

This is the Revision A version of the [Irsense3 RoboBrick](#). The status of this project is [work in progress](#).

Irsense3 Robobrick (Revision A)

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1. Introduction

The Irsense3 RoboBrick provides the ability to seek towards an IR beacon. In addition, it can be used to do simple IR proximity detection.

2. Programming

There is no programming specification yet.

3. Hardware

The hardware consists of a circuit schematic and a printed circuit board.

3.1 Circuit Schematic

The schematic for the Irsense3 RoboBrick is shown below:

The artwork layer.

[irsense3.gbl](#)

The RS-274X "Gerber" back (solder side) layer.

[irsense3.gtl](#)

The RS-274X "Gerber" top (component side) layer.

[irsense3.gal](#)

The RS-274X "Gerber" artwork layer.

[irsense3.drl](#)

The "Excellon" NC drill file.

[irsense3.tol](#)

The "Excellon" tool rack file.

4. Software

There is no software available yet.

5. Issues

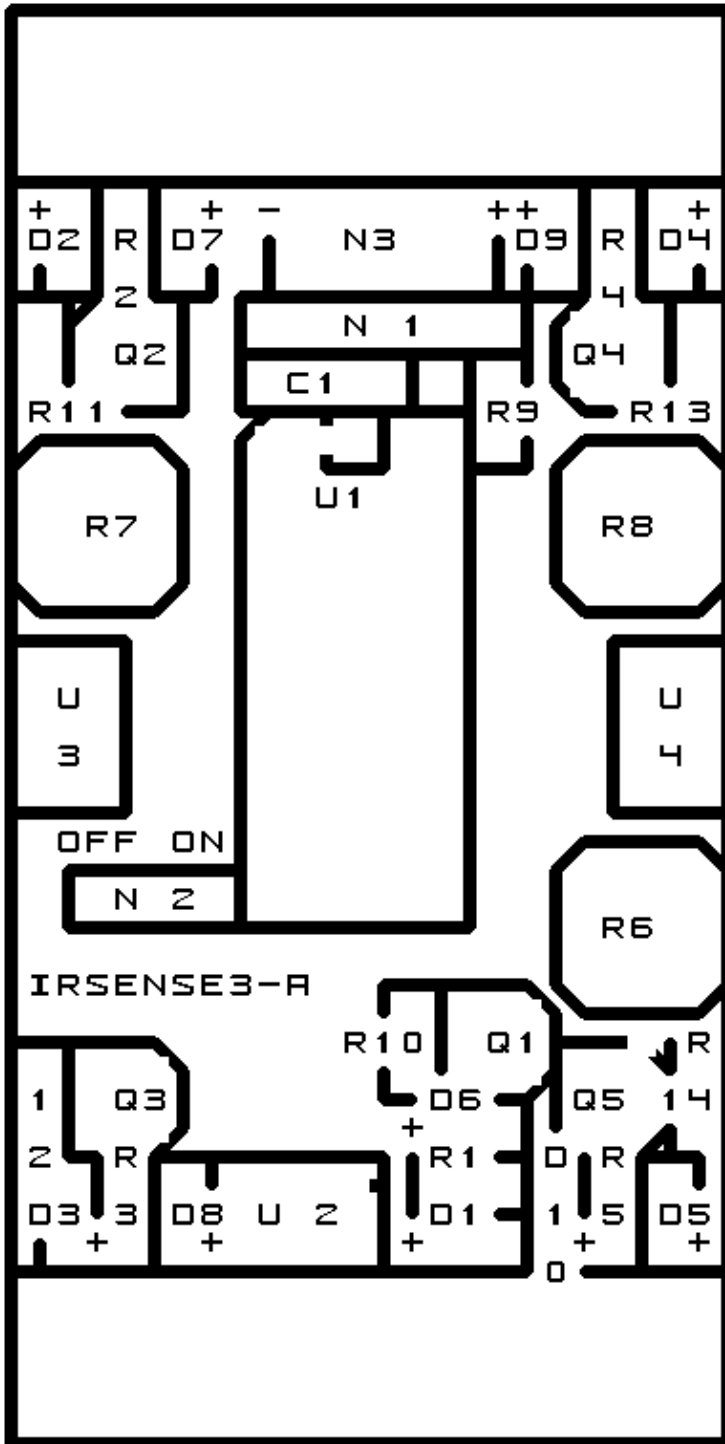
Any fabrication issues are listed here.

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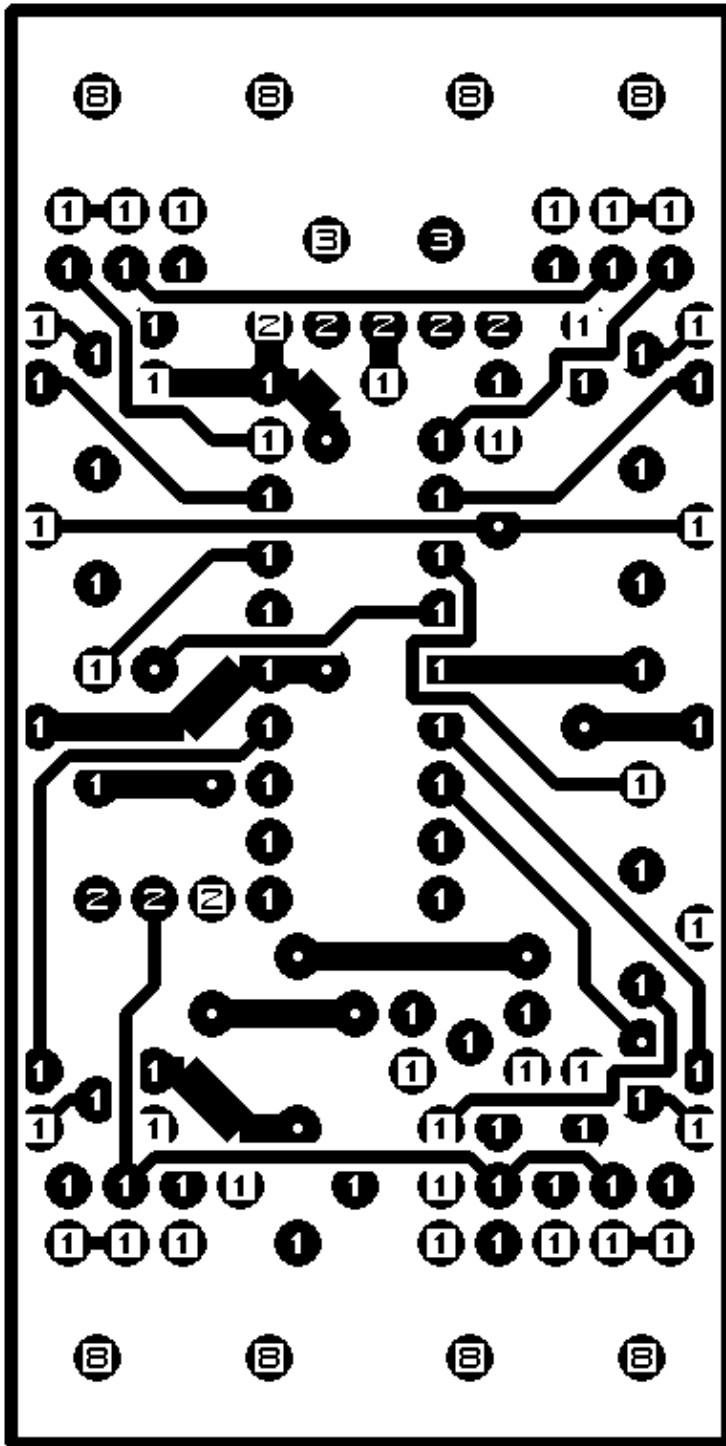
A. Appendix A: Parts List

```
# Parts list for IRSense2 RoboBrick (Rev. A)
#
C1: Capacitor10pF - 10 pF Ceramic Capacitor [Jameco: 15333]
D1-5: LEDGreen - Small Green LED [Jameco: 34606]
D6-10: IR_LED - IR LED [Jameco: 133946]
N1: Header1x5.RBSlave - 1x5 Male Header [5/40 Jameco: 160881]
N2: Header1x3.IRSense2 - 1x3 Male Header [3/40 Jameco: 160881]
N3: TerminalStrip2.IRSense3 - 2 Junction Terminal Strip [Jameco: 189675]
Q1: PN2222.CBE - NPN Transistor [Jameco: 28628]
Q2: PN2222.EBC - NPN Transistor [Jameco: 28628]
Q3: PN2222.CBE - NPN Transistor [Jameco: 28628]
Q4: PN2222.CBE - NPN Transistor [Jameco: 28628]
Q5: PN2222.EBC - NPN Transistor [Jameco: 28628]
R1-5: Resistor220.Vertical - 220 Ohm 1/4 Watt Resistor [Jameco: 30470]
R6-8: ResistorTrimPot500.IRSense3 - 500 Ohm Trim Pot [Jameco: 43123]
R9: Resistor100.Vertical - 100 Ohm 1/4 Watt Resistor [Jameco: 29946]
R10-14: Resistor1K.Vertical - 1K Ohm 1/4 watt resistor [Jameco: 29663]
U1: PIC16F627.IRSense3 - Microchip PIC16F627 [Digikey: PIC16F627A-I/P-ND]
U2-4: TSOP1840 - Vishay 40 MHz IR Receiver [Newark: 95B4869]
```

B. Appendix B: Artwork Layer



C. Appendix C: Back (Solder Side) Layer



D. Appendix D: Front (Component Side) Layer

