# PCB

Board size: 63.0x35.6 mm (2.48x1.4 inches)

- This is the size of the rectangle that contains the board
- Thickness: 1.6 mm (63 mils)
- Material: FR4Finish: HALLayers: 4
- Copper thickness: 35 μm

Solder mask: TOP / BOTTOM

• Color: Green

Silk screen: TOP / BOTTOM

• Color: White

# Important sizes

Clearance: 0.15 mm (6 mils)

Track width: 0.38 mm (15 mils)

• By design rules: 0.15 mm (6 mils)

Drill: 0.5 mm (20 mils)

- Vias: 0.5 mm (20 mils) [Design: 0.4 mm (16 mils)]
- Pads: 1.05 mm (41 mils)
- $\bullet\,$  The above values are real drill sizes, they add 0.1 mm (4 mils) to plated holes (PTH)

Via: 0.8/0.4 mm (31/16 mils)

- By design rules: 0.4/0.3 mm (16/12 mils)
- Micro via: yes [0.2/0.1 mm (8/4 mils)]
- Buried/blind via: yes
- Total: 40 (thru: 40 buried/blind: 0 micro: 0)

Outer Annular Ring: 0.15 mm (6 mils)

• By design rules: 0.28 mm (11 mils)

Eurocircuits class: 6B - Using min drill 0.5 mm for an OAR of 0.15 mm

## General stats

Components count: (SMD/THT)

• Top: 25/5 (SMD + THT)

• Bottom: 0/0 (NONE)

### Defined tracks:

- 0.15 mm (6 mils)
- 0.2 mm (8 mils)
- 0.25 mm (10 mils)
- 0.38 mm (15 mils)
- 0.51 mm (20 mils)
- 0.76 mm (30 mils)

#### Used tracks:

- 0.38 mm (15 mils) (78) defined: yes
- 0.51 mm (20 mils) (212) defined: yes

#### Defined vias:

#### Used vias:

• 0.8/0.4 mm (31/16 mils) (Count: 40, Aspect: 2.0 A) defined: no

## Holes (excluding vias):

- 0.95 mm (37 mils) (4)
- 1.0 mm (39 mils) (21)
- 2.0 mm (79 mils) (1)
- 2.3 mm (91 mils) (2)
- 2.7 mm (106 mils) (4)

#### Oval holes:

• 1.5x2.0 mm (59x79 mils) (1)

Drill tools (including vias and computing adjusts and rounding):

- 0.5 mm (20 mils) (40)
- 1.05 mm (41 mils) (4)
- 1.1 mm (43 mils) (21)
- 1.5 mm (59 mils) (1)
- 2.0 mm (79 mils) (1)
- 2.4 mm (94 mils) (2)
- 2.7 mm (106 mils) (4)

## Solder paste stats:

Using a paste with 87.75 % alloy, that has an specific gravity for the alloy of  $7.4 \text{ g/cm}^3$  and  $1.0 \text{ g/cm}^3$  for the flux. This paste has an specific gravity of  $4.15 \text{ g/cm}^3$ .

The stencil thickness is 0.12 mm.

Side	Pads with paste	Area [mm <sup>2</sup> ]	Paste [g]
Total	82	138.11	0.69

Note: this is just an approximation to the theoretical value. Margins of the solder mask and waste aren't computed.

# Schematic

Schematic in SVG format

# **PCB** Layers

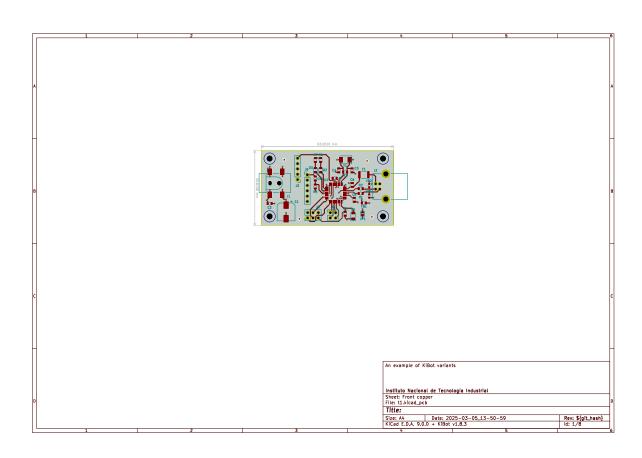


Figure 1: PCB Front copper

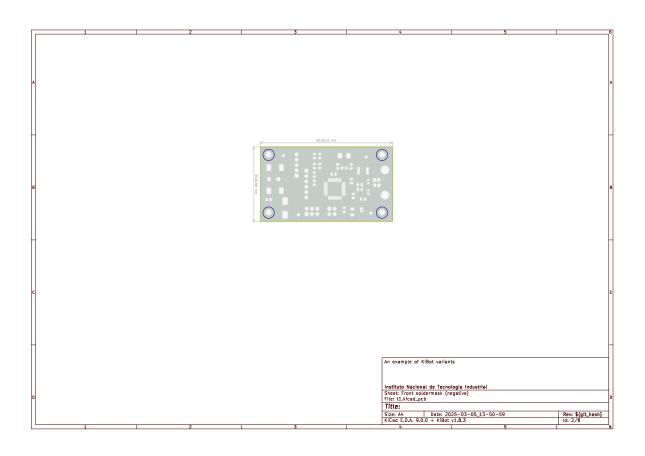


Figure 2: PCB Front soldermask (negative)

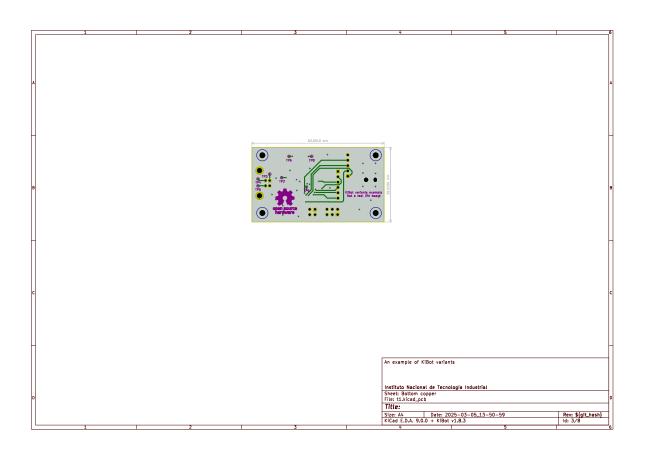


Figure 3: PCB Bottom copper

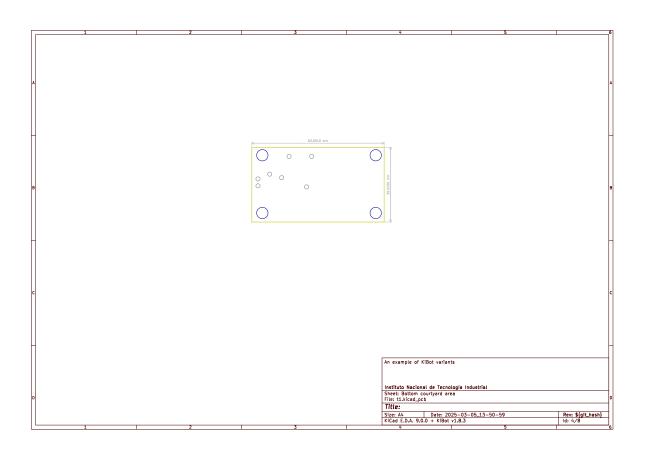


Figure 4: PCB Bottom courtyard area

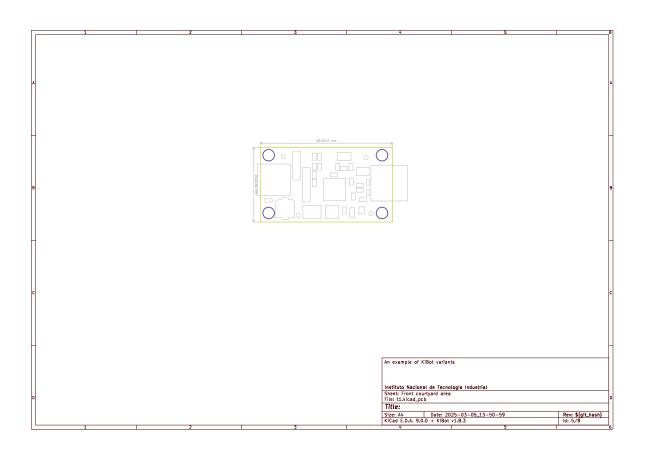


Figure 5: PCB Front courtyard area

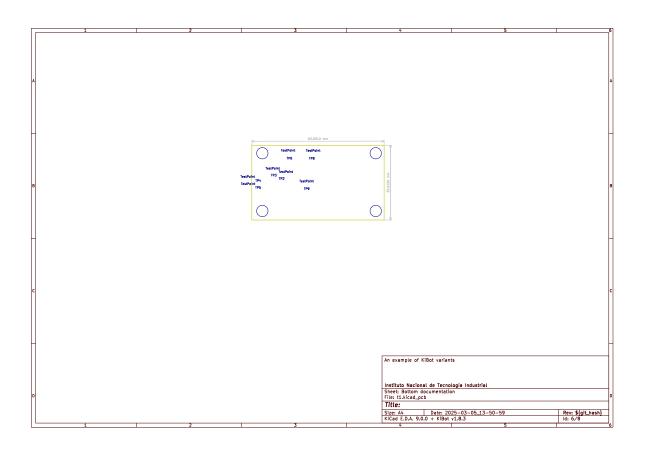


Figure 6: PCB Bottom documentation

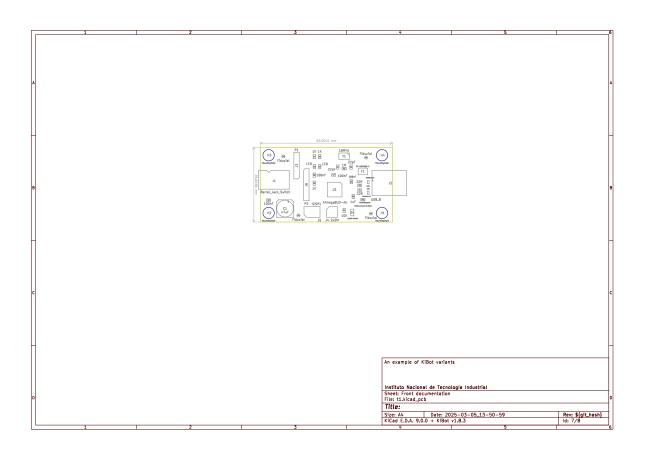


Figure 7: PCB Front documentation

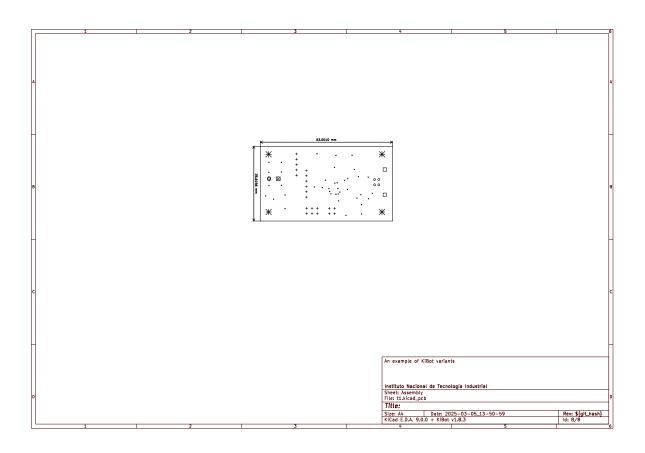


Figure 8: PCB Assembly