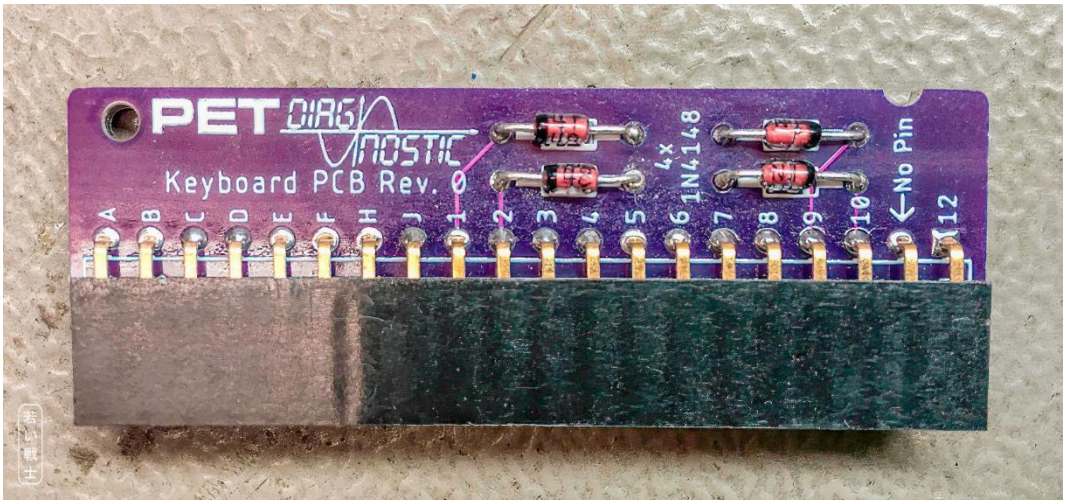
Project Documentation

Commodore PET/CBM80xx/40xx Diagnostic Keyboard PCB

Project number: 166

Revision: 0

Date: 27.10.2020



Commodore PET/CBM80xx/40xx Diagnostic Keyboard PCB **Rev. 0**

Module Description

Introduction

The Keyboard PCB is part of the Diagnostic Clip project. Originally, it was made with a connector and wires, but since PCBs got cheap and provide interconnects very reproduceable with a low failure rate, it is a very simple board design.

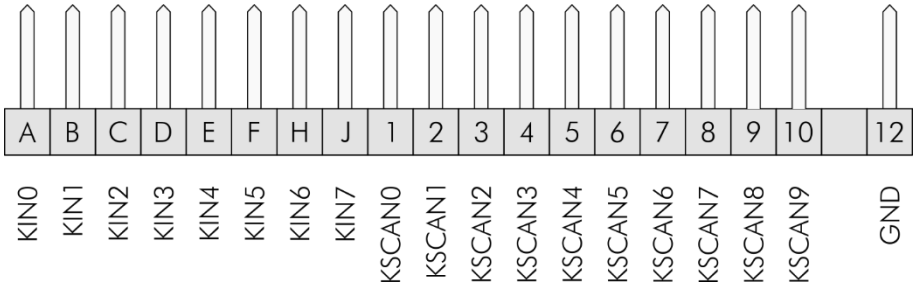


Figure 1: Pinout of the keyboard connector

KSCANx are the open collector outputs of a 74LS145 BCD to Decimal Decoder. So, it is not critical to connect more than one KeyScan Signal, nevertheless, the keyboard PCB provides diodes for a **wired-AND** connection, in case the slightly rare 74LS145 was replaced with another IC, that does not provide open collector outputs. The diodes could be replaced by a wire bridge.

Pins	Connected Signals
A-1-9	KIN0 - KeyScan0 - KeyScan8
B-2-10	KIN1 - KeyScan1 - KeyScan9
C-3	KIN2 - KeyScan2
D-4	KIN3 - KeyScan3
E-5	KIN4 - KeyScan4
F-6	KIN5 - KeyScan5
H-7	KIN6 - KeyScan6
J-8	KIN7 - KeyScan7

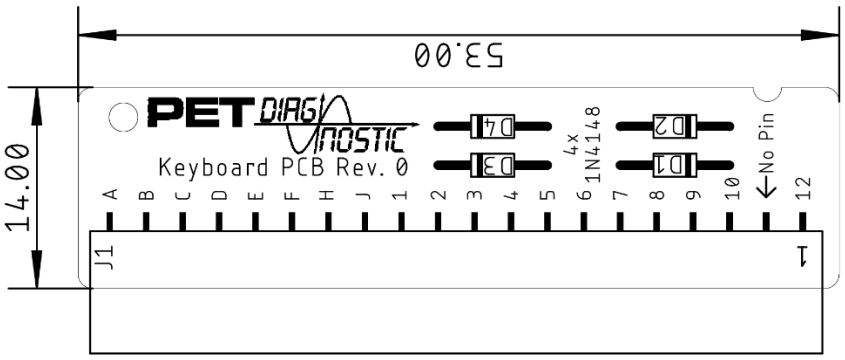
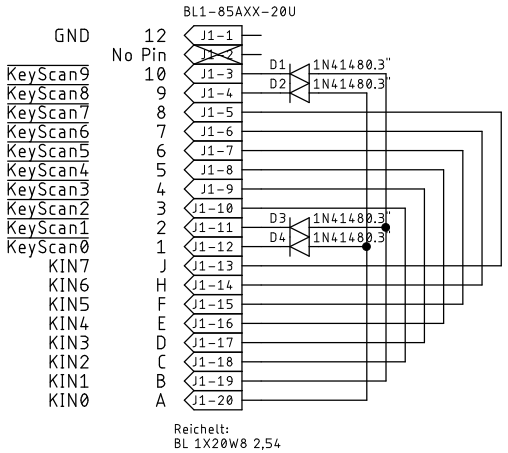


Figure 2: Dimensions of the Keyboard PCB

Revision History

Rev. 0

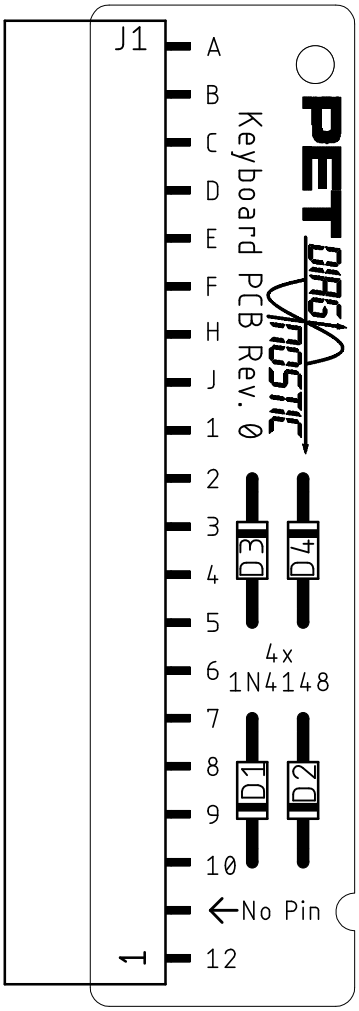
- Fully functional prototype



open source hardware

Title:	PET Diagnostic Keyboard PCB	Doc.-No.:	166-1-01-00
		Draft.:	Sven Petersen
Date:	27.10.2020 15:17	Rev.: 0	Page 1/1
File:	PET_Diag_KB		
	http://github.com/svenpetersen1965		A4

Sven Petersen 2020	Doc.-No.: 166-2-01-00	
	Cu: 35µm	Cu-Layers: 2
PET_Diag_KB		
04.01.2023 18:02		Rev.: 0
placement component side		



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04.01.2023 18:02		Rev.: 0
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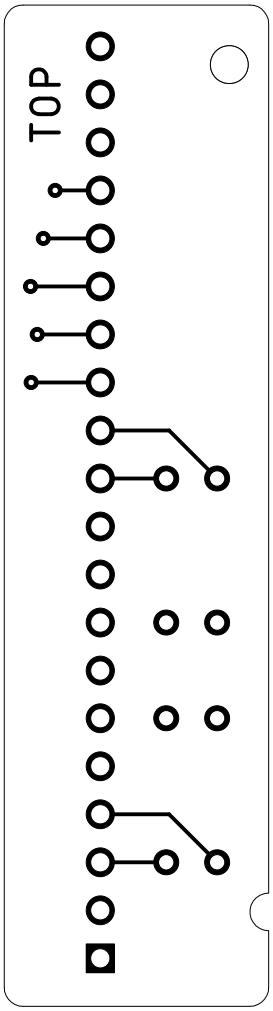

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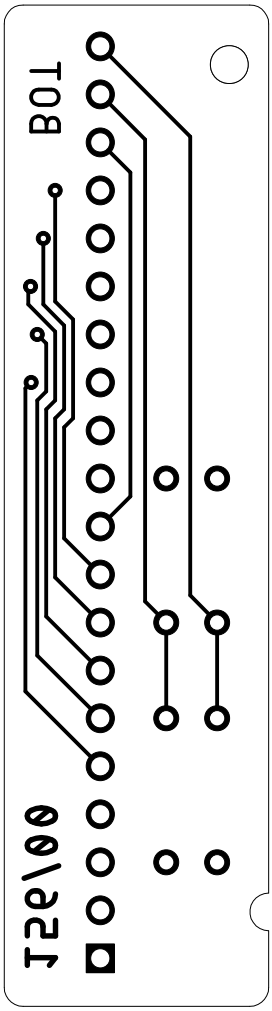
PET_Diag_KB		
04.01.2023 18:02		Rev.: 0
bottom	[redacted]	



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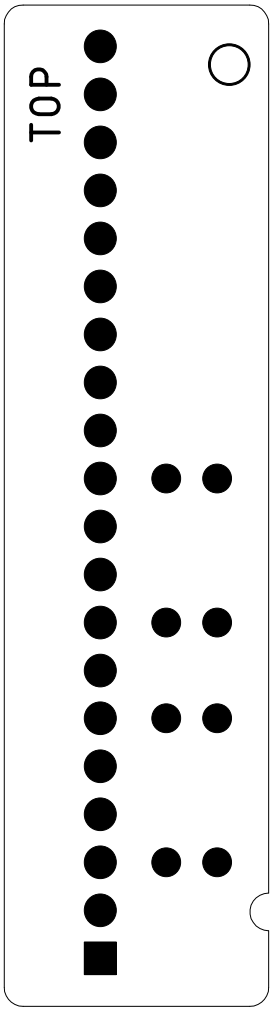
04.01.2023 18:02		Rev.: 0
stopmask component side		



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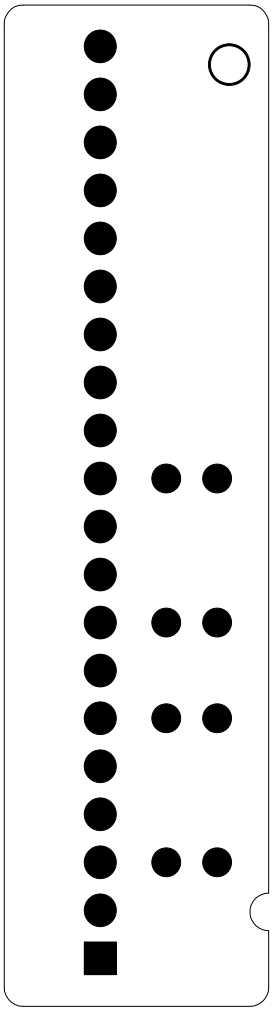
stopmask solder side		



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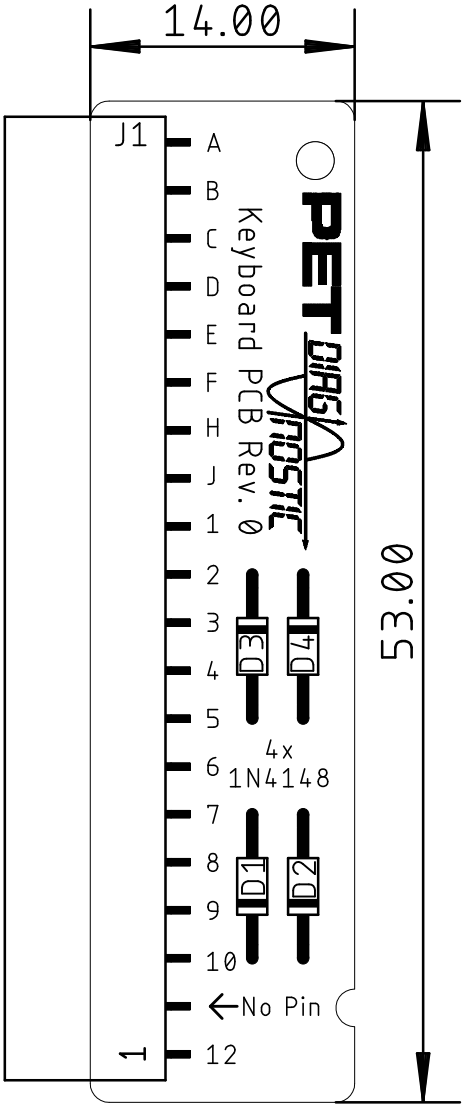
placement component side measures		



Commodore PET Diagnostic Clip: Keyboard Dongle Rev. 0
Bill of Material Rev. 0.0

Pos.	Qty	Value	Footprint	Ref.-No.	Comment
1	1	166-2-01-00	2 Layer	PCB Rev. 0	2 layer, Cu 35μ, HASL, 53.0mm x 14.0mm, 1.6mm FR4
2	4	1N4148	DO-35	D1, D2, D3, D4	Diode 1N4148
3	1	BL1-85AXX-20U	BL1-85AXX-20U	J1	e.g. MPE Garry, Reichelt BL 1x20W8 2,54