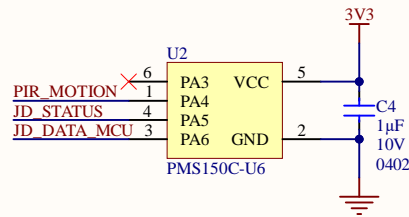
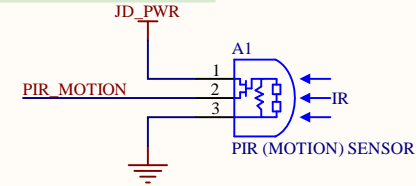


## MCU

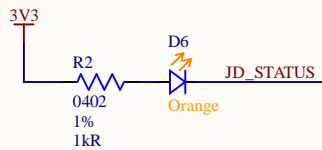


U2 must be programmed before being soldered down due to restrictive in-circuit programming requirements. JD\_STATUS is PWM-capable GPIO.

## PIR Motion sensor



## Status LED



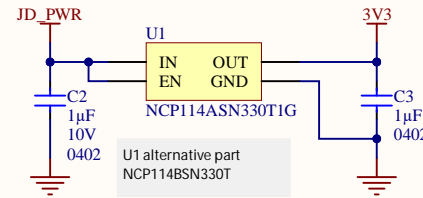
D6 alternative part  
SML-D12D  
E6C0603SEAC1UDA  
NCD0603O1

Jacdac modules require a status LED.

The LED can be monochrome or multicolor depending on GPIO availability

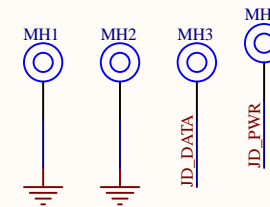
If using alternative part recalculate the resistor values R2

## 3V3 Regulator



U1 alternative part  
NCP114BSN330T

## Mounting holes



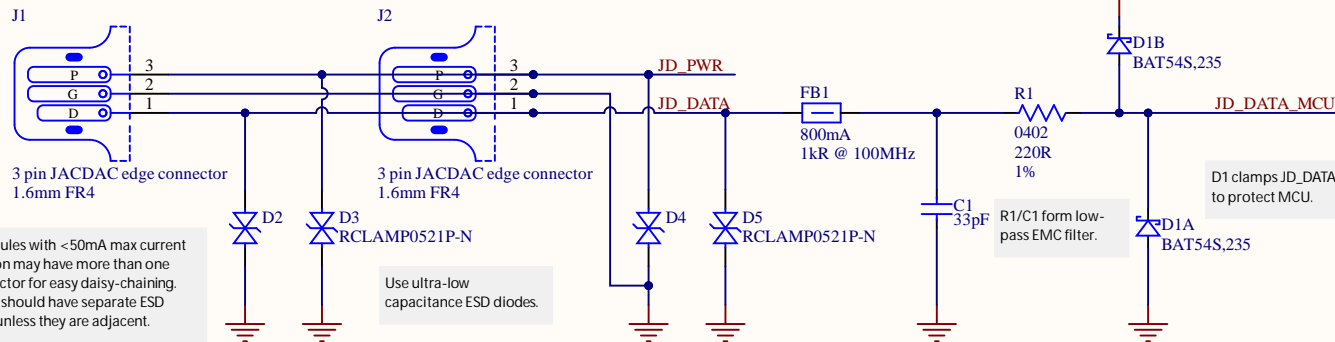
JACDAC mounting holes are plated through hole, finished diameter of 2.1mm, annular ring of 3.0mm diameter and copper/component keepout of 5.0mm. The mounting holes should be on 2.5mm pitch.

MH1 & MH2 : GND  
MH3 : JD\_DATA  
MH4 : JD\_PWR

Mounting holes should have appropriate silkscreen marker, and MH1 should have a pin 1 marker on the top side.

Jacdac modules require mounting holes. Modules mounting holes are electrically connected so that modules can be mounted on top of other PCBs without using cables.

## Jacdac connector



Jacdac modules with <50mA max current consumption may have more than one edge connector for easy daisy-chaining. Connectors should have separate ESD protection unless they are adjacent.

Use ultra-low capacitance ESD diodes.

D1 clamps JD\_DATA to protect MCU.

R1/C1 form low-pass EMC filter.

Silkscreen & layout notes

Block name

Design notes

When this PDF is viewed with Adobe Reader, clicking on components shows part numbers and other details.

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PROJECT FILENAME JacdacMotionDetection 54.PrjPCB

PROJECT CODENAME JacdacmotionDetection

SHEET FILENAME JacdacMotionDetection54.SchDoc

LICENCE Attribution 4.0 International (CC BY 4.0)

Microsoft

PROJECT DESCRIPTION

Motion detection based on low-cost OTP PADAUK MCU

SHEET DESCRIPTION

Complete design

LAST MODIFIED 10/11/2021

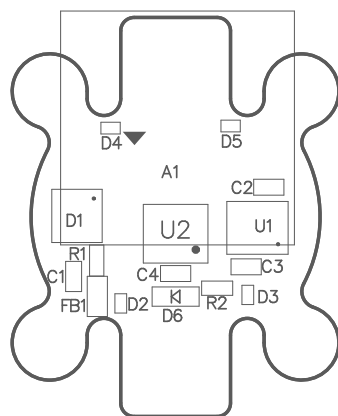
PAGE 1 OF 1

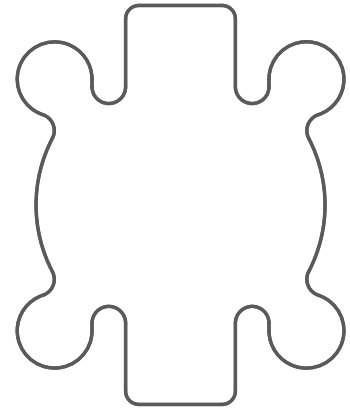
DRAWN BY DG, JD & SH

REVISION 0.2

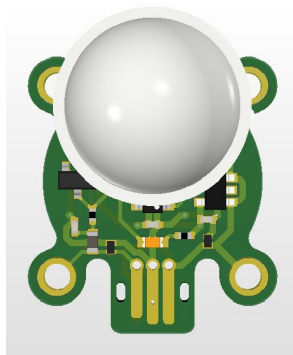
PCB ID 54-02

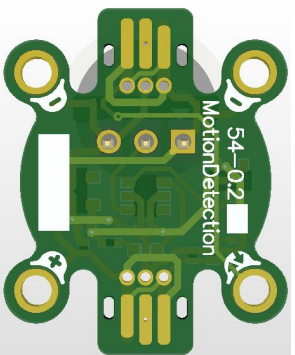
Board Outline  
Top Assy



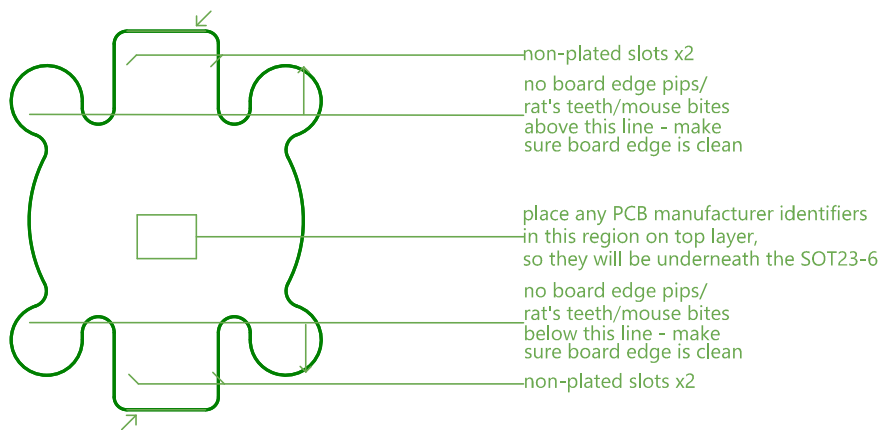


Board Outline  
Bottom Assy



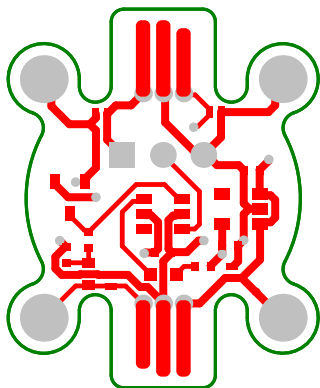


Fabrication Notes  
Board Outline

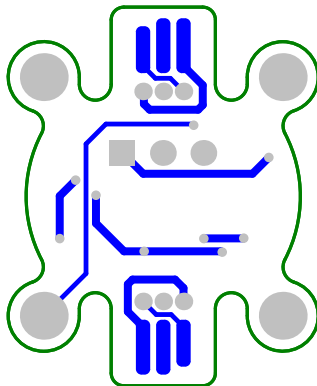


Top Layer

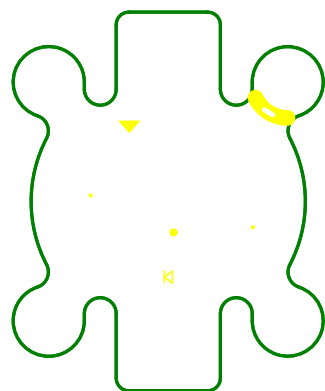
Board Outline



Bottom Layer  
Board Outline

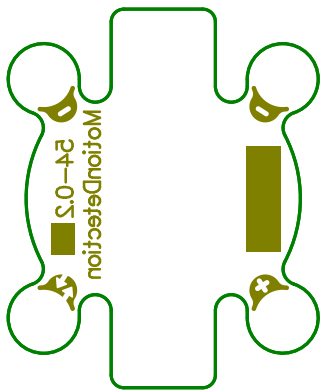






Board Outline

Top Overlay

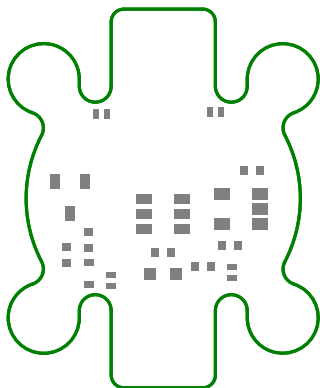


Board Outline

Bottom Overlay

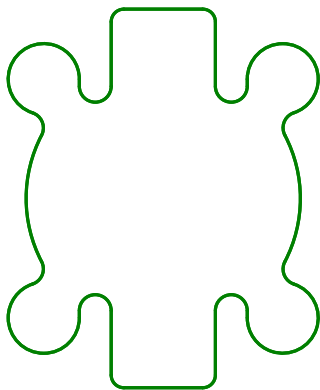
Board Outline

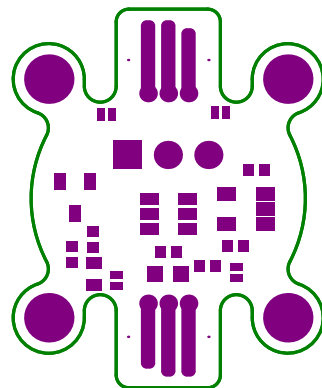
Top Paste



Board Outline

Bottom Paste

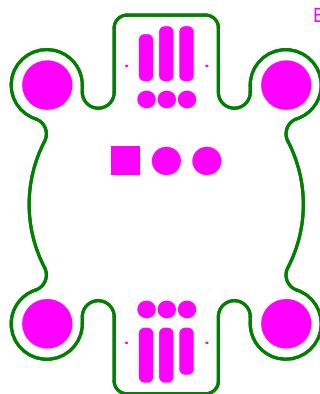




Board Outline

Top Solder (resist)

Board Outline



Bottom Solder (resist)

Board Outline

