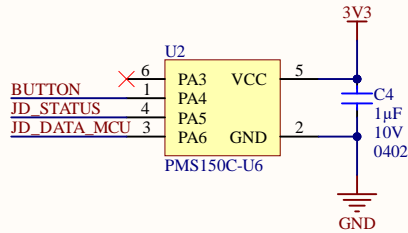
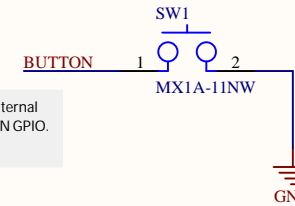


MCU

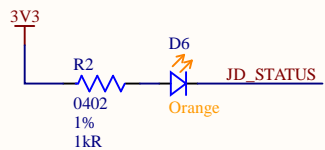


U2 must be programmed before being soldered down due to restrictive in-circuit programming requirements. JD_STATUS is PWM-capable GPIO.

Button



Status LED



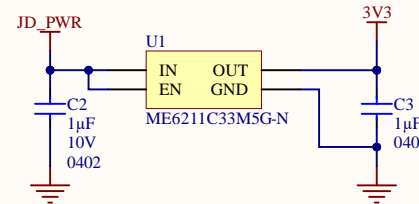
D6
Alternative part
SML-D12D
E6C0603SEAC1UDA
NCD060301

Jacdac modules require a status LED.

The LED can be monochrome or multicolor depending on GPIO availability

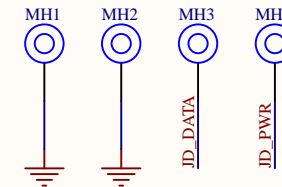
If using alternative part recalculate the resistor values R2

3V3 Regulator



U1 alternative parts:
ME6212C33M5G 6V 260mV @ 200mA Iout 350mA
NCP114BSN330T1G 5.5V 225mV @ 300mA Iout 300mA

Mounting holes



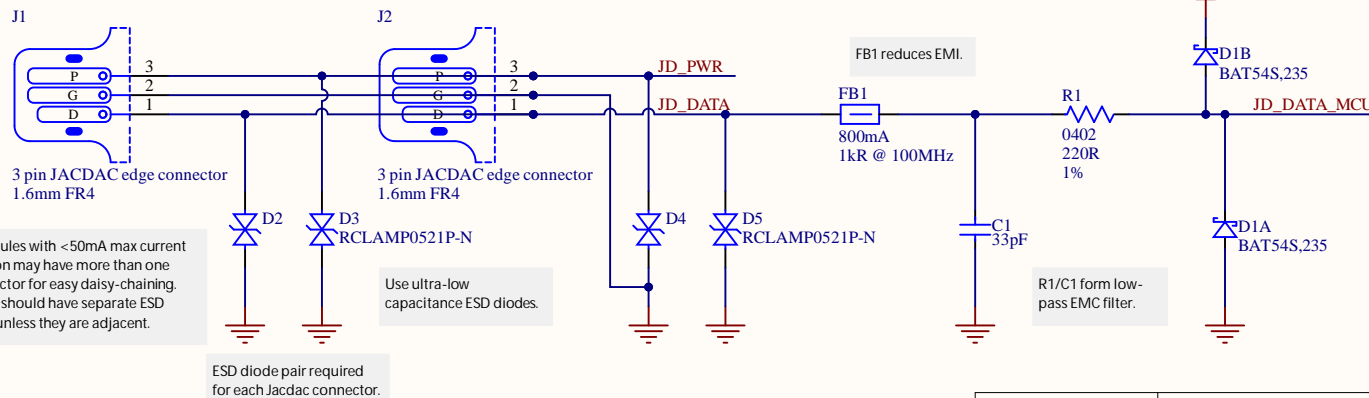
JACDAC mounting holes are plated through hole, finished diameter of 2.1mm, annular ring of 3.0mm diameter and copper/component keepout of 5.0mm. The mounting holes should be on 2.5mm pitch.

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.

ESD diode pair required for each Jacdac connector.

Use ultra-low capacitance ESD diodes.

FB1 reduces EMI.

D1 clamps JD_DATA to protect MCU.

R1/C1 form low-pass EMC filter.

Silkscreen & layout notes

Block name

Design notes

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

PROJECT FILENAME JacdacKeyboardKey 46.PrjPCB

PROJECT CODENAME JacdacKeyboardKey

SHEET FILENAME JacdacKeyboardKey 46.SchDoc

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Microsoft

PROJECT DESCRIPTION
Jacdac Keyboard Key using low-cost OTP PADAUK MCU

SHEET DESCRIPTION
Complete design

LAST MODIFIED 10/11/2021

PAGE 1 OF 1

DRAWN BY DG, JD & SH

REVISION 1.3

PCB ID 46-1.3