

3

2

1

Final Thickness : 1.60mm +/- 0.1mm
Dimensions : 38.00mm x 69.00mm

Min. Track/Gap (Outer) : 0.10/0.10
Min. Track/Gap (Inner) : 0.10/0.10

SMD Pads Top : 184
SMD Pads Bottom : 533
Minimum Pitch : 0.40mm
Minimum Annular Ring : 0.20mm

Total no. of holes : 711
Largest hole size : 2.82
Smallest hole size : 0.2
No. of hole sizes : 10

Connector Gold : Yes
Peel-Off mask : No
Scoring : No
Internal routing : No

Manufacturer's Logo : Yes, See drawing PCB-002
Date Marking : Yes, See drawing PCB-002
UL Marking : Yes, See drawing PCB-002

Layer Stackup
Design: Rabbit-FX.pcb
Board Thickness: 1.6842

| | | |
|--|----------------|---------|
| | SolderMask TOP | 0.076mm |
| | Signal 1 TOP | 0.018mm |
| | Pre-preg | 0.197mm |
| | Plane | 0.018mm |
| | Core | 0.200mm |
| | Signal 2 | 0.018mm |
| | Pre-preg | 0.197mm |
| | Plane | 0.018mm |
| | Core | 0.200mm |
| | Plane | 0.018mm |
| | Pre-preg | 0.197mm |
| | Signal 3 | 0.018mm |
| | Core | 0.200mm |
| | Plane | 0.018mm |
| | Pre-preg | 0.197mm |
| | Signal 4 BTM | 0.018mm |
| | SolderMask BTM | 0.076mm |

1. GENERAL

- Fabricate PCB in accordance with IPC-6012B, Class 2 and IPC-6013 when applicable.
- Bow and twist shall be 0.75% or less, measured in accordance with IPC-TM-650, method 2.4.22.
- Artwork may be adjusted by the PCB fabricator to compensate for manufacturing process tolerances or impedance requirements.
- All dimensions are mm.

2. MATERIALS

- Laminate and prepreg to be ISOLA 370HR or equivalent.
- Copper foil to be in accordance with IPC-4562.

3. HOLES

- Hole sizes are finished hole sizes after plating.
- Via holes have to be filled, because of the presentence of probing pads at part J2.
- No hole breakout allowed.

4. FINISH

- Apply Liquid Photo Image-able solder mask, color Red, per IPC-SM-840, Class H, to both sides of the board over bare copper.
- Land pattern of part J2 has to be plated with Connector Gold. See also drawing PCB-002 for the location of this land pattern.
- All remaining exposed conductive pattern areas not covered with soldermask or other plating shall be plated with Electroless Nickel Immersion Gold, ENIG, per IPC-4552, suitable for wire-bonding.
- Solder mask images that are the same size as the component pads may be enlarged, but shall not be enlarged beyond 0.05mm per side. All other soldermask shall not be enlarged.
- Soldermask overlap on smd lands is not allowed.

5. MARKING

- UL logo, manufacturer's identification and date code shall be rendered on the top side of the pcb, in silkscreen.
- Silkscreen both sides of the pcb using non-conductive epoxy ink, color white. No ink shall be on exposed pads.

6. TEST REQUIREMENTS

- 100% netlist verification using the netlist information in the ODB++ data

CONTROLLED IMPEDANCES

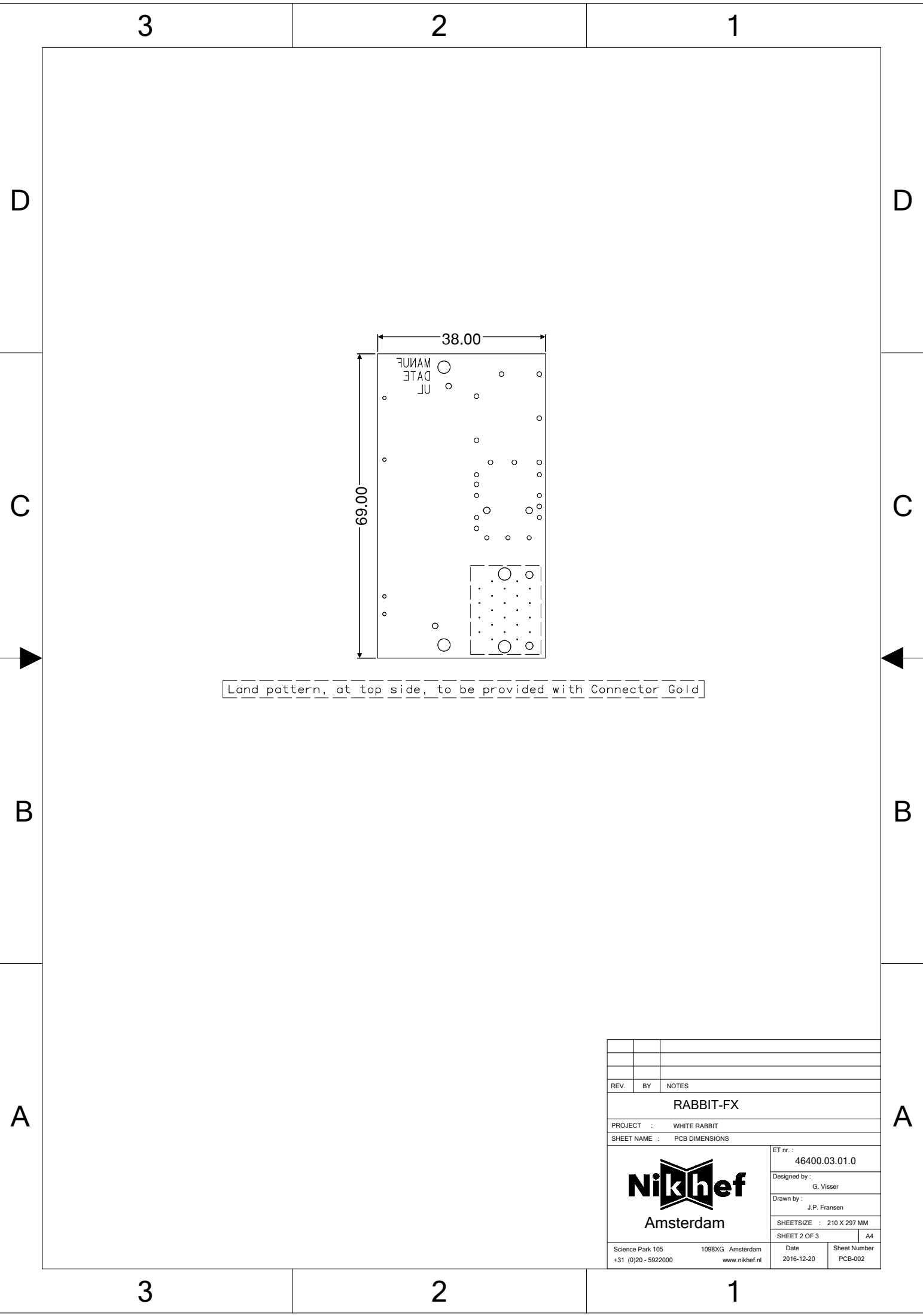
| Layer | Type | Width(mm) | Spacing(mm) | Ref.Layer | Dk |
|-------|------|-----------|-------------|-----------|------|
| 3 | LVDS | 0.1 | 0.12 | 2&4 | 3.92 |
| 6 | LVDS | 0.1 | 0.12 | 5&7 | 3.92 |

| | | |
|---|-----------------------------------|---|
| REV. | BY | NOTES |
| RABBIT-FX | | |
| PROJECT : WHITE RABBIT | | |
| SHEET NAME : PCB SPECIFICATION | | |
|  | | ET nr.: 46400.03.01.0 |
| Designed by: G. Visser | | |
| Drawn by: J.P. Fransen | | |
| SHEETSIZE : 210 X 297 MM | | |
| SHEET 1 OF 3 | | A4 |
| Science Park 105 +31 (0)20 - 5922000 | 1098XG Amsterdam www.nikhef.nl | Date 2016-12-20 Sheet Number PCB-001 |

3

2

1



Land pattern, at top side, to be provided with Connector Gold

| | | | | | |
|---|----|-----------------------------------|--------------------------|--------------------|-------------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| REV. | BY | NOTES | | | |
| RABBIT-FX | | | | | |
| PROJECT : WHITE RABBIT | | | | | |
| SHEET NAME : PCB DIMENSIONS | | | | | |
|  | | | ET nr. : 46400.03.01.0 | | |
| | | | Designed by : G. Visser | | |
| | | | Drawn by : J.P. Fransen | | |
| | | | SHEETSIZE : 210 X 297 MM | | |
| SHEET 2 OF 3 | | | A4 | | |
| Science Park 105 +31 (0)20 - 5922000 | | 1098XG Amsterdam www.nikhef.nl | | Date 2016-12-20 | Sheet Number PCB-002 |

1

D

C



B

| Through Holes All Drills (unless specified) +/- 0.10 (MM) | | | | |
|--|----------|-----------|--------|----------|
| Symbol | Diameter | Tolerance | Plated | Quantity |
| A | 0.20 | +/- 0.05 | Yes | 501 |
| B | 0.25 | | Yes | 22 |
| C | 0.25 | | Yes | 154 |
| D | 0.80 | | Yes | 4 |
| F | 0.95 | | Yes | 9 |
| I | 1.05 | | Yes | 11 |
| M | 2.80 | | Yes | 2 |
| E | 1.30 | | No | 2 |
| J | 1.50 | | No | 2 |
| G | 1.65 | | No | 2 |
| H | 2.82 | No | 2 | |

A

| | | | | | |
|---|----|--------------|---------------------------------|--|-------------------------|
| | | | | | |
| | | | | | |
| REV. | BY | NOTES | | | |
| <div style="text-align: center;"> <h1>RABBIT-FX</h1> </div> | | | | | |
| PROJECT | | WHITE RABBIT | | | |
| SHEET NAME | | DRILL CHART | | | |
|  | | | ET nr. : 64600.03.010 | | |
| | | | Designed by : G. Visser | | |
| | | | Drawn by : J.P. Franssen | | |
| | | | SHEETSIZE : 210 X 297 MM | | |
| Science Park 105 +31 (0)20 - 5922000 www.nikhef.nl | | | Date 2016-12-20 | | Sheet Number PCB-003 |
| | | | SHEET 3 OF 3 | | Ad |

1