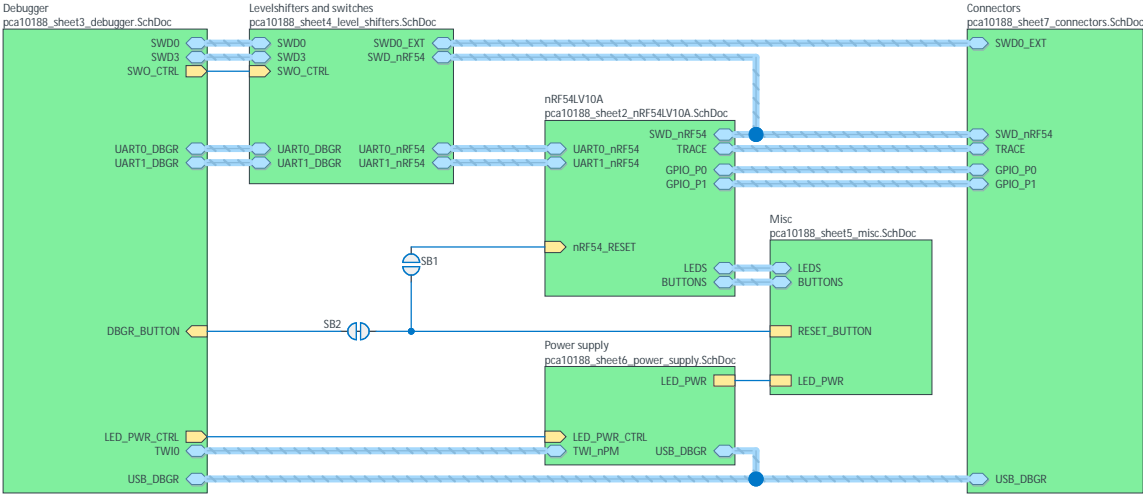


Nordic Semiconductor ASA

nRF54LV10 Development Kit (PCA10188)

- Sheet 1: Connections
- Sheet 2: nRF54LV10A
- Sheet 3: Debugger
- Sheet 4: Level Shifters
- Sheet 5: Misc
- Sheet 6: Power Supply
- Sheet 7: Connectors



Logo's and markings

PCA10188
0.7.0
<year> <week>
<ID>



Preliminary Development Kit
Early Access

✗ The No ERC object is a design directive.
This directive is placed on a node in the circuit to suppress harmless warnings and/or error violation conditions that are detected when the schematic project is compiled.

Board fiducials

Nordic Semiconductor does not warrant the accuracy or completeness of this documentation or any included information. Nordic Semiconductor makes no assurances that this design will meet specification, be appropriate for your application, or fit for any particular purpose, or that it will function in an implementation. Nordic Semiconductor also does not claim that the design is ready for production. It is your responsibility to thoroughly validate and test your design implementation to confirm the functionality of your application.
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Title
nRF54LV10-DK - Connections

Size
A3

PCB Assembly Number
PCA10188

Date: 24.09.2025

File: pca10188_sheet1_cover_sheet.SchDoc

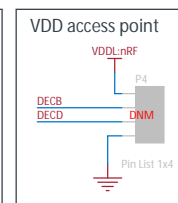
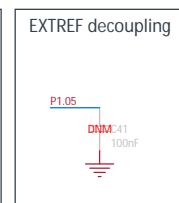
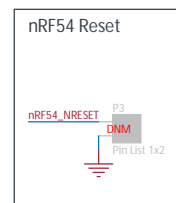
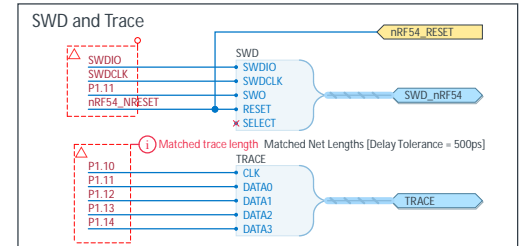
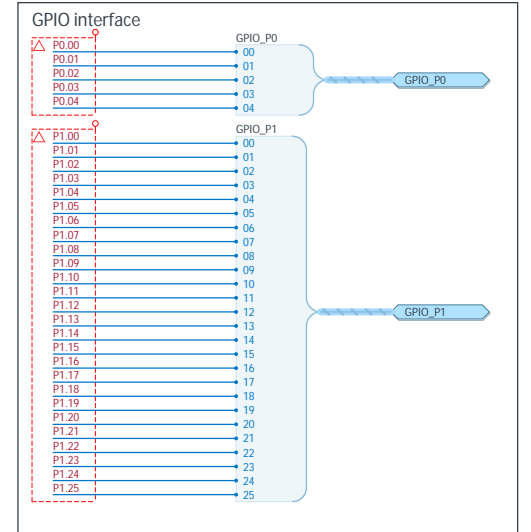
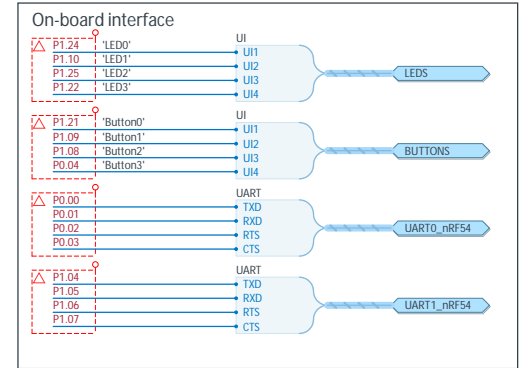
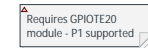
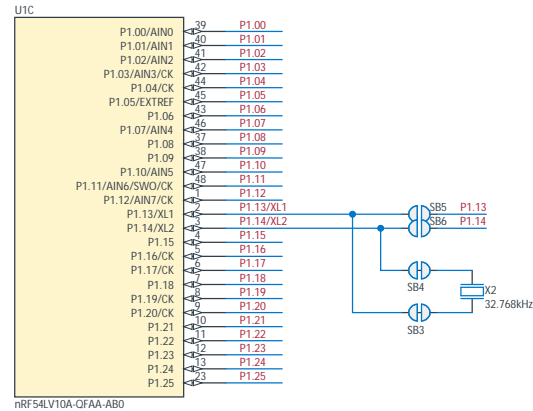
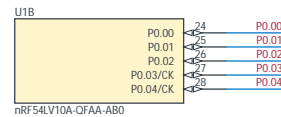
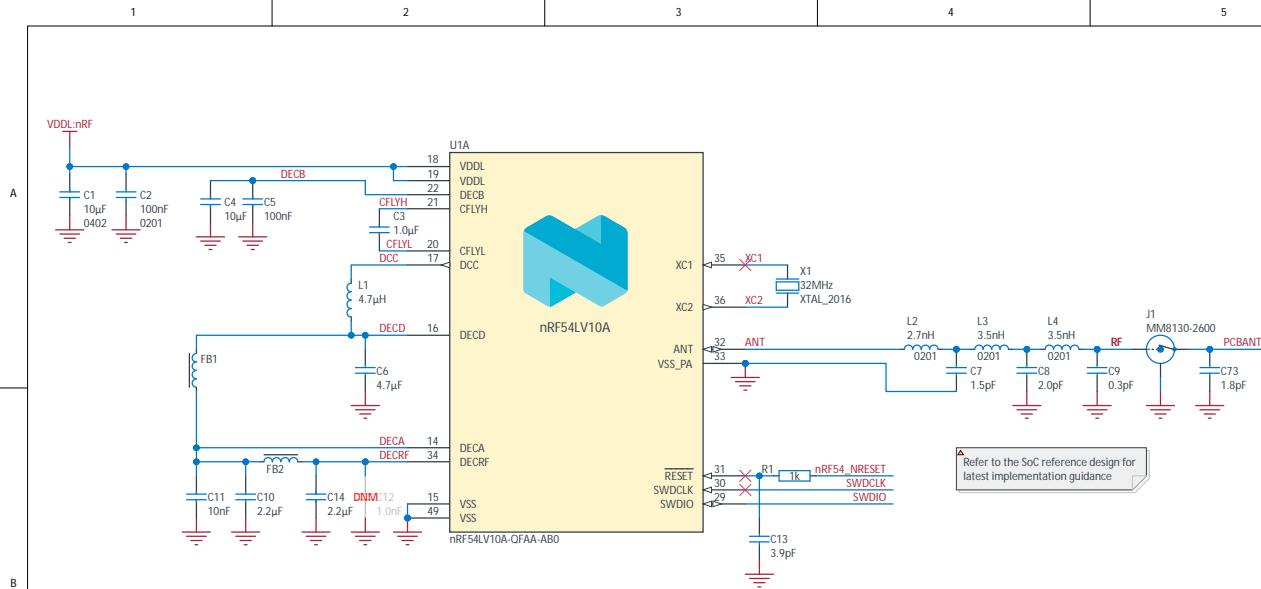
Classification: Public


Revision
0.7.0

Sheet 1 of 7

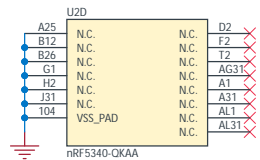
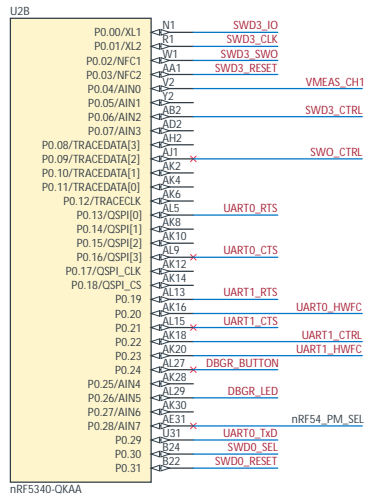
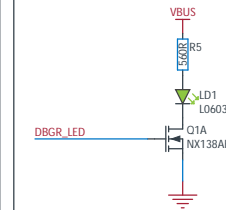
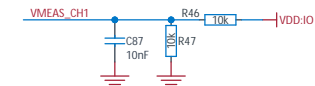
Drawn By: DABA



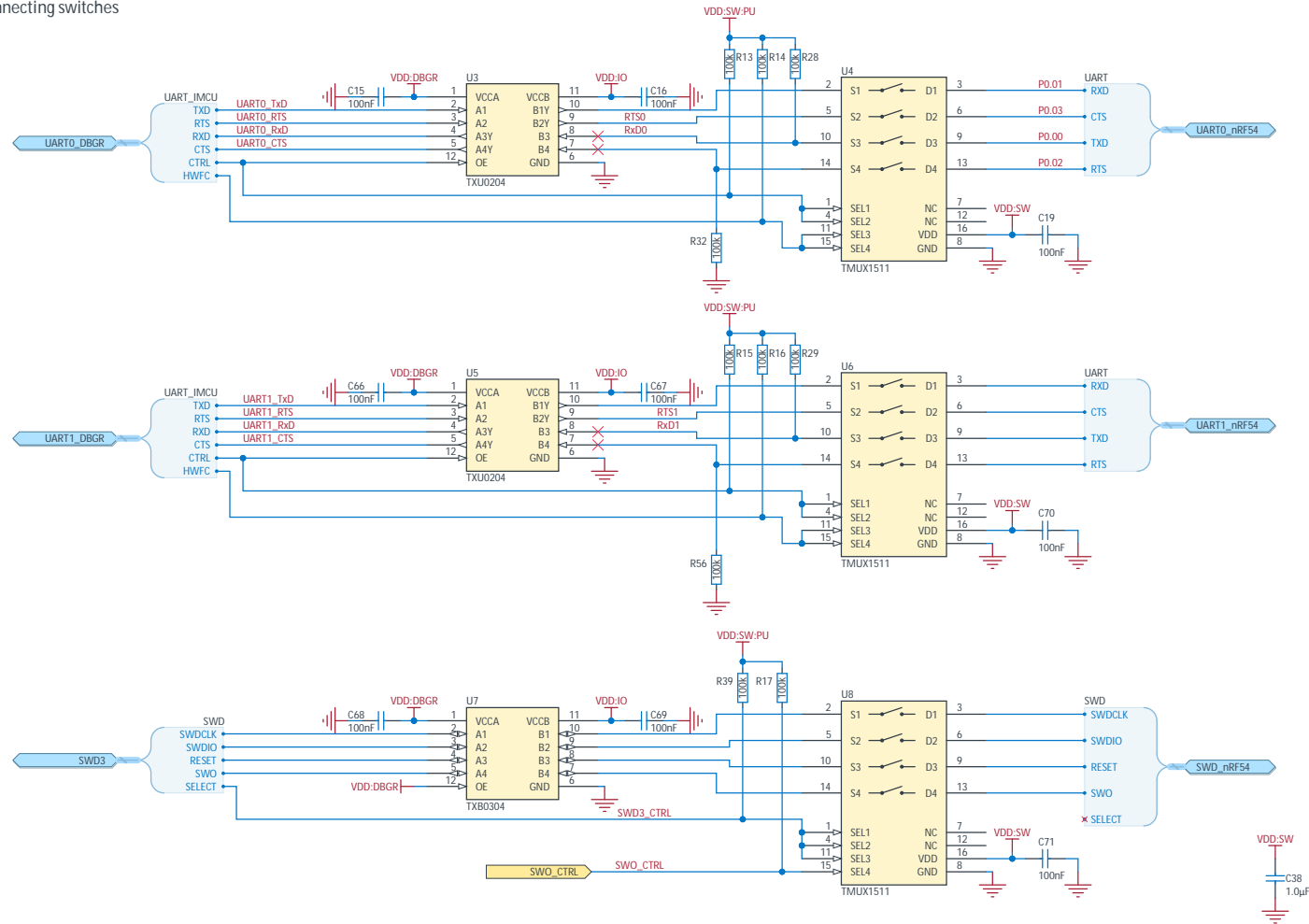


Title nRF54LV10-DK - nRF54LV10A		
Size A3	PCB Assembly Number 10A10188 Revision 0.7.0	
Date: 24.09.2025		Sheet 2 of 7
File: pca10188_sheet2_nRF54LV10A_SchDoc		Drawn By: DABA
Classification: Public		

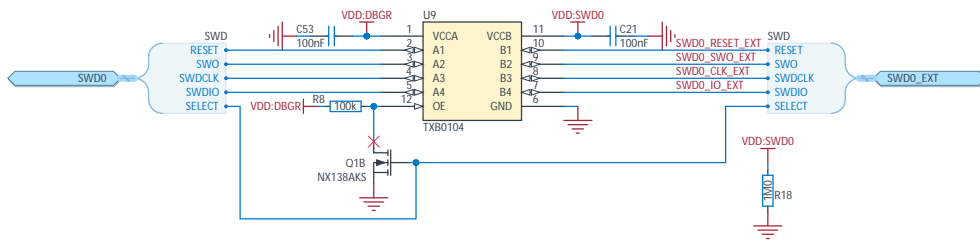
nRF5340 is self powered through VBUS and VDDH

[illegible][illegible]

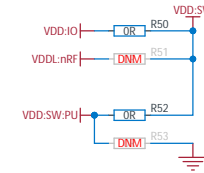
UART and SWD disconnecting switches



SWD Debug Out level shifter



Analog switches manual override



Title
nRF54LV10-DK - Level Shifters

Size
A3

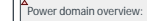
PCB Assembly Number
PCA10188

Revision
0.7.0

Date: 24.09.2025
File: pca10188_sheet4_level_shifters.SchDoc
Classification: Public

Sheet 4 of 7
Drawn By: DABA

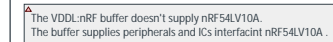




VDDL	1.2V - 1.7V VDDL sourced from nPM1300 VOUT1
VDDL:nRF	Input power for nRF54L10A only, delivered from VDDL
VDDL:IO	Buffered VDDL:nRF supplying analog switches, levelshifters
VBUS	USB VBUS after power switch
VBUS:OUT	VBUSOUT from nPM1300
5V0	5V VSYS (VBUS) used for input to Buck regulators and system 5V

nPM1300 settings:

- VOUT1 disabled
- VOUT1 default value 1.5V enabled by debugger at start up and forced in PWM mode
- VOUT1 output discharge enable
- Enable LS2 for LED power switching, using GPIO1 as enable/disable signal.



Size	PCB Assembly Number
A3	PCA10188

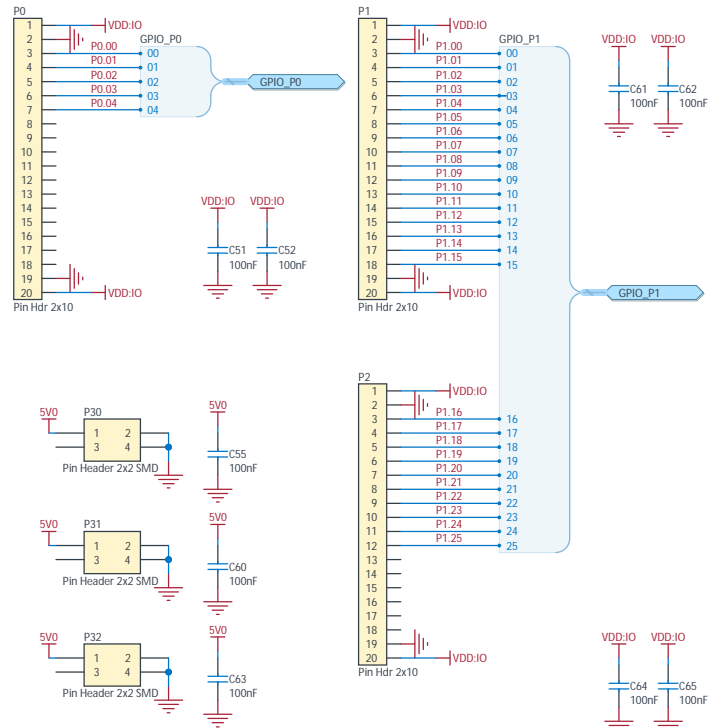
Date: 24.09.2025
File: pca10188_sheet6_power_supply.SchDoc
Classification: Public

Revision	0.7.0
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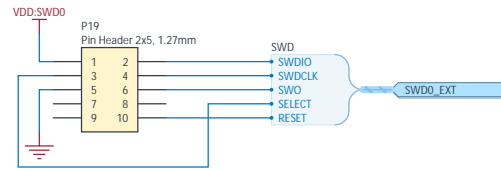
Sheet 6 of 7
Drawn By: DABA



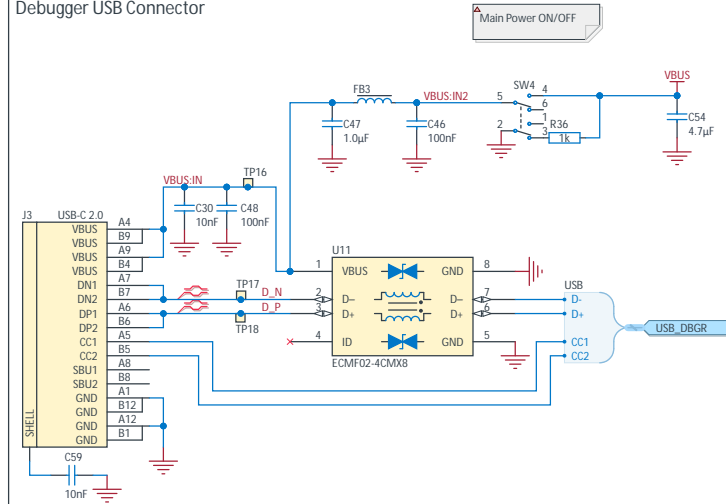
GPIO Headers



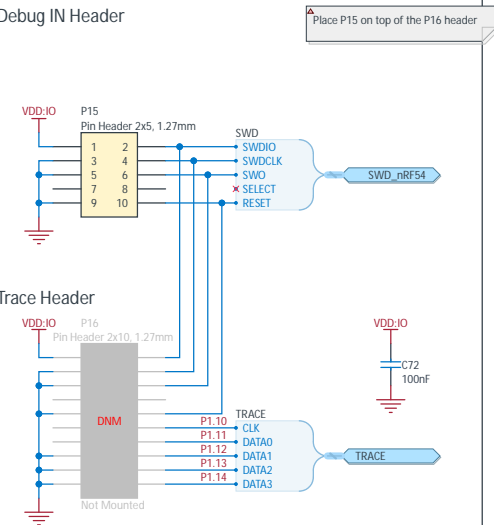
Debug OUT Header



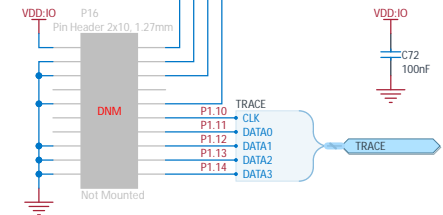
Debugger USB Connector



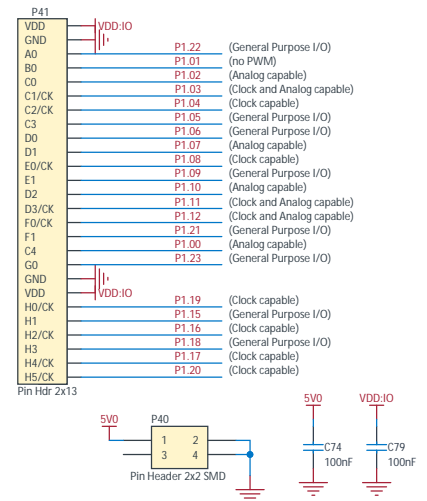
Debug IN Header



Trace Header



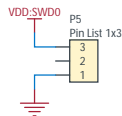
Expansion Board Header



GND probe point



Power Header



Title
nRF54LV10-DK - Connectors

Size
A3

Date: 24.09.2025
File: pca10188_sheet7_connectors.SchDoc
Classification: Public

PCB Assembly Number
PCA10188

Revision
0.7.0

Sheet 7 of 7
Drawn By: DABA



400868
0038DABA

nRF54LV10-DK

ON
OFF
SW4

POWER

VDDL CURRENT MEASURE

PMIC

DEBUGGER

RESET

DEBUG OUT

3.6V Max

GPIO pins shown in parentheses are only available on headers with modification

PORT0

PORT1

PORT2

EXPAN

DEBUG IN/TRACE

LED0

LED1

LED2

LED3

BUTTON 0

BUTTON 1

BUTTON 2

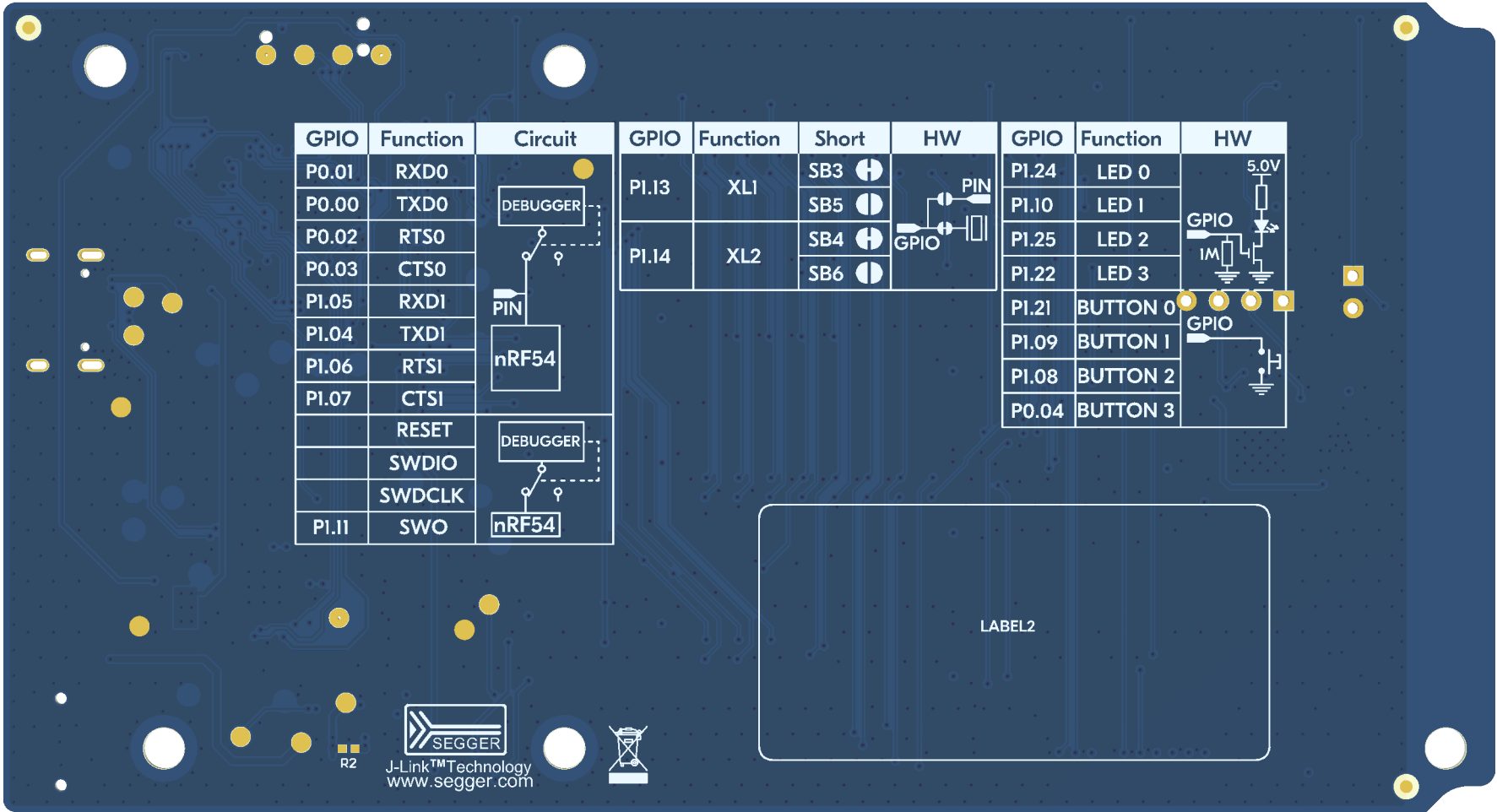
BUTTON 3

NORDIC SEMICONDUCTOR

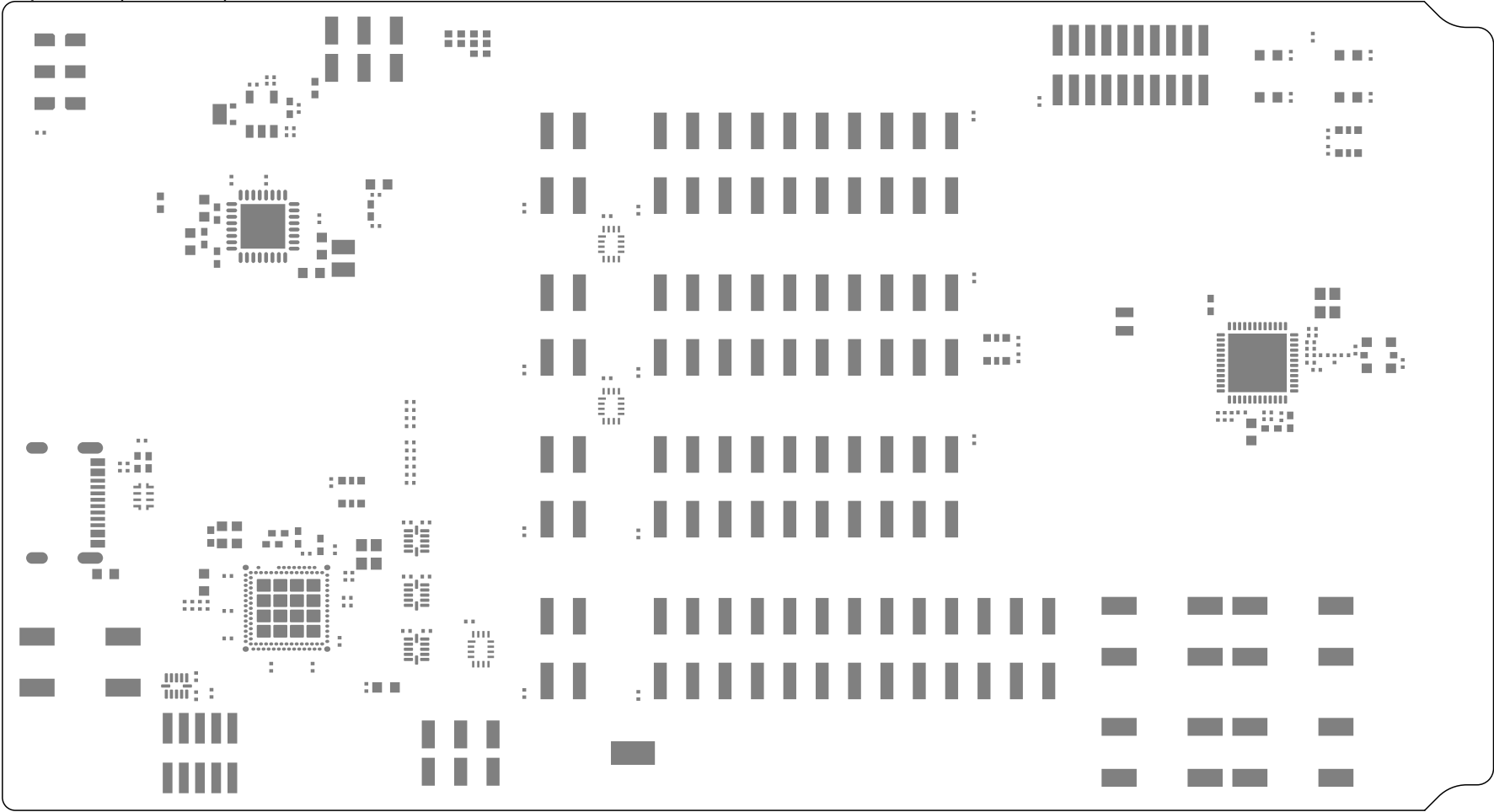
Title		nRF54LV10-DK	
Size: A4	Part Number: 400868	Revision: 0038DABA	
Date: 24.09.2025		Sheet 1 of 14	
File: 400868_PCB_prints.PCBDwf		Drawn By: DABA	
Classification:	Public		



Realistic View



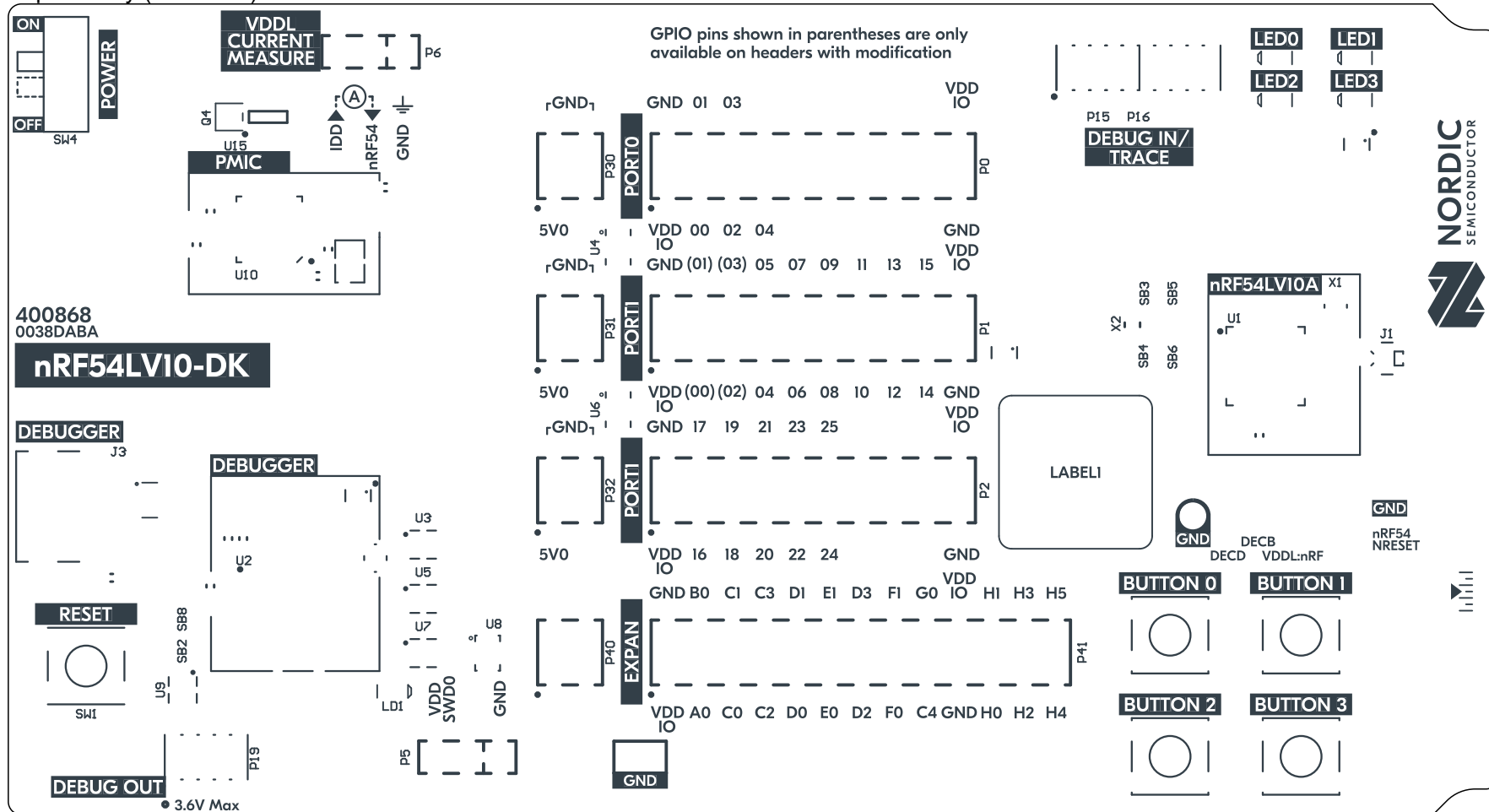
Top Paste (Scale 2:1)



Title			nRF54LV10-DK		
Size:	A4	Part Number:	400868	Revision:	0038DABA
Date:	24.09.2025			Sheet	3 of 14
File:	400868_PCB_prints.PCBDwf			Drawn By:	DABA
Classification:	Public				



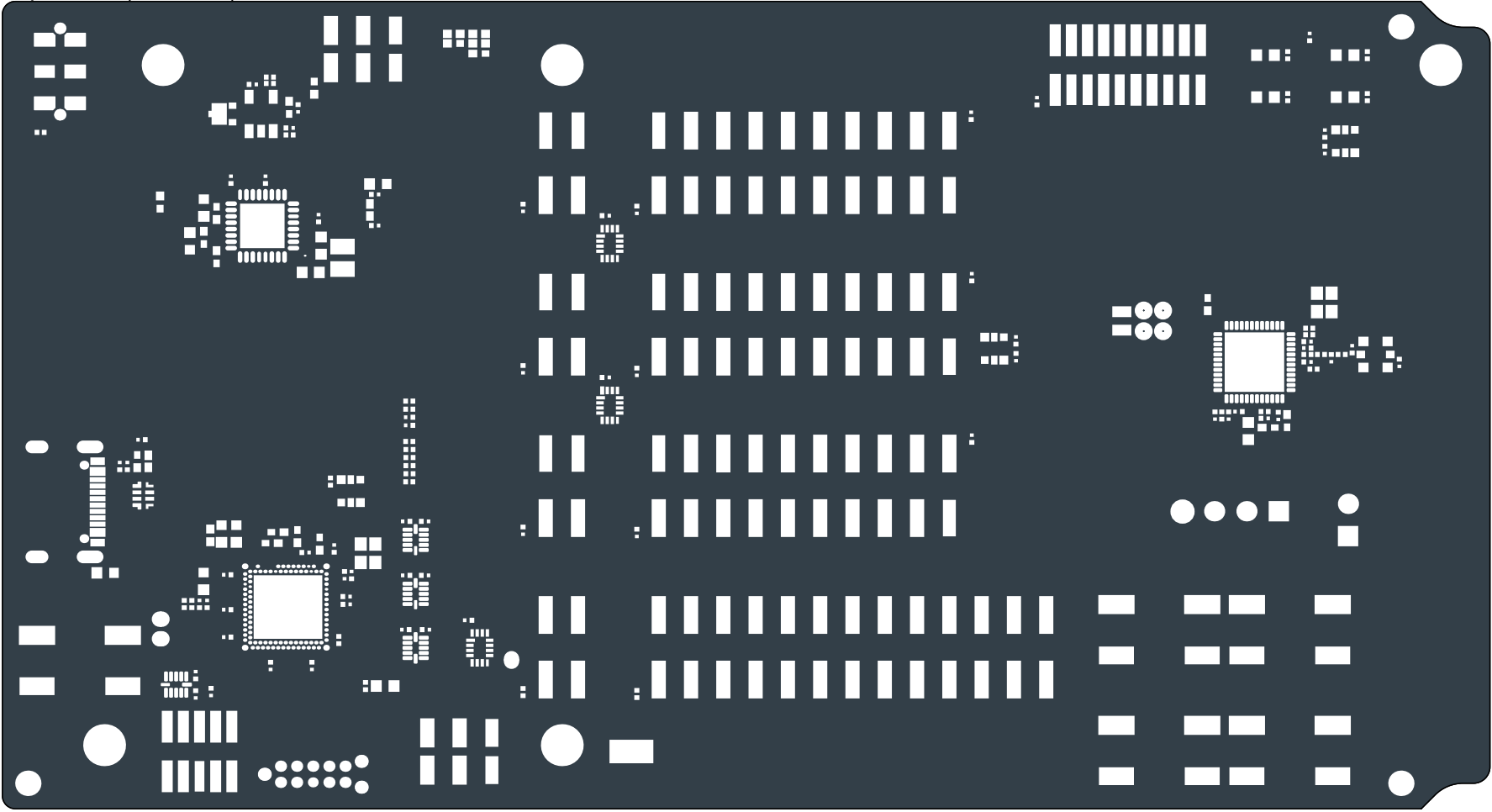
Top Overlay (Scale 2:1)



Title nRF54LV10-DK		
Size: A4	Part Number: 400868	Revision: 0038DABA
Date: 24.09.2025		Sheet 4 of 14
File: 400868_PCB_prints.PCBDwf		Drawn By: DABA
Classification: Public		



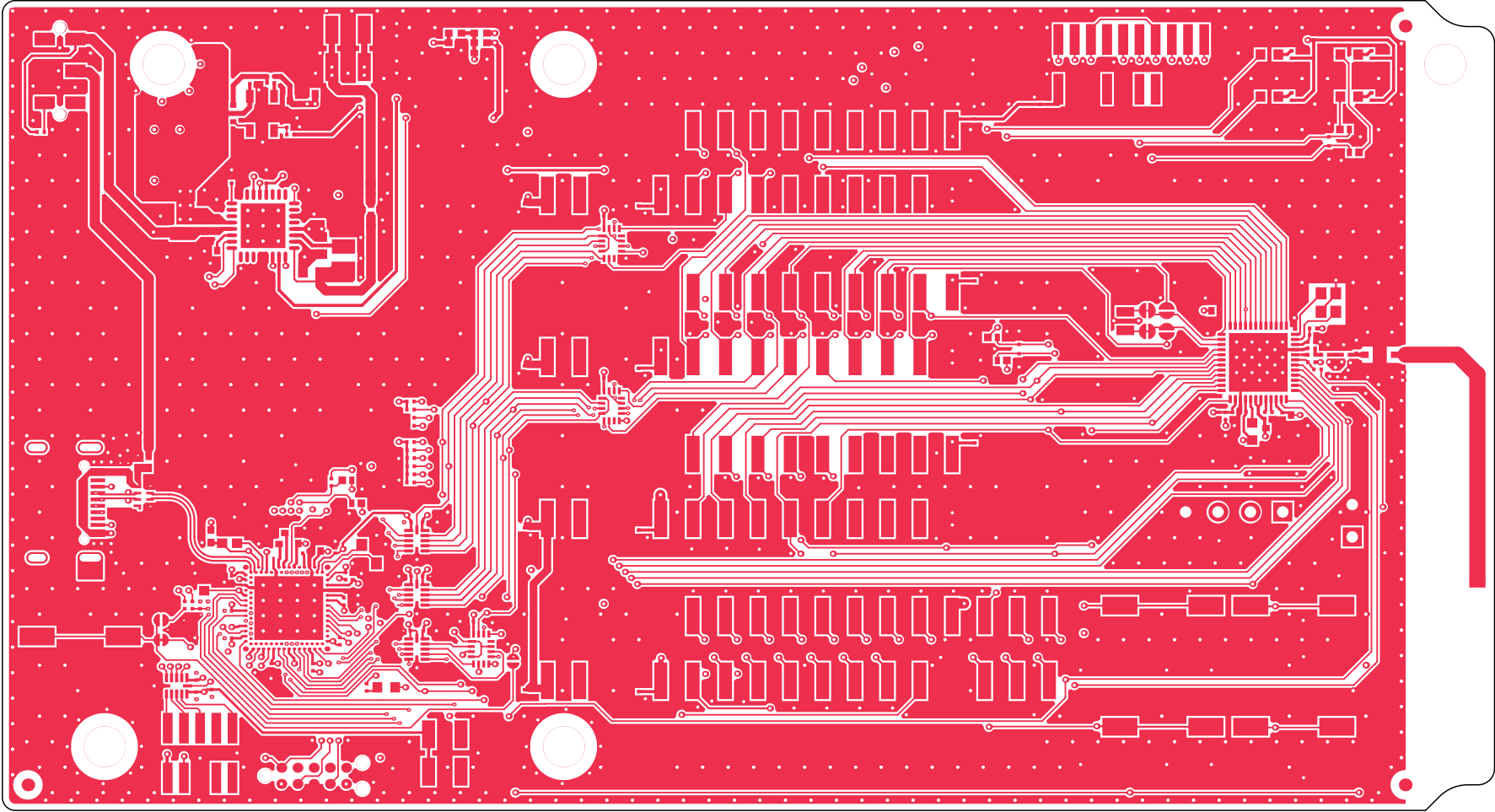
Top Solder (Scale 2:1)



Title				nRF54LV10-DK			
Size: A4		Part Number: 400868		Revision: 0038DABA			
Date: 24.09.2025				Sheet 5 of 14			
File: 400868_PCB_prints.PCBDwf				Drawn By: DABA			
Classification: Public							



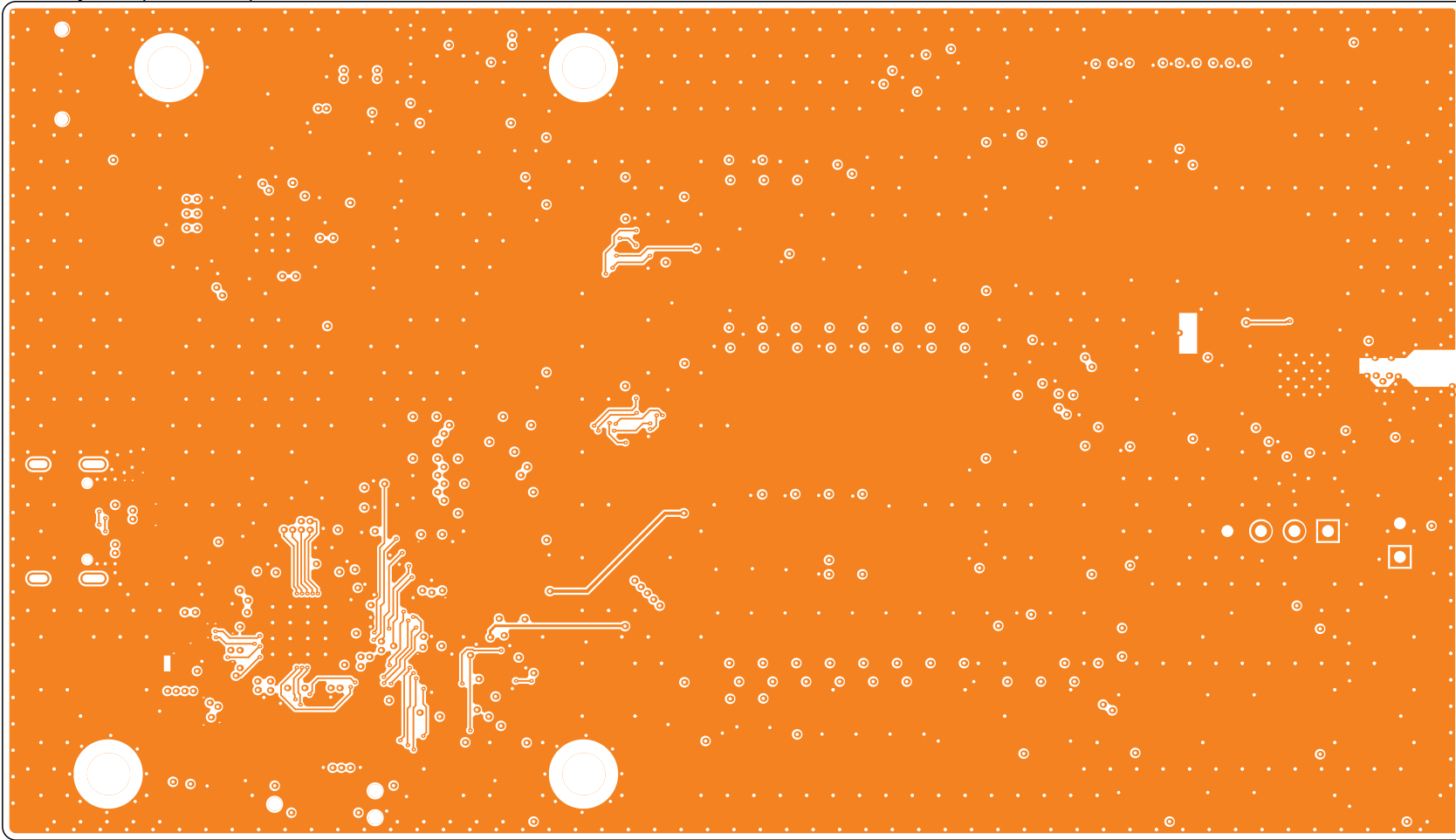
Top Layer (Scale 2:1)



Title			nRF54LV10-DK
Size:	A4	Part Number:	400868
Date:	24.09.2025	Revision:	0038DABA
File:	400868_PCB_prints.PCBDwf	Sheet	6 of 14
Classification:	Public	Drawn By:	DABA



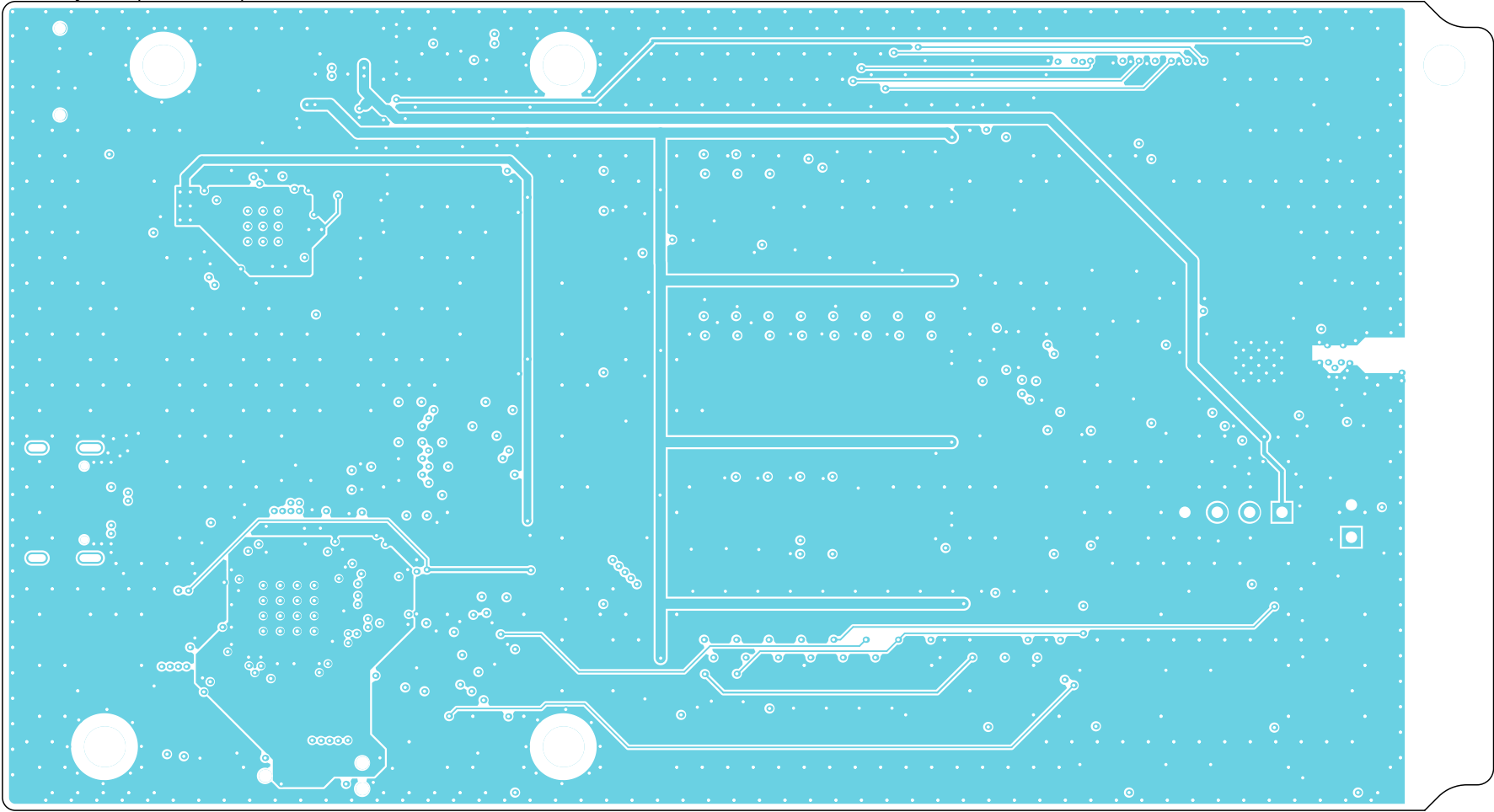
Mid-Layer 1 (Scale 2:1)



Title			nRF54LV10-DK
Size:	A4	Part Number:	400868
Date:	24.09.2025	Revision:	0038DABA
File:	400868_PCB_prints.PCBDwf	Sheet	7 of 14
Classification:	Public	Drawn By:	DABA



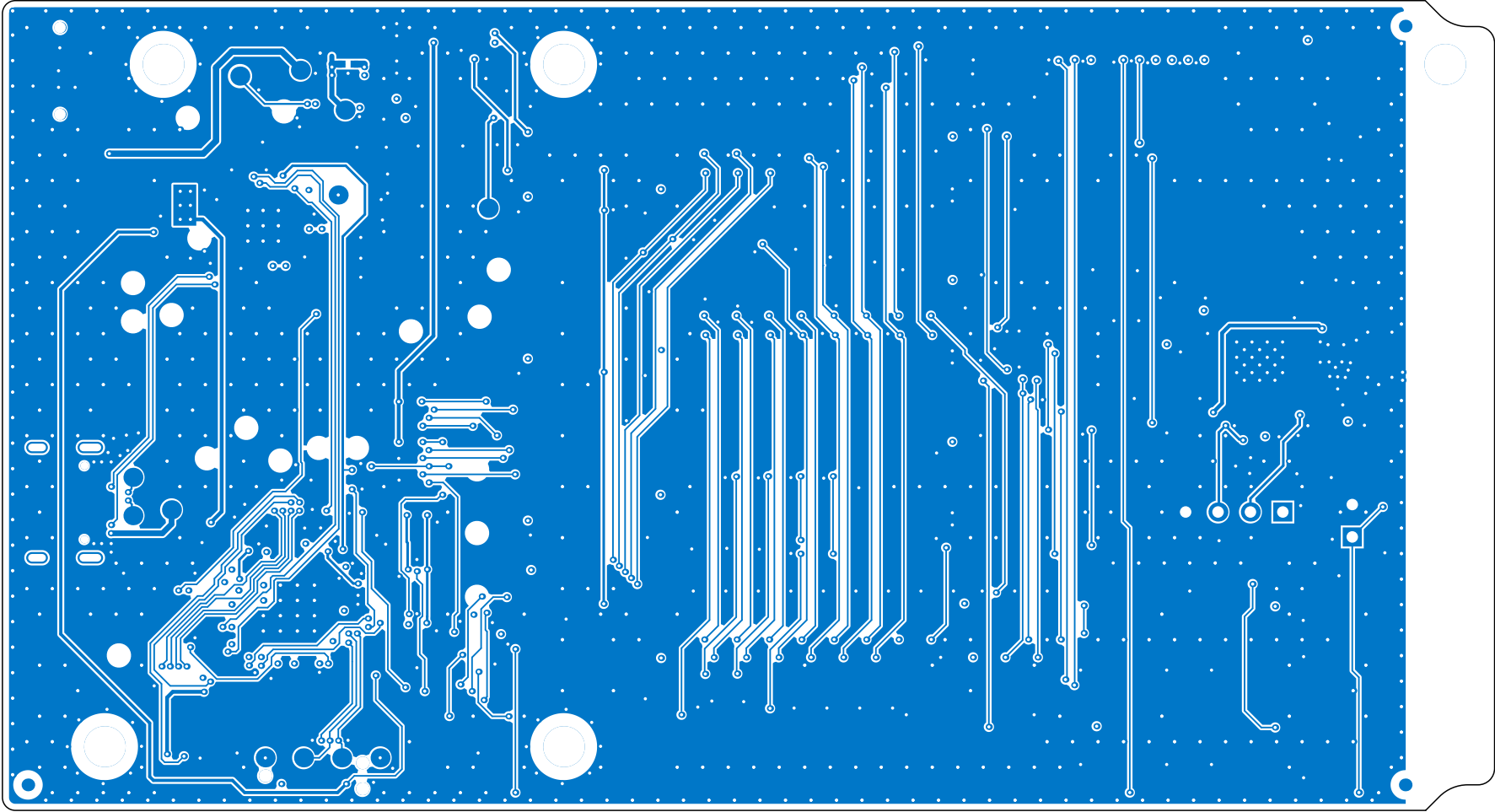
Mid-Layer 2 (Scale 2:1)



Title				nRF54LV10-DK			
Size: A4		Part Number: 400868		Revision: 0038DABA			
Date: 24.09.2025				Sheet 8 of 14			
File: 400868_PCB_prints.PCBDwf				Drawn By: DABA			
Classification: Public							



Bottom Layer (Scale 2:1)



Title			nRF54LV10-DK	
Size:	A4	Part Number:	400868	
Date:	24.09.2025		Revision:	0038DABA
File:	400868_PCB_prints.PCBDwf		Sheet	9 of 14
Classification:	Public		Drawn By:	DABA



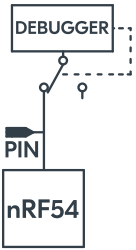




Bottom Solder (Scale 2:1)



Title					nRF54LV10-DK						
Size:		A4		Part Number:		400868		Revision:		0038DABA	
Date:		24.09.2025						Sheet		10 of 14	
File:		400868_PCB_prints.PCBdwf						Drawn By:		DABA	
Classification:		Public									



Bottom Overlay (Scale 2:1)

GPIO	Function	Circuit	GPIO	Function	Short	HW	GPIO	Function	HW
P0.01	RXD0		PI.13	XL1	SB3		PI.24	LED 0	
P0.00	TXD0				SB5		PI.10	LED 1	
P0.02	RTS0		PI.14	XL2	SB4		PI.25	LED 2	
P0.03	CTS0				SB6		PI.22	LED 3	
PI.05	RXD1						PI.21	BUTTON 0	
PI.04	TXD1						PI.09	BUTTON 1	
PI.06	RTS1						PI.08	BUTTON 2	
PI.07	CTS1						P0.04	BUTTON 3	
	RESET								
	SWDIO								
	SWDCLK								
PI.11	SWO								

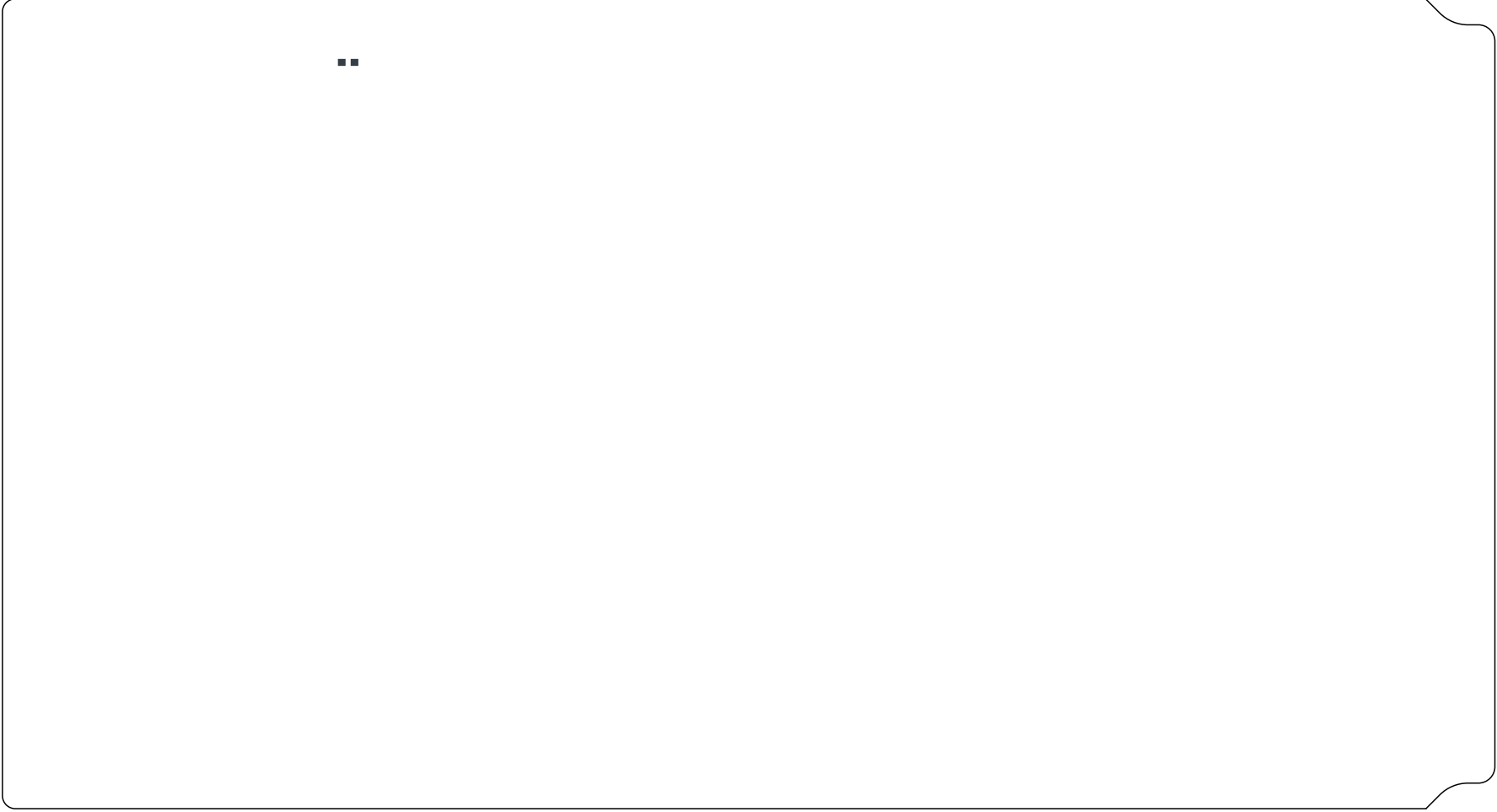
LABEL2



Title nRF54LV10-DK		
Size: A4	Part Number: 400868	Revision: 0038DABA
Date: 24.09.2025		Sheet 11 of 14
File: 400868_PCB_prints.PCBDwf		Drawn By: DABA
Classification: Public		



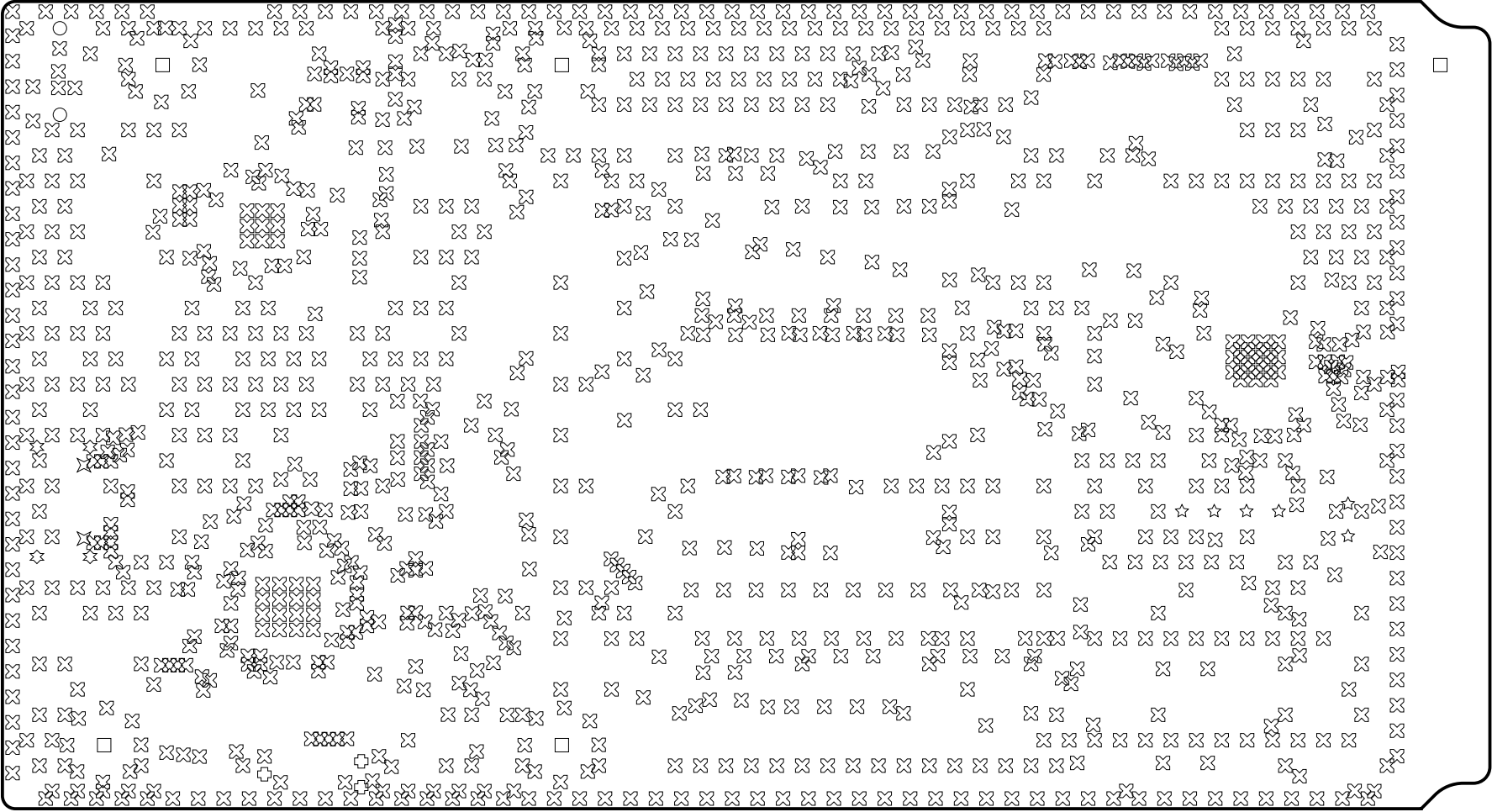
Bottom Paste (Scale 2:1)



Title			nRF54LV10-DK		
Size:	A4	Part Number:	400868	Revision:	0038DABA
Date:	24.09.2025			Sheet	12 of 14
File:	400868_PCB_prints.PCBDwf			Drawn By:	DABA
Classification:	Public				



Drill Drawing Top - Bottom (Scale 2:1)



Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
⊗	1261	0.25mm	Plated	
⊗	2	0.60mm	Non-Plated	
☆	4	0.60mm	Plated	
○	2	0.90mm	Non-Plated	
☆	6	0.90mm	Plated	
⊕	3	0.99mm	Non-Plated	
□	5	3.20mm	Non-Plated	
	1283 Total			

Title		
nRF54LV10-DK		
Size: A4	Part Number: 400868	Revision: 0038DABA
Date: 24.09.2025		Sheet 13 of 14
File: 400868_PCB_prints.PCBDwf		Drawn By: DABA
Classification: Public		



Drill Drawing Top - Mid-Layer 1 (Scale 2:1)



Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
◇	90	0.10mm	Plated	
	90 Total			

Title nRF54LV10-DK		
Size: A4	Part Number: 400868	Revision: 0038DABA
Date: 24.09.2025		Sheet 14 of 14
File: 400868_PCB_prints.PCBDwf		Drawn By: DABA
Classification: Public		

