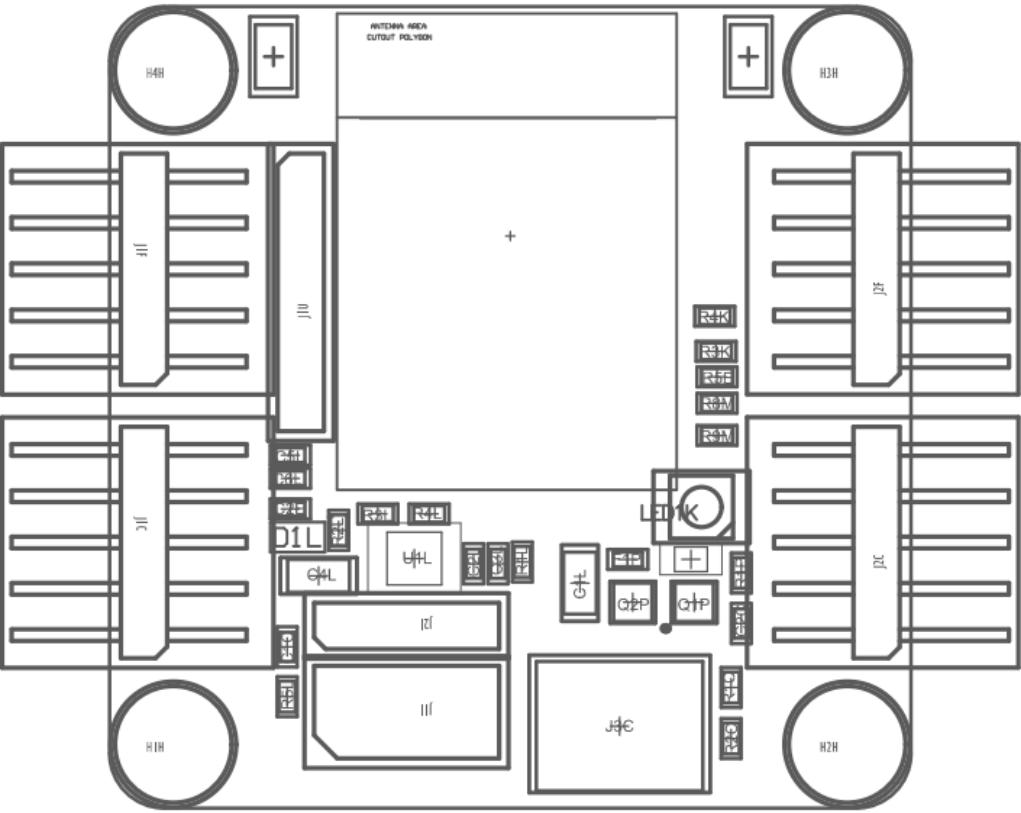


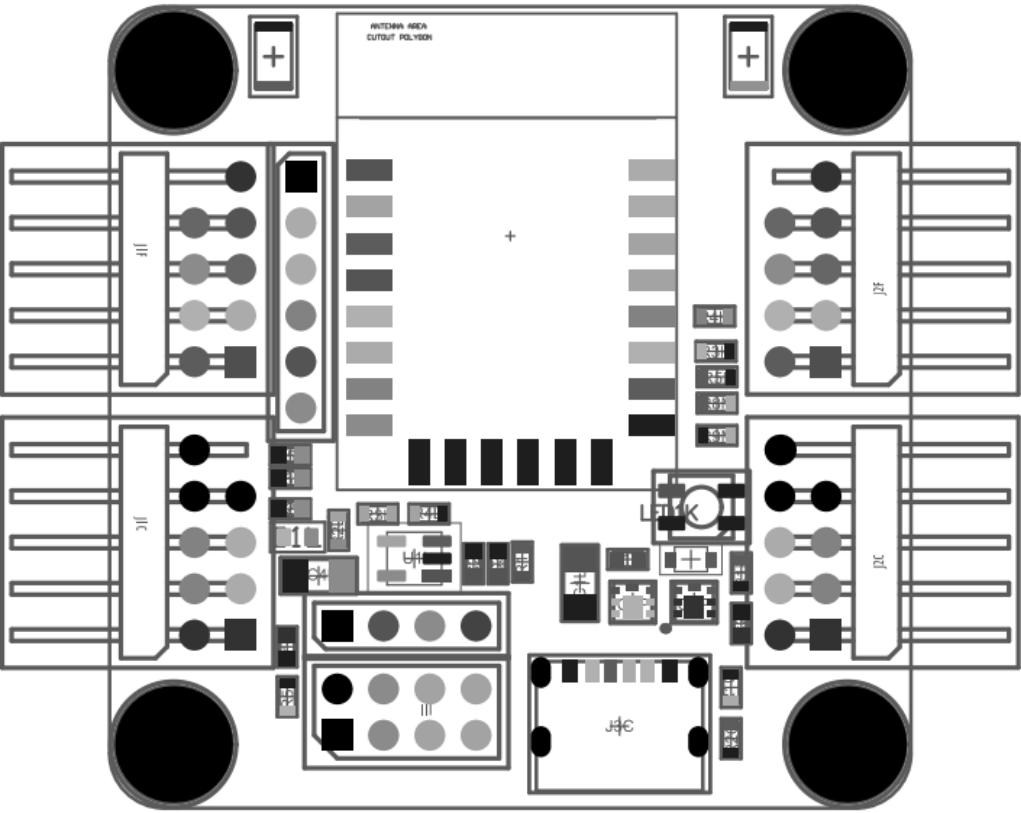


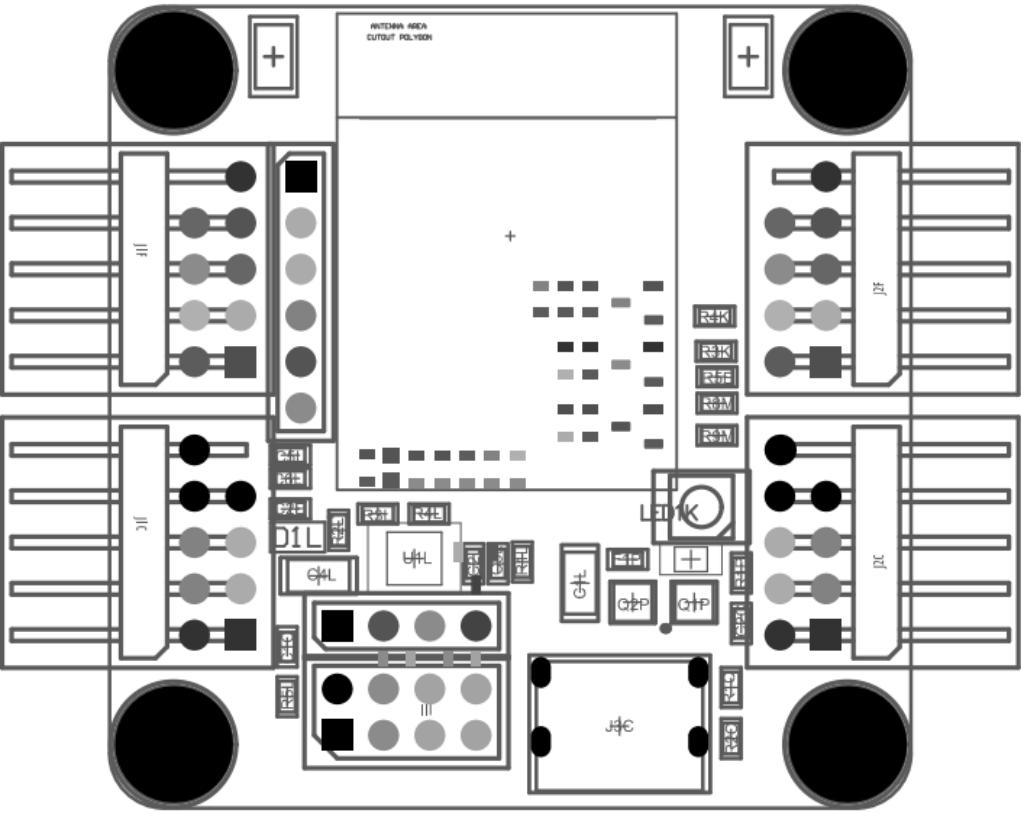


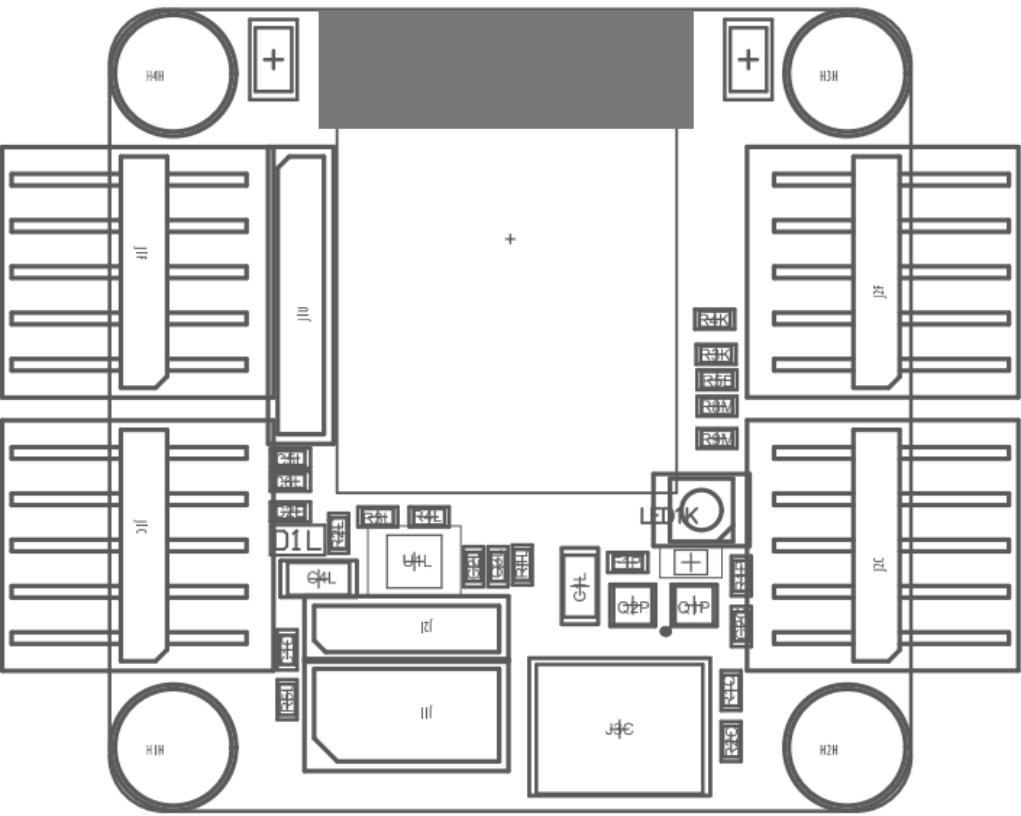


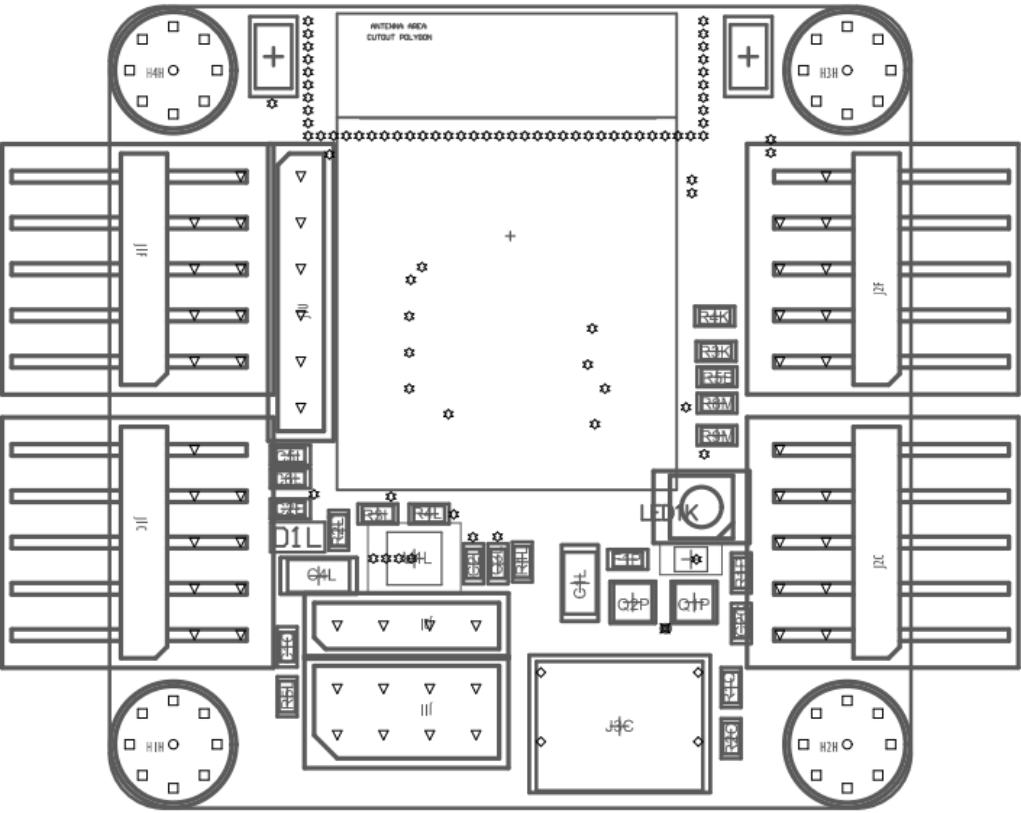


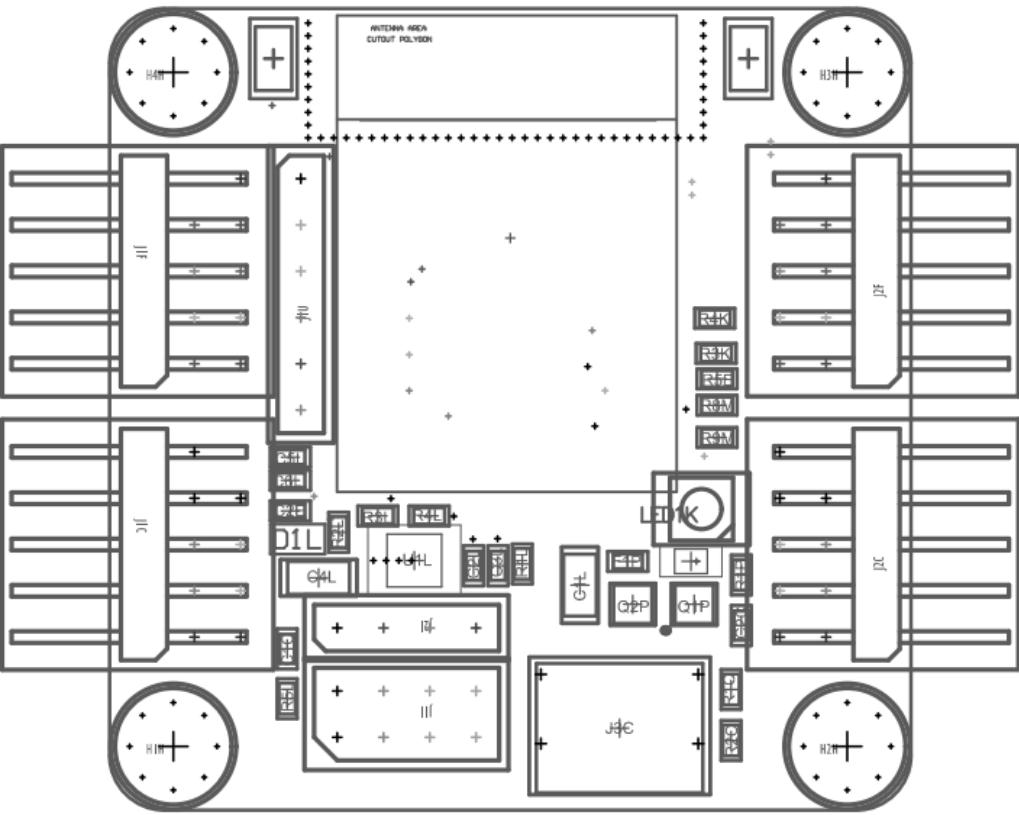


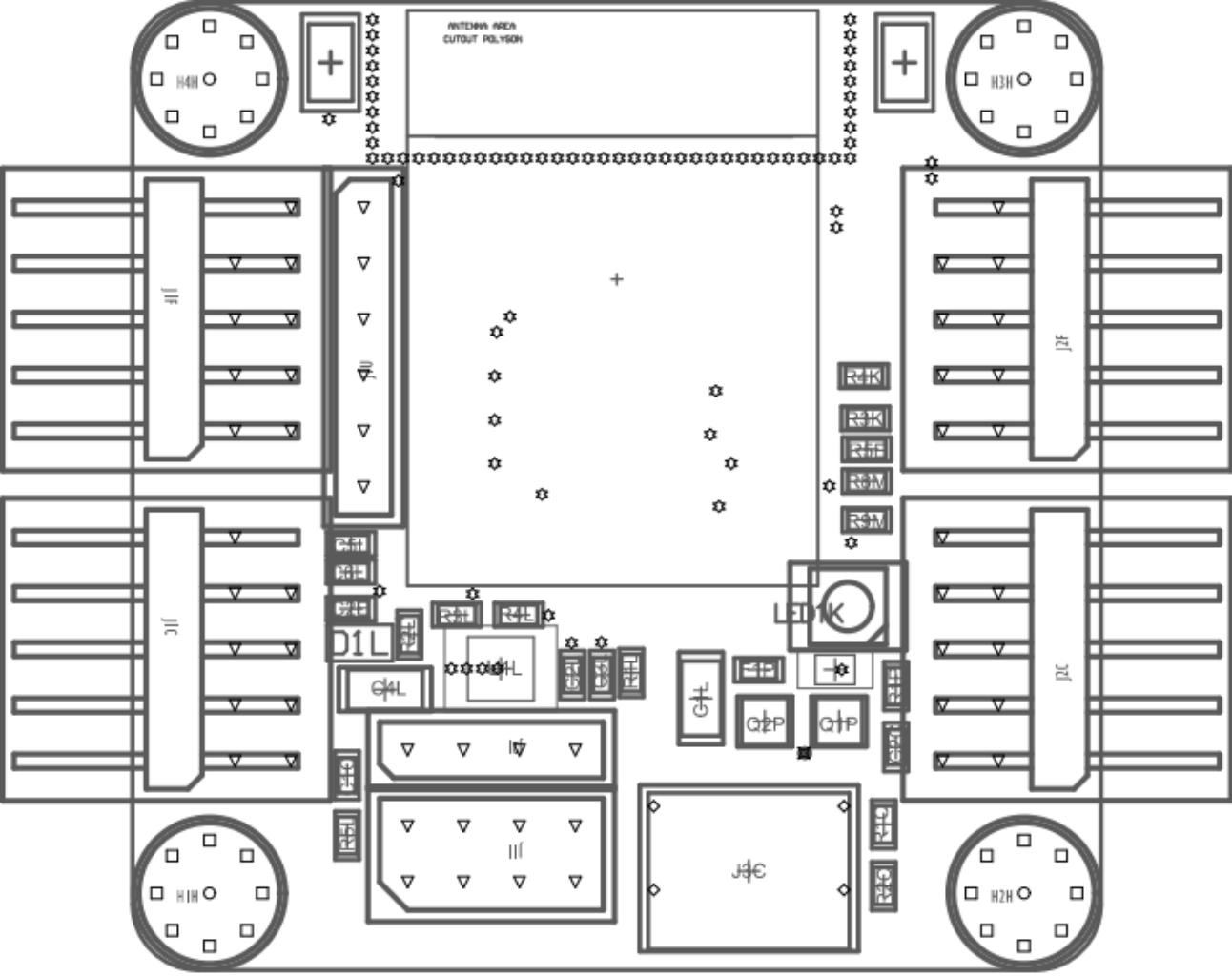


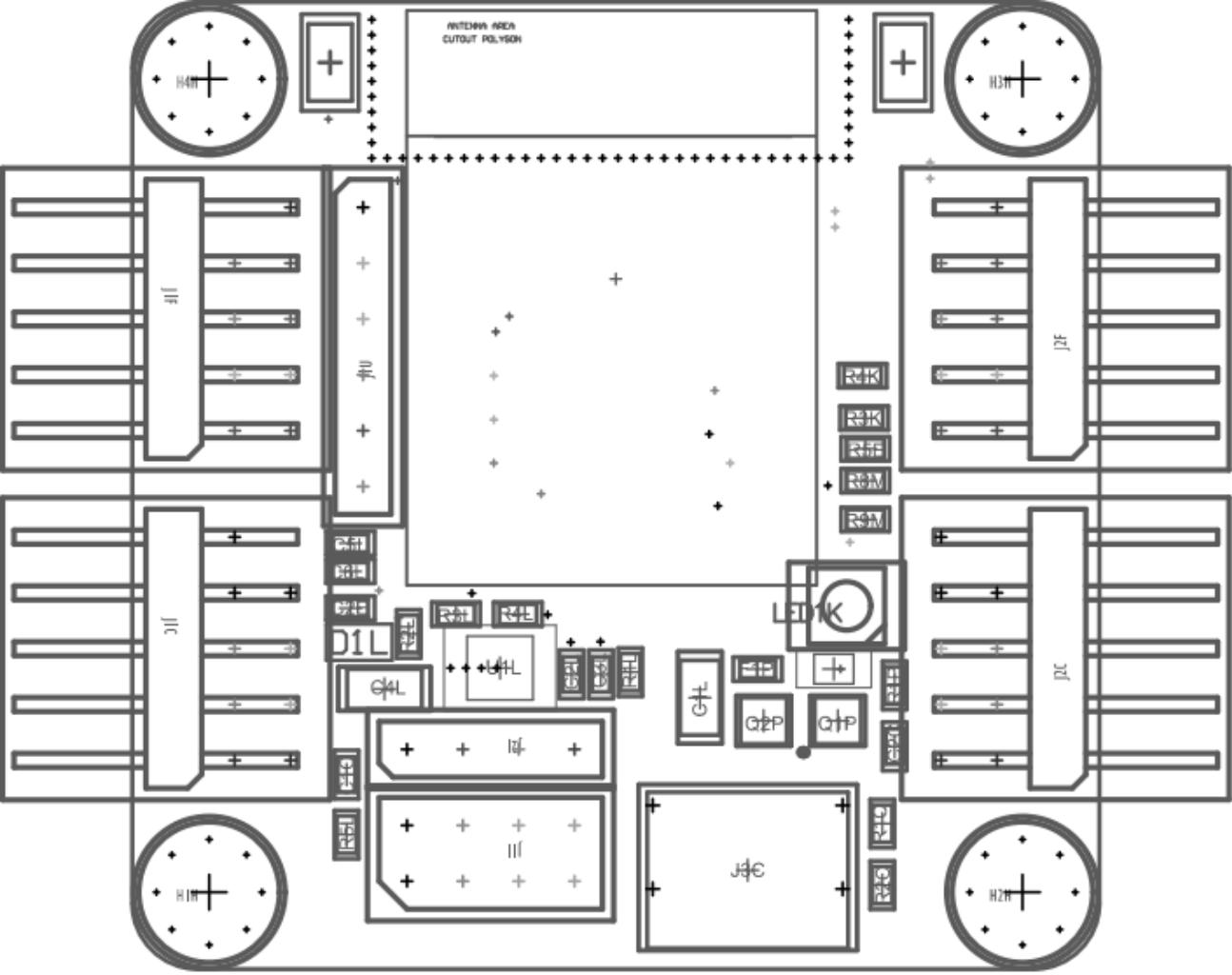












Comment	Description	Designator	Footprint	LibRef	Quantity	Manufacturer Part Number	Value	Tolerance	Voltage Rating
C1608K7R1A225K089 AC	Multilayer Ceramic Capacitor, 2.2uf, 10 V, ± 10%, X7R, 0603 (1608 Metric)	C1E	C0603-IPC_C_No_Silk	2.2uF_10V	1	C1608K7R1A225K089AC	2.2uF	10%	10V
KGM15AR7010K0M X7R (0603)	Surface Mount Tantalum Capacitor, 10uF, 10V, ± 20%, 55°C, 1°C, 125°C, 1000ppm, (3216 Metric)	C1E, C2E	C0603-IPC_C_No_Silk	10uF_6.3V	2	KGM15AR7010K0M	100nF		
TCTAL1A476MBR	Multilayer Ceramic Capacitor, 4.7uF, 10 V, ± 10%, X7R, 0603 (1608 Metric)	C1L	CAP POL 1206_3216-MFG	47uF_10V	1	TCTAL1A476MBR	47uF	20%	10V
C110A475K9NNMC SG	Multilayer Ceramic Capacitor, 4.7uF, 10 V, ± 10%, X7R, 0603 (1608 Metric)	C2C	C0603-IPC_C_No_Silk	4.7uF_10V	1	C110A475K9NNMC	4.7uF	10%	10V
GRM188R61A226ME03 SG	Multilayer Ceramic Capacitor, 22uF, 10 V, ± 20%, X7R, 0603 (1608 Metric)	C2L	C0603-IPC_C_No_Silk	22uF_10V	1	GRM188R61A226ME03	22uF	20%	10V
C0603C10408K06CTU SG	Multilayer Ceramic Capacitor, 10uF, 10 V, ± 10%, X7R, 0603 (1608 Metric)	C3L	C0603-IPC_C_No_Silk	10uF_10V	1	C0603C10408K06CTU	100nF	10%	10V
T491A476M006AT	47uF Solid MnO2 Tantalum Electrolytic Capacitor, 6.3V dc, +/- 10%	C4L	CAP POL 1206_3216-MFG	47uF_-6.3V	1	T491A476M006AT	47uF		
GRM188R610226ME03 D0	Multilayer Ceramic Capacitor, 22uF, 6.3V, X7R, 0603 (1608 Metric)	C5L, C6L	C0603-IPC_C_No_Silk	22uF_6.3V	2	GRM188R610226ME03	22uF	20%	6.3V
LED_0603_YELLOW SMD	LED, 0603, YELLOW	D1L	LED_0603_YELLOW	LED_0603_YELLOW	1				
F0603	Fuse PTC SMD 0603	J1P	R0603-IPC_C	FUSE_PTC_0603	1		500mA		
H1H, H2H, H3H, H4H 1.2mm	Mounting Hole, 3.2mm		MountingHole_3.2mm		4		3.2mm		
ESP8266-ESP-12-F	ESP8266-ESP-12-F	C1E	ESP8266-ESP-12-Large	ESP8266-ESP-12-F	1				
2.54Pitch	USB_Front_Panel_2 J1C		USB_Front_Panel_2 J1C, P2.54mm, Horizon al_Right	USB_Front_Panel_2 J1C, P2.54mm	1				
Z005	J1F		Front_Panel_2x05_P J1F, 2.54mm, Horizontal, 2.54mm	Front_Panel_2x05_P J1F, 2.54mm	1				
Z004	J1I		Pinheader_2x04_P2.54mm J1I, 2x04, P2.54mm	Pinheader_2x04_P2.54mm	1				
Iw06	J1U		Pinheader_1x06_P2.54mm J1U, Vertical, No_J _2	Pinheader_1x06_P2.54mm J1U, Vertical, No_J _2	1				
2.54Pitch	J2C		USB_Front_Panel_2 J2C, P2.54mm, Horizon al_Right	USB_Front_Panel_2 J2C, P2.54mm	1				
Z005	J2F		Front_Panel_2x05_P J2F, 2.54mm, Horizontal, 2.54mm	Front_Panel_2x05_P J2F, 2.54mm	1				
Tx04	J2I		Pinheader_1x04_P2.54mm J2I, 1x04, P2.54mm	Pinheader_1x04_P2.54mm J2I, 1x04, P2.54mm	1				
21175-0001	Connector USB Type C Female, 4 Positions 0.8mm Right Angle SMT Embroided T/R, Tape and Reel	J3C	USB-Type-C-4-Pin-SMT	USB-Type-C-4-Pin-SMT	1				
WS2812B_3535	4PIN SMART LED WS2812B 3535 3.5MM X 3.5MM	LED1K	WS2812B-Mini_3535	WS2812B_3535	1				
BSS138NH6327	Single N Channel 60 V 3.5 Ohm 1nC SiPMOS* Small Signal MOSFET - SOT-23	Q1M, Q2M, Q3M, Q4M	SOT-23-3-IPC_C	BSS138NH6327	4BSS138NH6327				
PMPB14K9Z	PMPB14K9Z	J1P, G2P	DFN2020MD-MFG	PMPB14K9Z	2PMPB14K9Z				
CRCW0603SK10YKEA	SMD Chip Resistor, 10 kOhm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R1C, R2C	R0603-MFG	5.1k	2CRCW0603SK10YKEA	5.1kR	1%	75V	
RC0603FR-0710KL	SMD Chip Resistor, 2.2kOhm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R1E, R1L, R2E, R2L, R4E, RAM, RSE, RSM, R6M, R7M, R8M	R0603-MFG	10k	1RC0603FR-0710KL	10kR	1%	75V	
RC0603FR-072KL	SMD Chip Resistor, 100.0Ohm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R1L, R2L	R0603-MFG	2.2k	2RC0603FR-072KL	2.2kR	1%	50V	
RC0603FR-101KL	SMD Chip Resistor, 1 Ohm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R1K, R4K	R0603-MFG	1k	2RC0603FR-101KL	1kR	1%	50V	
AC0603FR-0710KL	SMD Chip Resistor, 100.0Ohm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R1M, R2M, R3K, R3M, R8M	R0603-MFG	100R	5AC0603FR-0710KL	100R	1%	50V	
AC0603FR-0701KL	SMD Chip Resistor, 100.0Ohm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R1P	R0603-MFG	100k	1AC0603FR-0701KL	100kR	1%	50V	
MCR03EPZPFX1691	Surface Mount Thick Film Chip Resistor 0603 1.6kR ± 1% Tolerance, 100PPM	R2L	R0603-MFG	1.6k	1MCR03EPZPFX1691	1.6kR	1%		
AC0603FR-074KL	SMD Chip Resistor, 4.7kOhm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R3I	R0603-MFG	4.7k	1AC0603FR-074KL	4.7kR	1%	50V	
EPU-3DKF3302V	Resistor Film 0603 1.6kR ± 1% 100ppm ± 100ppm/°C Pad SMD Autotrim 175	R3L	R0603-MFG	33k	1EPU-3DKF3302V	33kR	1%	75V	
CR0603-FX-2002LF	SMD Chip Resistor, 20 Ohm, ± 1%, 100 mW, 0603 (1608 Metric), Thick Film, General Purpose	R4L	R0603-MFG	20k	1CR0603-FX-2002LF	20kR	1%	50V	
MCR03EPZPFX2491	Resistor Film 0603 2.4kR Ohm 1% 1/10W ± 100ppm/°C Molded SMD SMD Paper T/R	R5L	R0603-MFG	2.4k	1MCR03EPZPFX2491	2.4kR	1%		
EVP-AWED4A	3.0MHz X 2.0MHz / 3.3N / 0.15μMΩ ST	S4W, SW2K	PANASONIC EVP-AWED4A		2				
ES4A09P	100nF ± 10% 50V SMD	S4Z	ES4A09P		1ES4A09P				
AD1YN5G/TR	MM3212V5T1G Zener Diode, 12V 2% 200 mW, 0603 (1608 Metric)	S5L	TSOT-23-5-IPC-A	AD1YN5G/TR	1AD1YN5G/TR				
MM3212V5T1G	MM3212V5T1G Zener Diode, 12V 2% 200 mW, 0603 (1608 Metric)	S5D-322	MM3212V5T1G		1MM3212V5T1G		2%		

Design Rules Verification Report

Filename : C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Deskop_Power\ESP8266-Deskop_Power.Pcbschematic Warnings 0
Rule Violations 0

Warnings
Total 0

Rule Violations	
Clearance Constraint (Gap=4mm) (InNetClass('PowerRails_HighVoltage_AC') Or	0
Clearance Constraint (Gap=0.254mm) (InComponentClass('Via_Plugged')), (IsPad)	0
Clearance Constraint (Gap=0.254mm) (All), (All)	0
Short-Circuit Constraint (Allowed=No) (All), (not IsBoardCutoutRegion)	0
Un-Routed Net Constraint (All)	0
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Width Constraint (Min=0.2mm) (Max =25.4mm) (Preferred=0.3mm) (InNetClass('PowerRails_LowVoltage_DC'))	0
Width Constraint (Min=0.11mm) (Max =0.11mm) (Preferred=0.11mm) (InNetClass('Signal_75_ohm'))	0
Width Constraint (Min=0.2mm) (Max =25.4mm) (Preferred=0.3mm) (InNetClass('GND'))	0
Width Constraint (Min=0.11mm) (Max =0.11mm) (Preferred=0.11mm) (InNetClass('Signal'))	0
Width Constraint (Min=0.303mm) (Max =0.303mm) (Preferred=0.303mm) (InNetClass('Signal_50_ohm'))	0
Width Constraint (Min=0.18mm) (Max =0.4mm) (Preferred=0.254mm) (InNetClass('Power_Signal'))	0
Routing Layers(All)	0
Routing Via (MinHoleWidth=0.3mm) (Max HoleWidth=0.5mm) (PreferredHoleWidth=0.3mm) (MinWidth=0.45mm)	0
Differential Pairs Uncoupled Length using the Gap Constraints (Min=0.127mm) (Max =0.127mm) (Preferred=0.127mm)	0
Differential Pairs Uncoupled Length using the Gap Constraints (Min=0.381mm) (Max =0.381mm) (Preferred=0.381mm)	0
Differential Pairs Uncoupled Length using the Gap Constraints (Min=0.381mm) (Max =0.381mm) (Preferred=0.381mm)	0
SMD To Corner (Distance=0.127mm) (All)	0
SMD Neck-Down Constraint (Percent=90%) (not IsTestpoint and not InNetClass('PowerRails_LowVoltage_DC') and not	0
SMD Entry (Side = Allowed) (Corner = Allowed) (Any Angle = Not Allowed) (Ignore First Corner = Allowed)	0
Power Plane Connect Rule(Relief Connect)(Expansion=0.508mm) (Conductor Width=0.254mm) (Air Gap=0.254mm)	0
Minimum Annular Ring (Minimum=0.2mm) (IsThruPin)	0
Minimum Annular Ring (Minimum=0.075mm) (IsVia)	0
Acute Angle Constraint [Tracks Only] (Minimum=60.000) (All)	0
Hole Size Constraint (Min=0.3mm) (Max =6.3mm) (All)	0
Pads and Vias to follow the Drill pairs settings	0
Hole To Hole Clearance (Gap=0.45mm) (ispad),(IsPad)	0
Minimum Solder Mask Sliver (Gap=0.13mm) (All),(All)	0
Silk To Solder Mask (Clearance=0.15mm) (All),(All)	0
Silk to Silk (Clearance=0.102mm) (All),(All)	0
Net Antennae (Tolerance=0mm) (All)	0
Board Clearance Constraint (Gap=0mm) ((OnLayer('Top Layer') OR OnLayer('Bottom Layer')))	0
Height Constraint (Min=0mm) (Max =1816.048mm) (Preferred=12.7mm) (All)	0
Total	0

Electrical Rules Check Report

Class	Document	Message
Warning	5_Keys_And_Status.SchDoc	Net WS2812B_DATA has no driving source (Pin LED1K-4, Pin R3K-1)

Different Descriptions

Schematic Object

MM3Z12VST1G Zener Diode, 12V 2% 200 mW SMT 2-Pin SOD-323

PCB Object

ON Semiconductor MM3Z12VST1G [ZD1P]