

Module Fabrication Document

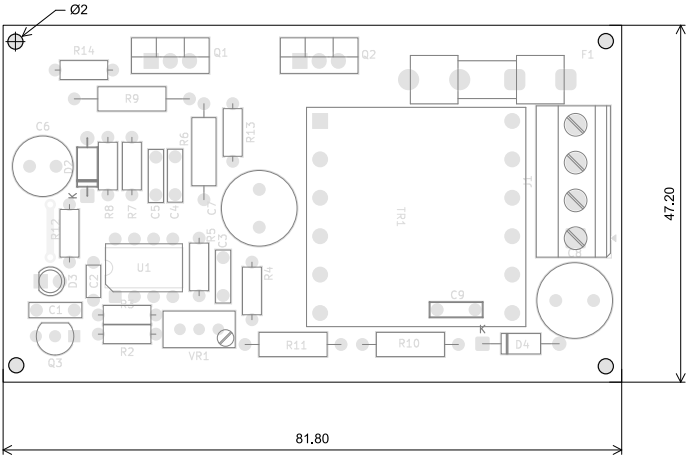
Layer Stack Legend

	Material	Layer	Thickness	Dielectric	Type	Gerber
		F,Paste			Paste Mask	
		F,Silkscreen			Legend	GBR
		F.Mask	0,02mm	Solder Resist	Solder Mask	GBR
	Copper	L1 (Sig, PWR)	0,07mm (2,00oz)		Signal	GBR
	Core		1,48mm	FR4_7628	Dielectric	
	Copper	L2 (Sig, PWR)	0,07mm (2,00oz)		Signal	GBR
		B.Mask	0,02mm	Solder Resist	Solder Mask	GBR
		B,Silkscreen		Direct Printing	Legend	GBR
		B,Paste			Paste Mask	
Total thickness: 1,66mm						
Note: external layer thicknesses are specified after plating						

Impedance Table

Transmission Line	Impedance [ohms]	Tolerance [ohms]	Layer	Trace Width [mm]	Gap [mm]	Ref. Layers
NA	-	-	-	-	-	-

Top Fabrication (Scale 1:1)



FABRICATION NOTES (UNLESS OTHERWISE SPECIFIED)

- 1) FABRICATE PER IPC-6012A CLASS 2.
- 2) OUTLINE DEFINED IN SEPARATE GERBER FILE WITH "Edge\_Cuts.GBR" SUFFIX.  
  
DIMENSIONS OF CIRCUMSIZED RECTANGLE SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY.
- 3) SEE SEPARATE DRILL FILES WITH ".DRL" SUFFIX FOR HOLE LOCATIONS.  
  
SELECTED HOLE LOCATIONS SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY.
- 4) SURFACE FINISH: IMMERSION GOLD
- 5) SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR TOP: #8071501A / BOTTOM: GREEN.
- 6) SILK SCREEN LEGEND TO BE APPLIED PER LAYER STACKUP USING WHITE NON-CONDUCTIVE EPOXY INK.
- 7) ALL VIAS ARE TENTED ON BOTH SIDES UNLESS SOLDERMASK OPENED IN GERBER.
- 8) VENDOR SHOULD FOLLOW ROHS COMPLIANT PROCESS AND Pb FREE FOR MANUFACTURING
- 9) PCB MATERIAL REQUIREMENTS:  

A. FLAMMABILITY RATING MUST MEET OR EXCEED UL94V-0 REQUIREMENTS.

B. Tg 170 C OR EQUIVALENT.

C. EQUIVALENT MATERIAL SHALL BE RoHS COMPLIANT, HALOGEN FREE AND APPROVED BY FR.
- 10) DESIGN GEOMETRY MINIMUM FEATURE SIZES:  

BOARD SIZE81,800 × 47,200 mm

BOARD THICKNESS1,660 mm

TRACE WIDTH1,000 mm

TRACE TO TRACE0,200 mm

MIN. HOLE (PTH)0,800 mm

MIN. HOLE (NPTH)2,100 mm

ANNULAR RING0,320 mm

COPPER TO HOLE0,254 mm

COPPER TO EDGE0,250 mm

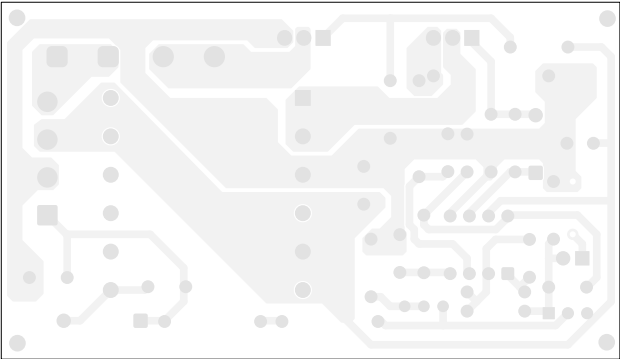
HOLE TO HOLE0,254 mm
- 11) REFER TO IMPEDANCE TABLE FOR IMPEDANCE CONTROL REQUIREMENTS.
- 12) CONFIRM SPACE WIDTHS AND SPACINGS.

All dimensions are in millimeters unless otherwise specified.

	Comments:	Company:		Variant:	Git Hash:
	Comment 1	FR		CHECKED	ab67c9b
	Comment 2	Board Name: Module		Project Name: Step-up module 12:450 V	
	Comment 3				
	Sheet Title:	File Name:	Designer:	Date:	Revision:
	Top Fabrication (Scale 1:1)	StepUp_module_12to450V.kicad_pcb	FR	2024-04-13	1.0.1+ (Unreleased)
Sheet Path:			Reviewer:	Size:	Sheet:
			NA	A4	1 of 8

Module Fabrication Document

Bottom Fabrication (Scale 1:1)



All dimensions are in millimeters unless otherwise specified.

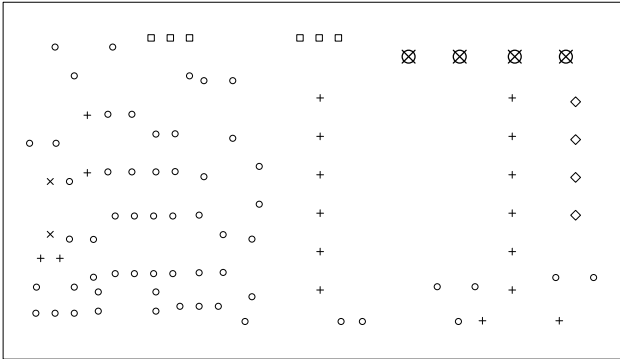
	Comments:	Company:		Variant:	Git Hash:
	Comment 1	FR		CHECKED	ab67c9b
	Comment 2	Board Name:		Project Name:	
	Comment 3	Module		Step-up module 12:450 V	
	Comment 4				
	Sheet Title:	File Name:	Designer:	Date:	Revision:
	Bottom Fabrication (Scale 1:1)	StepUp_module_12to450V.kicad_pcb	FR	2024-04-13	1.0.1+ (Unreleased)
	Sheet Path:		Reviewer:	Size:	Sheet:
			NA	A4	2 of 8

Module Fabrication Document

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
×	2	0,80mm (31,50mils)	PTH	Round	L1 (Sig. PWR) - L2 (Sig. PWR)	Via
○	58	0,80mm (31,50mils)	PTH	Round	L1 (Sig. PWR) - L2 (Sig. PWR)	Pad
+	18	0,90mm (35,43mils)	PTH	Round	L1 (Sig. PWR) - L2 (Sig. PWR)	Pad
□	6	1,20mm (47,24mils)	PTH	Round	L1 (Sig. PWR) - L2 (Sig. PWR)	Pad
◇	4	1,30mm (51,18mils)	PTH	Round	L1 (Sig. PWR) - L2 (Sig. PWR)	Pad
⊗	4	1,70mm (66,93mils)	PTH	Round	L1 (Sig. PWR) - L2 (Sig. PWR)	Pad
Total 92						

Drill Drawing L1 - L2 (Scale 1:1)



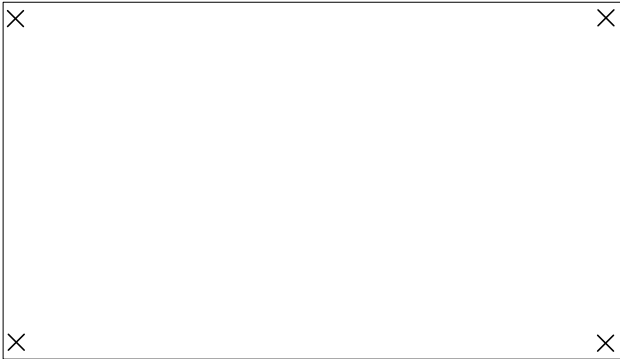
	Comments:	Company:		Variant:	Git Hash:
	Comment 1	FR		CHECKED	ab67c9b
	Comment 2	Board Name: Module		Project Name:	
	Comment 3			Step-up module 12:450 V	
	Comment 4	File Name:		Date:	Revision:
		StepUp_module_12to450V.kicad_pcb		2024-04-13	1.0.1+ (Unreleased)
	Sheet Title:	Designer:		Size:	Sheet:
	Drill Drawing (L1 - L2)	FR		A4	3 of 8
	Sheet Path:	Reviewer:			
		NA			

Module Fabrication Document

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
X	4	2.10mm (82.68mils)	NPTH	Round	L1 (Sig, PWR) - L2 (Sig, PWR)	Mechanical
	Total 4					

Drill Drawing L1 - L2 (Scale 1:1)



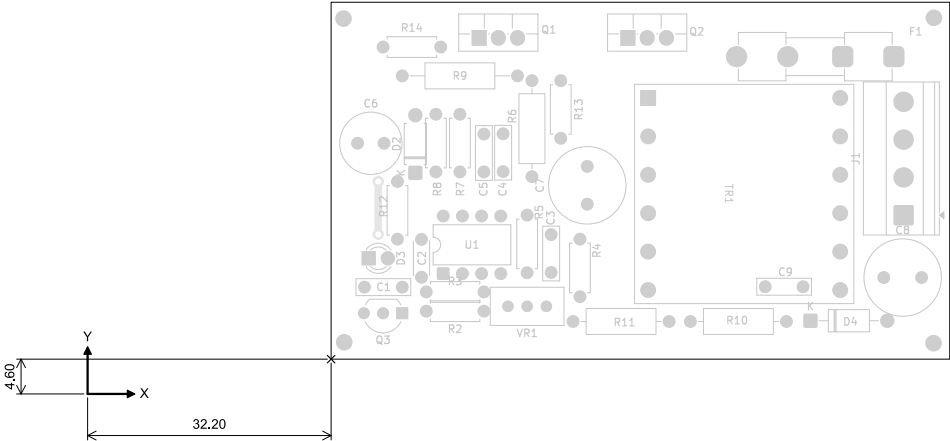
	Comments:	Company:		Variant:	Git Hash:
	Comment 1 Comment 2 Comment 3 Comment 4	FR		CHECKED	ab67c9b
	Sheet Title:	File Name:	Designer:	Date:	Revision:
	Drill Drawing (L1 - L2)	StepUp_module_12to450V.kicad_pcb	FR	2024-04-13	1.0.1+ (Unreleased)
	Sheet Path:		Reviewer:	Size:	Sheet:
			NA	A4	4 of 8

Module Fabrication Document

Top Test Points (Scale 1:1)

Ref.	Net	X [mm]	Y [mm]
------	-----	--------	--------

Ref.	Net	X [mm]	Y [mm]
------	-----	--------	--------



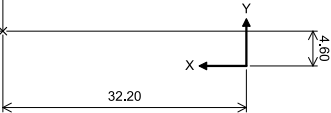
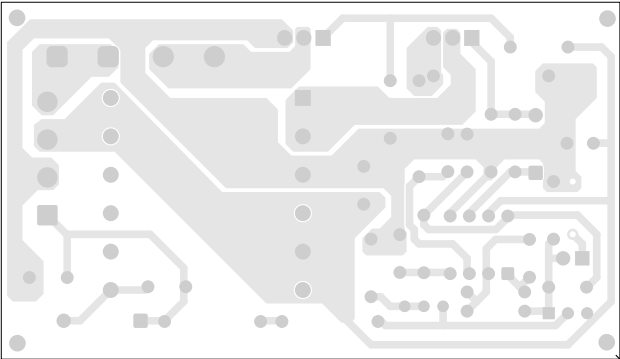
All dimensions are in millimeters unless otherwise specified.

	Comments:	Company:		Variant:	Git Hash:
	Comment 1	FR		CHECKED	ab67c9b
	Comment 2	Board Name: Module		Project Name:	
	Comment 3			Step-up module 12:450 V	
	Comment 4	File Name:		Date:	Revision:
	Top Test Points (Scale 1:1)	StepUp_module_12to450V.kicad_pcb		2024-04-13	1.0.1+ (Unreleased)
	Sheet Path:	Reviewer:		Size:	Sheet:
		NA		A4	5 of 8

Module Fabrication Document

Bottom Test Points (Scale 1:1)

Ref.	Net	X [mm]	Y [mm]
------	-----	--------	--------

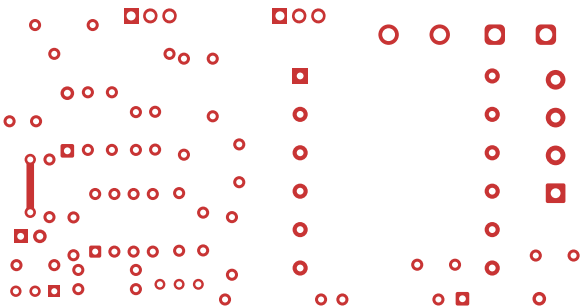


All dimensions are in millimeters unless otherwise specified.

	<b>Comments:</b> Comment 1 Comment 2 Comment 3 Comment 4	<b>Company:</b> FR		<b>Variant:</b> CHECKED	<b>Git Hash:</b> ab67c9b
		<b>Board Name:</b> Module		<b>Project Name:</b> Step-up module 12:450 V	
	<b>Sheet Title:</b> Bottom Test Points (Scale 1:1)	<b>File Name:</b> StepUp_module_12to450V.kicad_pcb	<b>Designer:</b> FR	<b>Date:</b> 2024-04-13	<b>Revision:</b> 1.0.1+ (Unreleased)
	<b>Sheet Path:</b>		<b>Reviewer:</b> NA	<b>Size:</b> A4	<b>Sheet:</b> 6 of 8

Module Fabrication Document

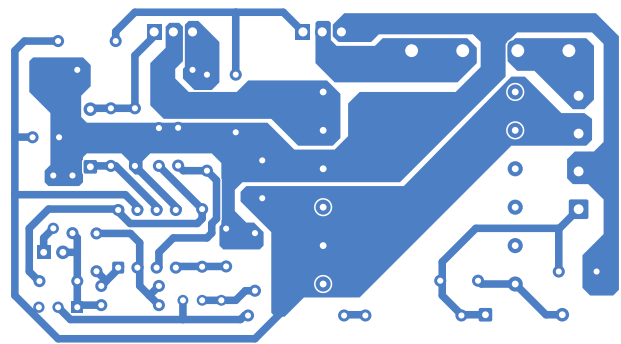
L1 (Sig, PWR) (Scale 1:1)



	Comments:	Company:		Variant:	Git Hash:
	Comment 1	FR		CHECKED	ab67c9b
	Comment 2	Board Name:		Project Name:	
	Comment 3				
	Comment 4	Module		Step-up module 12:450 V	
	Sheet Title:	File Name:	Designer:	Date:	Revision:
	L1 (Sig, PWR) (Scale 1:1)	StepUp_module_12to450V.kicad_pcb	FR	2024-04-13	1.0.1+ (Unreleased)
	Sheet Path:		Reviewer:	Size:	Sheet:
			NA	A4	7 of 8

Module Fabrication Document

L2 (Sig, PWR) (Scale 1:1)



	<b>Comments:</b> Comment 1 Comment 2 Comment 3 Comment 4	<b>Company:</b> FR		<b>Variant:</b> CHECKED	<b>Git Hash:</b> ab67c9b
		<b>Board Name:</b> Module		<b>Project Name:</b> Step-up module 12:450 V	
	<b>Sheet Title:</b> L2 (Sig, PWR) (Scale 1:1)	<b>File Name:</b> StepUp_module_12to450V.kicad_pcb	<b>Designer:</b> FR	<b>Date:</b> 2024-04-13	<b>Revision:</b> 1.0.1+ (Unreleased)
	<b>Sheet Path:</b>		<b>Reviewer:</b> NA	<b>Size:</b> A4	<b>Sheet:</b> 8 of 8