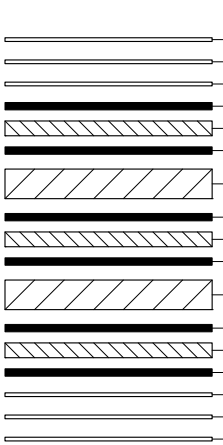
EncoGo Fabrication Document

Layer Stack Legend



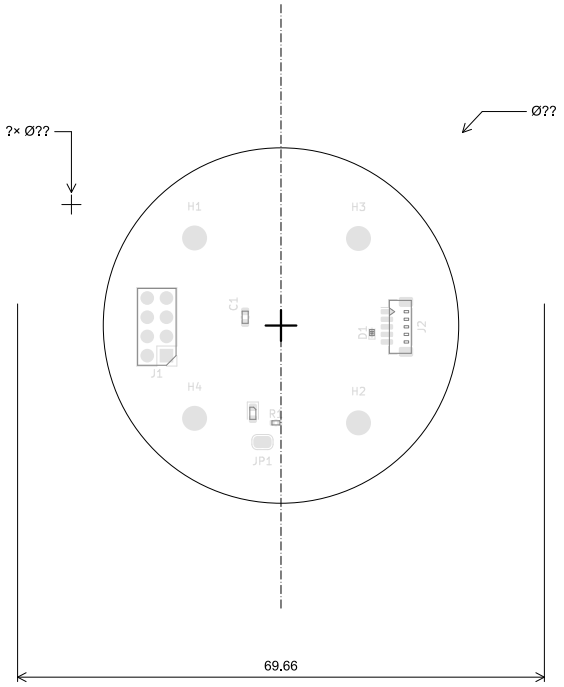
Material	Layer	Thickness	Dielectric	Type	Gerber
	F.Paste			Paste Mask	
	F.Silkscreen		Direct Printing	Legend	GBR
	F.Mask	0.02mm	Solder Resist	Solder Mask	GBR
Copper	**L1 (Sig, PWR)**	**0.07mm (2.00oz)**		**Signal**	**GBR**
Prepreg		0.18mm	FR4_7628	Dielectric	
Copper	**L2 (GND)**	**0.035mm (1.00oz)**		**Plane**	**GBR**
Core		0.4mm	FR4	Dielectric	
Copper	**L3 (Sig, PWR)**	**0.035mm (1.00oz)**		**Signal**	**GBR**
Prepreg		0.18mm	FR4_7628	Dielectric	
Copper	**L4 (Sig, PWR)**	**0.035mm (1.00oz)**		**Signal**	**GBR**
Core		0.4mm	FR4	Dielectric	
Copper	**L5 (GND)**	**0.035mm (1.00oz)**		**Plane**	**GBR**
Prepreg		0.18mm	FR4_7628	Dielectric	
Copper	**L6 (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
Edge-Coupled Coated Microstrip	100	±10 %	L1	0.2032	0.28	L2

Top Fabrication (Scale 1:1)



All dimensions are in millimeters unless otherwise specified.

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 FOR REFERENCE ONLY.

3) SEE SEPARATE DRILL FILES WITH ".DRL" SUFFIX FOR HOLE LOCATIONS.

   SELECTED HOLE LOCATIONS SHOWN ON THIS DRAWING FOR REFERENCE ONLY.

4) SURFACE FINISH: IMMERSION GOLD

5) SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR BLACK.

6) SILK SCREEN LEGEND TO BE APPLIED PER LAYER STACKUP USING YELLOW 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 EVERYFLAVORROBOTICS.

10) DESIGN GEOMETRY MINIMUM FEATURE SIZES:

BOARD SIZE	47.003 × 47.003 mm
BOARD THICKNESS	1.660 mm
TRACE WIDTH	N/A mm
TRACE TO TRACE	0.200 mm
MIN. HOLE (PTH)	1.000 mm
MIN. HOLE (NPTH)	3.200 mm
ANNULAR RING	0.350 mm
COPPER TO HOLE	0.254 mm
COPPER TO EDGE	0.250 mm
HOLE TO HOLE	0.254 mm

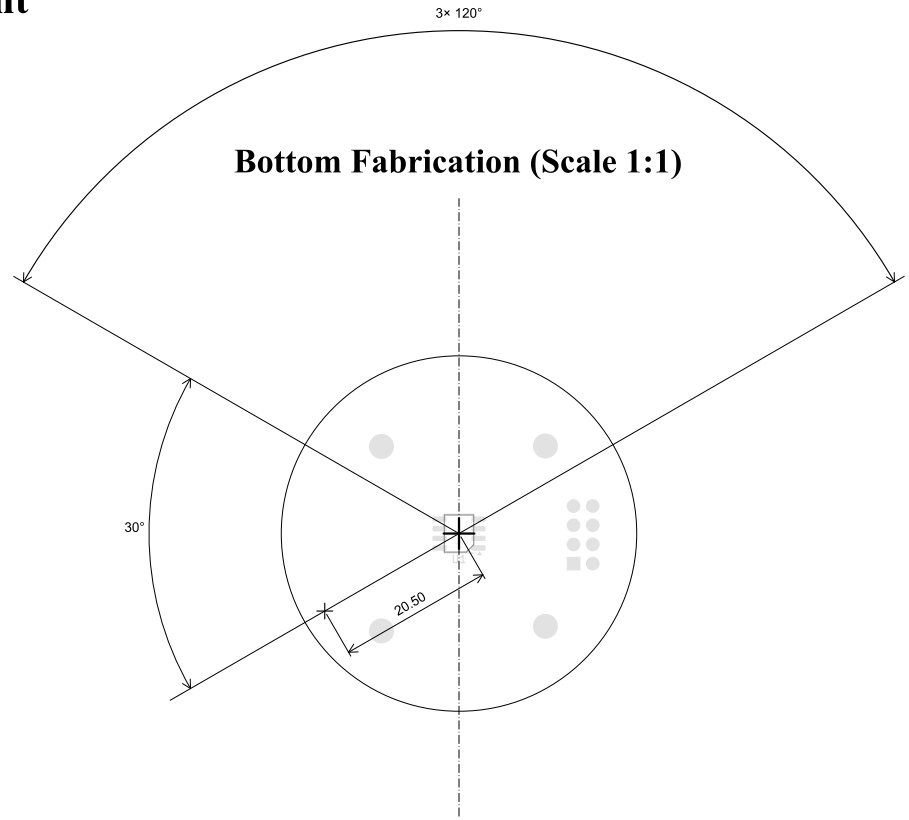
11) REFER TO IMPEDANCE TABLE FOR IMPEDANCE CONTROL REQUIREMENTS.

12) CONFIRM SPACE WIDTHS AND SPACINGS.

Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
	Board Name: **EncoGo**		Project Name: **CICD-Test**	
Sheet Title: Top Fabrication (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
Sheet Path:		Reviewer:	Size: **A4**	Sheet: **1** of **12**

EncoGo Fabrication Document

Bottom Fabrication (Scale 1:1)



All dimensions are in millimeters unless otherwise specified.

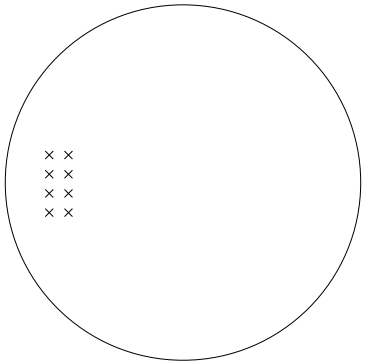
	Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: **EncoGo**		Project Name: **CICD-Test**	
	Sheet Title: Bottom Fabrication (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: **A4**	Sheet: **2** of **12**

EncoGo Fabrication Document

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
×	8	1.00mm (39.37mils)	PTH	Round	L1 (Sig, PWR) - L6 (Sig, PWR)	Pad
	Total 8					

Drill Drawing L1 - L6 (Scale 1:1)



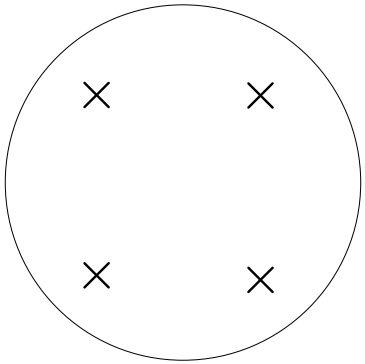
	Comments:	Company: EveryFlavorRobotics		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: EncoGo		Project Name: CICD-Test	
	Sheet Title: Drill Drawing (L1 - L6)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: A4	Sheet: 3 of 12

EncoGo Fabrication Document

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
X	4	3.20mm (125.98mils)	NPTH	Round	L1 (Sig, PWR) - L6 (Sig, PWR)	Mechanical
	Total 4					

Drill Drawing L1 - L6 (Scale 1:1)



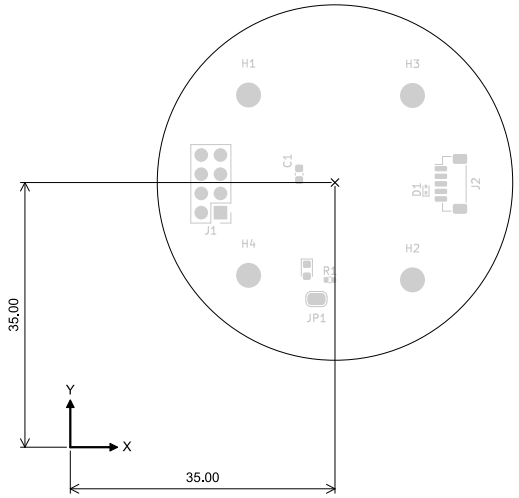
	Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: **EncoGo**		Project Name: **CICD-Test**	
	Sheet Title: Drill Drawing (L1 - L6)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: **A4**	Sheet: **4** of **12**

EncoGo Fabrication Document

Top Test Points (Scale 1:1)

Ref.	Net	X [mm]	Y [mm]

Ref.	Net	X [mm]	Y [mm]



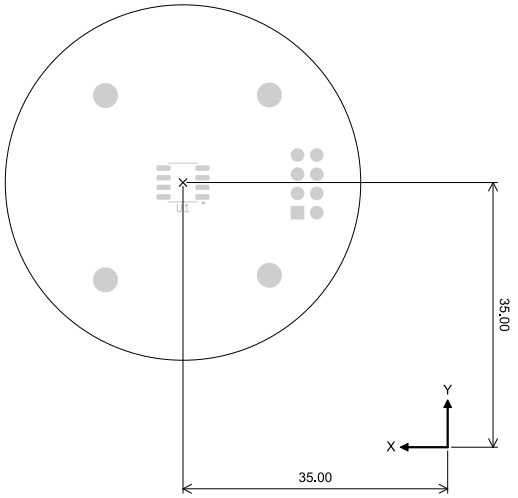
All dimensions are in millimeters unless otherwise specified.

Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
	Board Name: **EncoGo**		Project Name: **CICD-Test**	
Sheet Title: Top Test Points (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
Sheet Path:		Reviewer:	Size: **A4**	Sheet: **5** of **12**

EncoGo Fabrication Document

Bottom Test Points (Scale 1:1)

Ref.	Net	X [mm]	Y [mm]



All dimensions are in millimeters unless otherwise specified.

	Comments:	Company: EveryFlavorRobotics		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: EncoGo		Project Name: CICD-Test	
	Sheet Title: Bottom Test Points (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: A4	Sheet: 6 of 12

EncoGo Fabrication Document

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

Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
	Board Name: **EncoGo**		Project Name: **CICD-Test**	
Sheet Title: L1 (Sig, PWR) (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
Sheet Path:		Reviewer:	Size: **A4**	Sheet: **7** of **12**

EncoGo Fabrication Document

L2 (GND) (Scale 1:1)

	Comments:	Company: EveryFlavorRobotics		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: EncoGo		Project Name: CICD-Test	
	Sheet Title: L2 (GND) (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: A4	Sheet: 8 of 12

EncoGo Fabrication Document

L3 (Sig, PWR) (Scale 1:1)

	Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: **EncoGo**		Project Name: **CICD-Test**	
	Sheet Title: L3 (Sig, PWR) (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: **A4**	Sheet: **9** of **12**

EncoGo Fabrication Document

L4 (Sig, PWR) (Scale 1:1)

	Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: **EncoGo**		Project Name: **CICD-Test**	
	Sheet Title: L4 (Sig, PWR) (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: **A4**	Sheet: **10** of **12**

EncoGo Fabrication Document

L5 (GND) (Scale 1:1)

	Comments:	Company: EveryFlavorRobotics		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: EncoGo		Project Name: CICD-Test	
	Sheet Title: L5 (GND) (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: A4	Sheet: 11 of 12

EncoGo Fabrication Document

L6 (Sig, PWR) (Scale 1:1)

	Comments:	Company: **EveryFlavorRobotics**		Variant: PRELIMINARY	Git Hash: 49b666b
		Board Name: **EncoGo**		Project Name: **CICD-Test**	
	Sheet Title: L6 (Sig, PWR) (Scale 1:1)	File Name: kibot-test-cicd.kicad_pcb	Designer: Alexchunlin	Date: 2024-04-13	Revision: 0.1.0+ (Unreleased)
	Sheet Path:		Reviewer:	Size: **A4**	Sheet: **12** of **12**