

# Watch-DevKit-HW Fabrication Document

## Layer Stack Legend

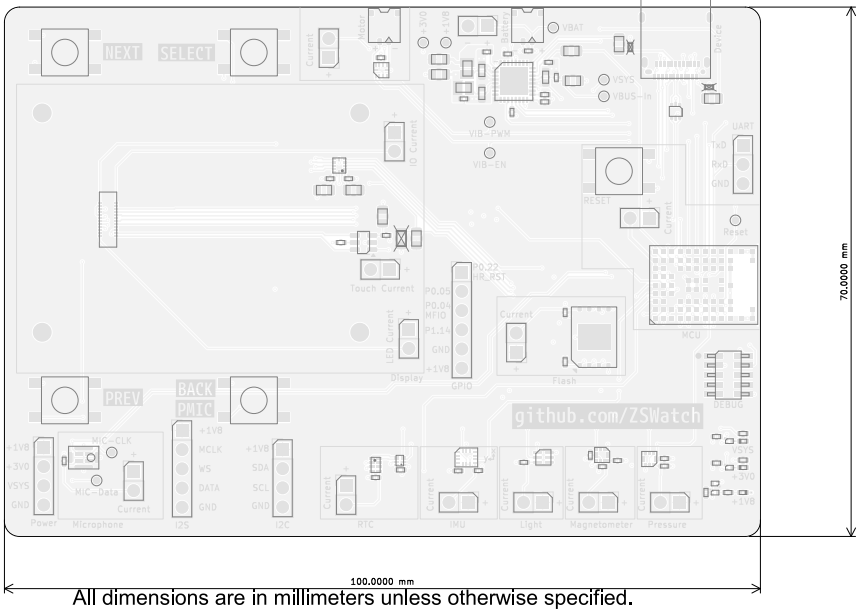
	Material	Layer	Thickness	Dielectric	Type	Gerber
	F,Paste				Paste Mask	
	F,Silkscreen				Legend	GBR
	F,Mask		0,01mm		Solder Mask	GBR
	Copper	F,Cu	0.035mm (1oz)		Signal	GBR
	Core		0,1855mm	FR4	Dielectric	
	Copper	Inner1 (GND)	0.035mm (1oz)		Plane	GBR
	Prepreg		1,03mm	FR4	Dielectric	
	Copper	Inner2	0.035mm (1oz)		Plane	GBR
	Core		0,1855mm	FR4	Dielectric	
	Copper	B,Cu	0.035mm (1oz)		Signal	GBR
	B,Mask		0,01mm		Solder Mask	GBR
	B,Silkscreen				Legend	GBR
	B,Paste				Paste Mask	

Total thickness: 1.561mm  
Note: external layer thicknesses are specified after plating

## Impedance Table

Transmission Line	Impedance [ohms]	Tolerance [%]	Layer	Trace Width [mm]	Gap [mm]	Ref. Layers
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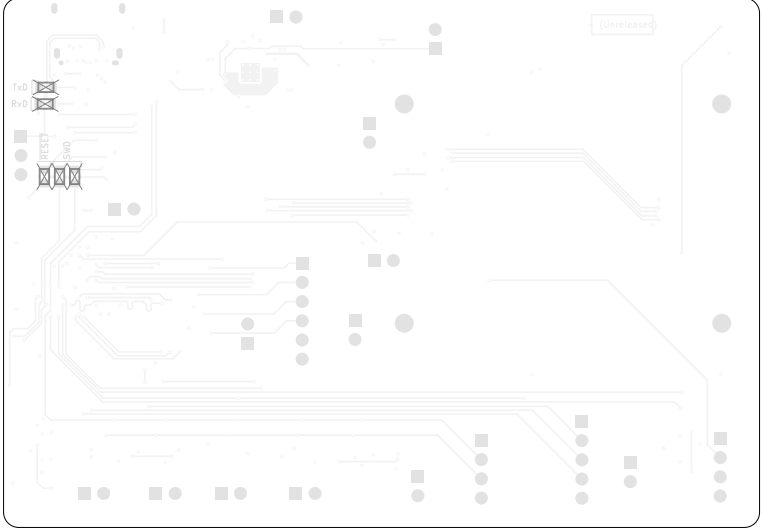
## Top Fabrication (Scale 1:1)



### FABRICATION NOTES (UNLESS OTHERWISE SPECIFIED)

- FABRICATE PER IPC-6012A CLASS 2.
- OUTLINE DEFINED IN SEPARATE GERBER FILE WITH "Edge\_Cuts.GBR" SUFFIX.  
  
DIMENSIONS OF CIRCUMSIZED RECTANGLE SHOWN ON THIS DRAWING FOR REFERENCE ONLY.
- SEE SEPARATE DRILL FILES WITH ".DRL" SUFFIX FOR HOLE LOCATIONS.  
  
SELECTED HOLE LOCATIONS SHOWN ON THIS DRAWING FOR REFERENCE ONLY.
- SURFACE FINISH: HAL SNPB
- SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR WHITE.
- SILK SCREEN LEGEND TO BE APPLIED PER LAYER STACKUP USING BLACK NON-CONDUCTIVE EPOXY INK.
- ALL VIAS ARE TENTED ON BOTH SIDES UNLESS SOLDERMASK OPENED IN GERBER.
- VENDOR SHOULD FOLLOW ROHS COMPLIANT PROCESS AND Pb FREE FOR MANUFACTURING
- PCB MATERIAL REQUIREMENTS:  
  
A. FLAMMABILITY RATING MUST MEET OR EXCEED UL94V-0 REQUIREMENTS.  
B. Tg 150 C OR EQUIVALENT.  
C. EQUIVALENT MATERIAL SHALL BE RoHS COMPLIANT, HALOGEN FREE AND APPROVED BY ZSWATCH.
- DESIGN GEOMETRY MINIMUM FEATURE SIZES:  
  
BOARD SIZE 100.000 × 70.000 mm  
BOARD THICKNESS 1.561 mm  
TRACE WIDTH 0.127 mm  
TRACE TO TRACE 0.125 mm  
MIN. HOLE (PTH) 0.250 mm  
MIN. HOLE (NPTH) 0.650 mm  
ANNULAR RING 0.100 mm  
COPPER TO HOLE 0.125 mm  
COPPER TO EDGE 0.125 mm  
HOLE TO HOLE 0.250 mm

	Comments: ZSWatch	Company: ZSWatch	Variant: CHECKED	Git Hash: dbc49fa
	Board Name: Watch-DevKit-HW		Project Name: ZSWatch Watch-DevKit	
	Sheet Title: Top Fabrication (Scale 1:1)	File Name: ZSWatch-Watch-DevKit.kicad_pcb	Designer: Daniel Kampert	Date: 2025-07-13
	Sheet Path:		Reviewer:	Revision: + (Unreleased)
			Size: A3	Sheet: 1 of 10

	1	2	3	4	5	6	7	8
A	<div> <div>Watch-DevKit-HW Fabrication Document</div> <div> <div>Bottom Fabrication (Scale 1:1)</div> <div>  </div> <div> <div>All dimensions are in millimeters unless otherwise specified.</div> </div> </div> </div>							
B								
C								
D								
E								
F	1	2	3	4	5	6	7	8

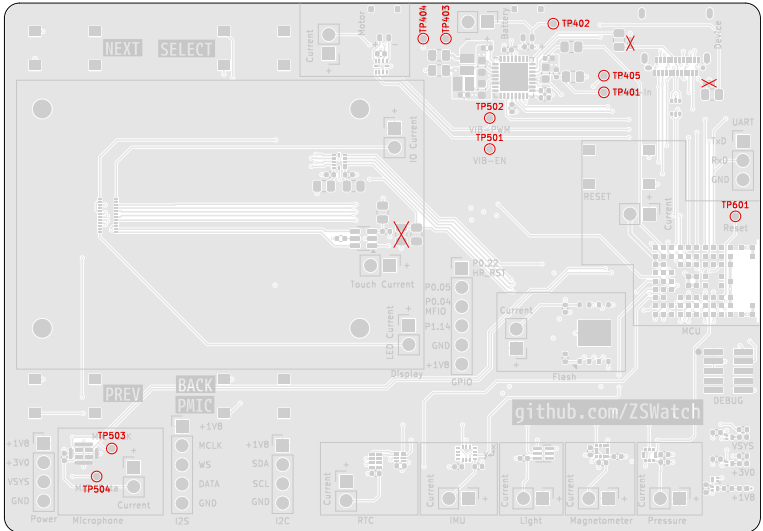
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		Watch-DevKit-HW		ZSWatch Watch-DevKit	
	Sheet Title:	File Name:	Designer:	Date:	Revision:
	Bottom Fabrication (Scale 1:1)	ZSWatch-Watch-DevKit.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)
	Sheet Path:		Reviewer:	Size:	Sheet:
				A3	2 of 10





Watch-DevKit-HW Fabrication Document

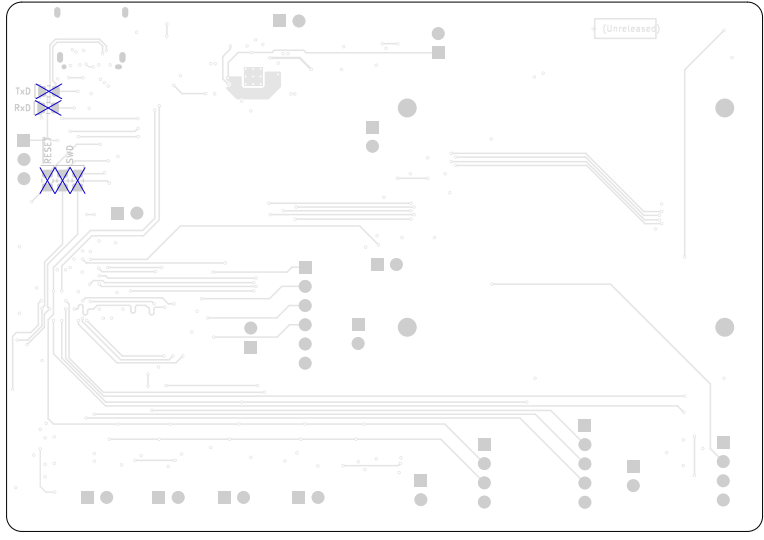
Top Test Points (Scale 1:1)



Ref.	Net	X [mm]	Y [mm]
TP401	VBUS-In	237.30	-125.80
TP402	VBAT	230.60	-116.72
TP403	+1V8	216.40	-118.70
TP404	+3V0	213.40	-118.70
TP405	VSYS	237.30	-123.60
TP501	VIB-EN	222.20	-133.30
TP502	VIB-PWM	222.20	-129.20
TP503	MIC-CLK	172.20	-172.90
TP504	MIC-DATA	170.20	-176.60
TP601	RESETn	254.70	-142.20

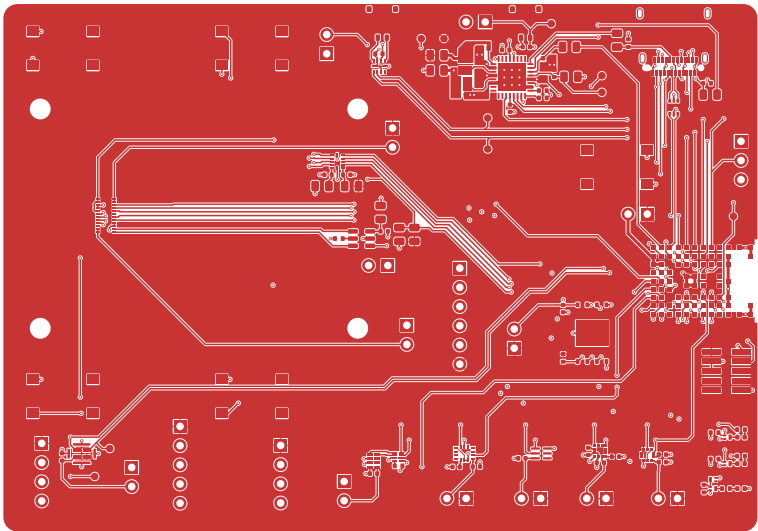
Ref.	Net	X [mm]	Y [mm]
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	Sheet Title: Top Test Points (Scale 1:1)	File Name: ZSWatch-Watch-DevKit.kicad_pcb	Designer: Daniel Kampert	Date: 2025-07-13	Revision: + (Unreleased)
	Sheet Path:		Reviewer:	Size: A3	Sheet: 5 of 10

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Bottom Test Points (Scale 1:1)							
							
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	ZSWatch	ZSWatch		CHECKED	dbc49fa		
		Board Name:		Project Name:			
		Watch-DevKit-HW		ZSWatch Watch-DevKit			
	Sheet Title:	File Name:	Designer:	Date:	Revision:		
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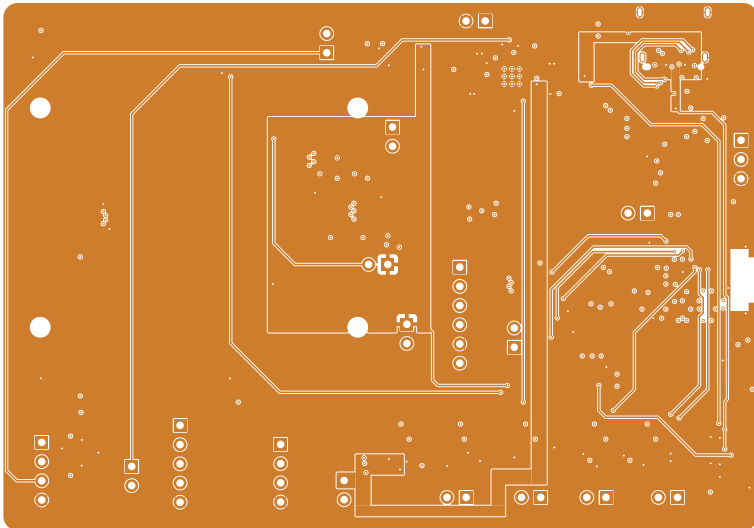
F.Cu (Scale 1:1)

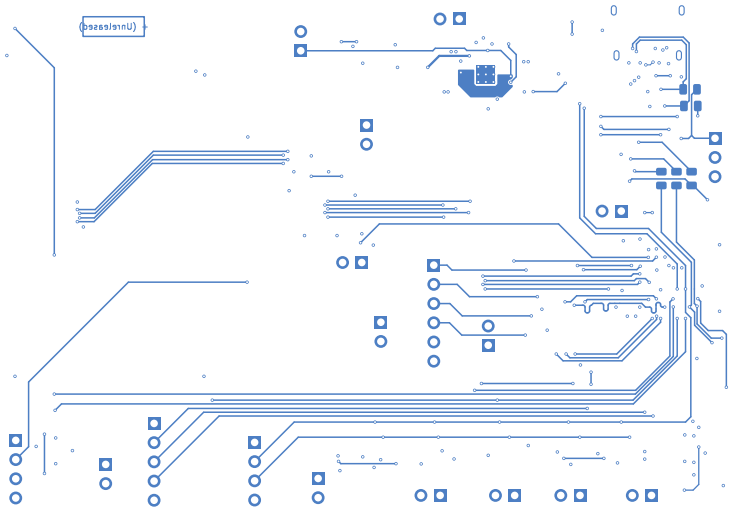


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	<b>Sheet Title:</b> F.Cu (Scale 1:1)		<b>File Name:</b> ZSWatch-Watch-DevKit.kicad_pcb	<b>Designer:</b> Daniel Kampert	<b>Date:</b> 2025-07-13	<b>Revision:</b> + (Unreleased)
	<b>Sheet Path:</b>			<b>Reviewer:</b>	<b>Size:</b> A3	<b>Sheet:</b> 7 of 10

Watch-DevKit-HW Fabrication Document							
Inner1 (GND) (Scale 1:1)							
							
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		ZSWatch	ZSWatch		CHECKED	dbc49fa	
		Sheet Title:	File Name:	Designer:	Date:	Revision:	
		Inner1 (GND) (Scale 1:1)	ZSWatch-Watch-DevKit.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)	
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			A3	8 of 10			



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A	Watch-DevKit-HW Fabrication Document							A																							
B	Inner2 (Scale 1:1)							B																							
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