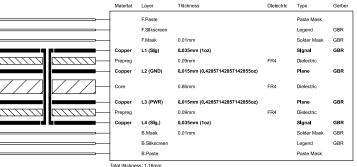
### **Top Fabrication (Scale 1:1)**

#### **Layer Stack Legend Stackup: JLC04121H-7628**



Note: external layer thicknesses are specified after plating

#### **Impedance Table**

| Transmission Line | Impedance [ohms] | Tolerance [ohms] | Layer | Trace Width [mm] | Gap [mm] | Ref. Layers |
|-------------------|------------------|------------------|-------|------------------|----------|-------------|
| USB               | 90               | ±10 %            | L1    | 0.17             | 0.275    | L2          |



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.

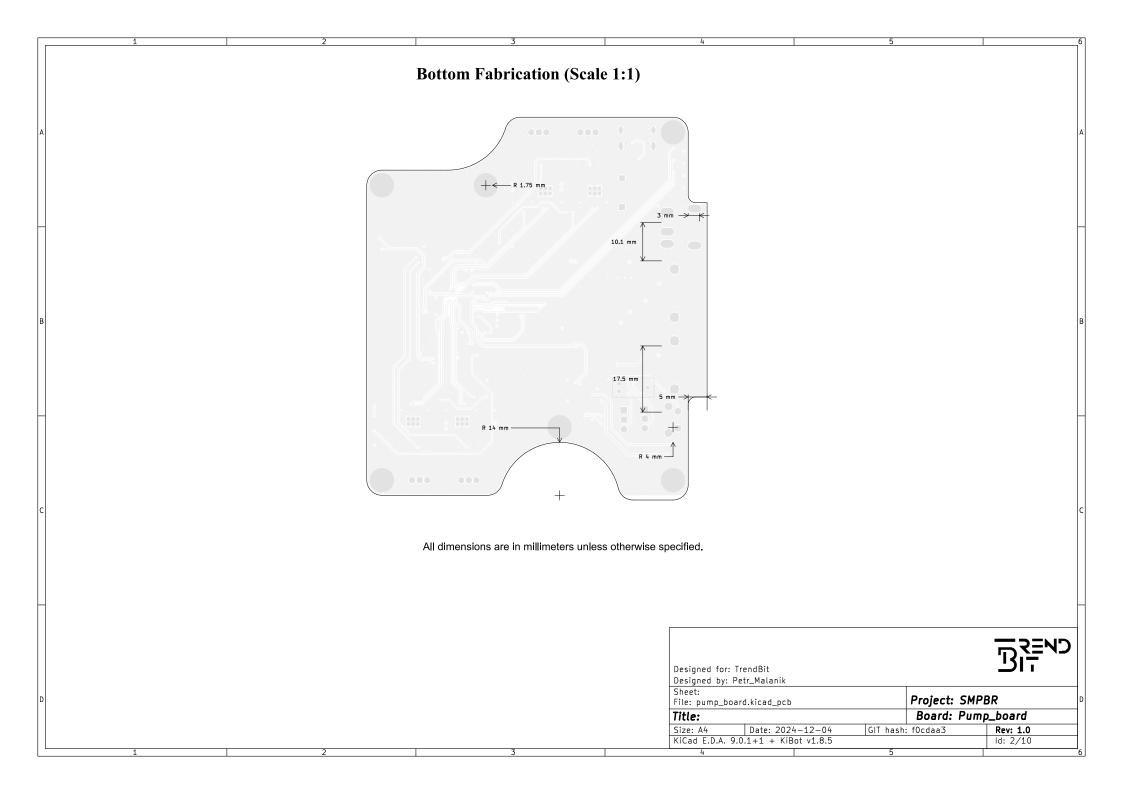
SELECTED HOLE LOCATIONS SHOWN ON THIS DRAWING FOR REFERENCE ONLY.

- 4) SURFACE FINISH: ENIG
- 5) SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR 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 Ph 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 TRENDBIT.
- 10) DESIGN GEOMETRY MINIMUM FEATURE SIZES:

BOARD SIZE 90.000 × 101.250 mm BOARD THICKNESS 1.160 mm TRACE WIDTH 0.170 mm TRACE TO TRACE -0.000 mm MIN. HOLE (PTH) 0.300 mm MIN. HOLE (NPTH) 0.650 mm ANNULAR RING 0.075 mm COPPER TO HOLE 0.150 mm COPPER TO EDGE 0.300 mm 0.250 mm HOLE TO HOLE

- 11) REFER TO IMPEDANCE TABLE FOR IMPEDANCE CONTROL REQUIREMENTS.
- 12) CONFIRM SPACE WIDTHS AND SPACINGS.

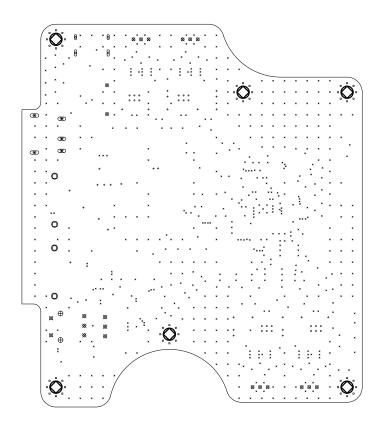
Designed for: TrendBit Designed by: Petr\_Malaník Sheet: Project: SMPBR File: pump\_board.kicad\_pcb Board: Pump\_board Title: Size: A4 Date: 2024-12-04 GIT hash: f0cdaa3 Rev: 1.0 KiCad E.D.A. 9.0.1+1 + KiBot v1.8.5 ld: 1/10



# **Drill Drawing L1 - L4 (Scale 1:1)**

## **Drill Table**

| Symbol   | Count     | Hole Size           | Plated | Hole Shape | Drill Layer Pair     | Hole Type |
|----------|-----------|---------------------|--------|------------|----------------------|-----------|
| ×        | 669       | 0.30mm (11.81mils)  | PTH    | Round      | L1 (Sig) - L4 (Sig,) | Via       |
| 0        | 24        | 0.33mm (12.99mlls)  | PTH    | Round      | L1 (Slg) - L4 (Slg,) | Pad       |
| +        | 30        | 0.50mm (19.69mlls)  | PTH    | Round      | L1 (Slg) - L4 (Slg,) | Vla       |
| 0        | 48        | 0.50mm (19.69mils)  | PTH    | Round      | L1 (Sig) - L4 (Sig,) | Pad       |
| <b>♦</b> | 4         | 0.60mm (23.62mlls)  | PTH    | Slot       | L1 (Slg) - L4 (Slg,) | Pad       |
| ×        | 14        | 0.80mm (31.50mlls)  | PTH    | Round      | L1 (Slg) - L4 (Slg,) | Pad       |
| *        | 5         | 0.90mm (35.43mlls)  | PTH    | Slot       | L1 (Slg) - L4 (Slg,) | Pad       |
| ×        | 2         | 0.99mm (38.98mils)  | PTH    | Round      | L1 (Sig) - L4 (Sig,) | Pad       |
| *        | 6         | 1.00mm (39.37mlls)  | PTH    | Round      | L1 (Slg) - L4 (Slg,) | Pad       |
| <b>⊕</b> | 2         | 1.30mm (51.18mlls)  | PTH    | Round      | L1 (Slg) - L4 (Slg,) | Pad       |
| 0        | 4         | 1.60mm (62.99mils)  | PTH    | Round      | L1 (Sig) - L4 (Sig,) | Pad       |
| 0        | 6         | 3,20mm (125,98mlls) | PTH    | Round      | L1 (Slg) - L4 (Slg,) | Pad       |
|          | Total 814 |                     |        |            |                      |           |



|   | Designed for: Tro<br>Designed by: Pe |                     |          |              | BIT BIT  |   |
|---|--------------------------------------|---------------------|----------|--------------|----------|---|
|   | Sheet:<br>File: pump_board           | d.kicad_pcb         |          | Project: SMP | BR       | 0 |
|   | Title:                               |                     |          | Board: Pum   | p_board  | ٦ |
|   | Size: A4                             | Date: 2024-12-04    | GIT hash | : f0cdaa3    | Rev: 1.0 |   |
|   | KiCad E.D.A. 9.0                     | .1+1 + KiBot v1.8.5 | •        | •            | ld: 3/10 |   |
| _ | 7.                                   |                     |          |              |          |   |

