

Project Documentation

Epyx FastLoad Cartridge for the C64

Project number: 146

Revision: 2

Date: 24.10.2022



Epyx FastLoad Cartridge for the C64 Rev. 2

Module Description

This is a cartridge PCB, which is suitable for the Epyx FastLoad software.

This software can be obtained here: https://rr.pokefinder.org/wiki/Epyx_FastLoad

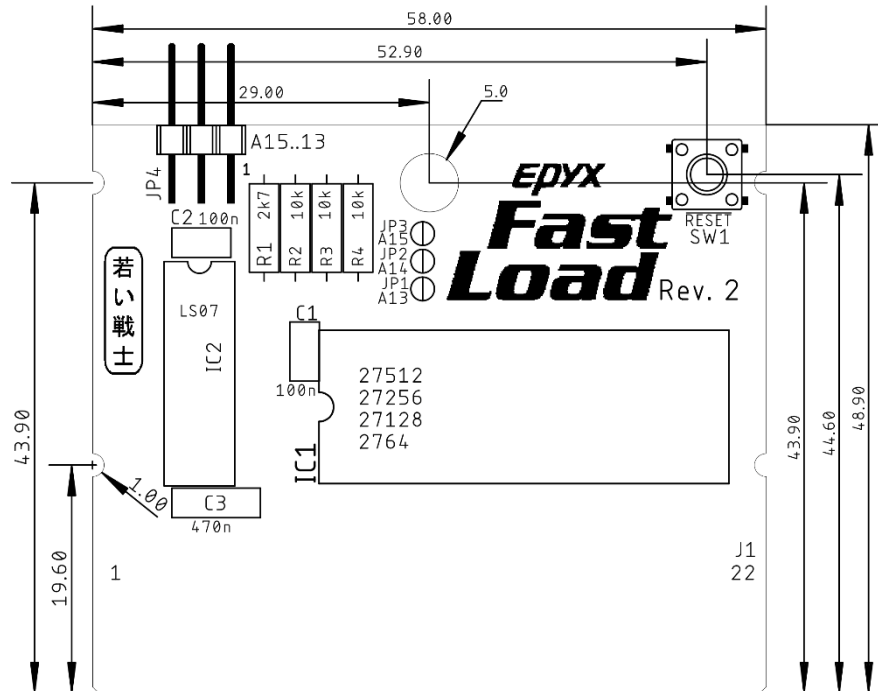


Figure 1: Dimensions

The circuit is based on a schematic found at the source, which was mentioned before.

A RESET button was added to this circuit and solder bridges (JP1 to JP3) for configuring the cartridge for being used with 27C64, 27C128, 27C256 and 27C512 EPROMs for a greater part availability.

EPROM	Jumper		
	JP3 = A15	JP2 = A14	JP1 = A13
27C64	open	open	open
27C128	open	open	close
27C256	open	close	close
27C512	close	close	close

The software is programmed to the EPROM offset address 0x0000 (hex).

The dimensions are equal to the dimensions of the Versa64Cart. Notches for the Stumpy Cartridge Case were added in Rev. 2.

The memory slot can be selected with a jumper (JP4). Leave JP1..3 open and set the jumpers on the pins accordingly.

Revision History

Rev. 0

- Prototype, fully functional

Rev. 1

- Board Revision
- Added JP4

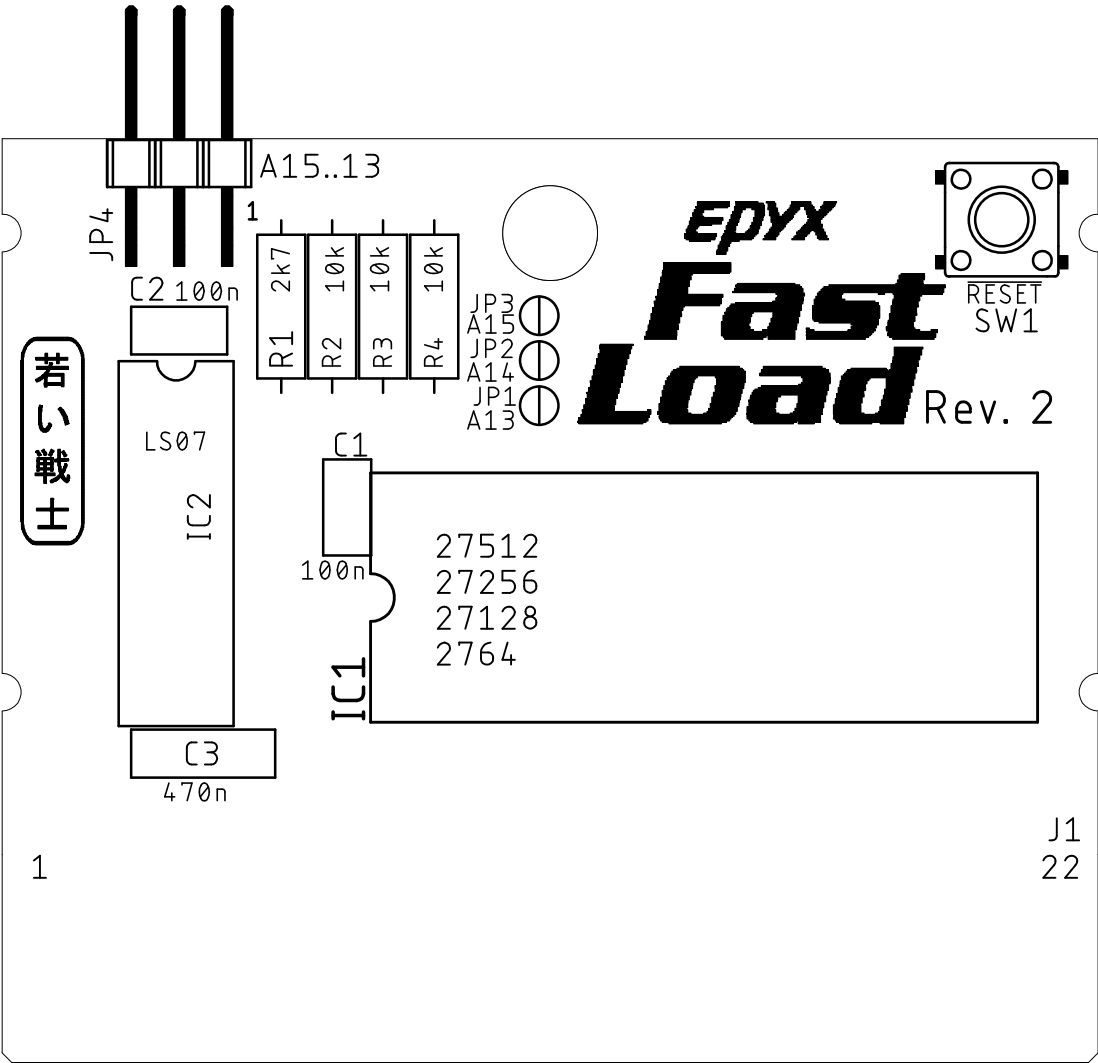
Rev. 2

- Notches added for fitting the tfw8bit.com [Stumpy Cartridge Case](#)

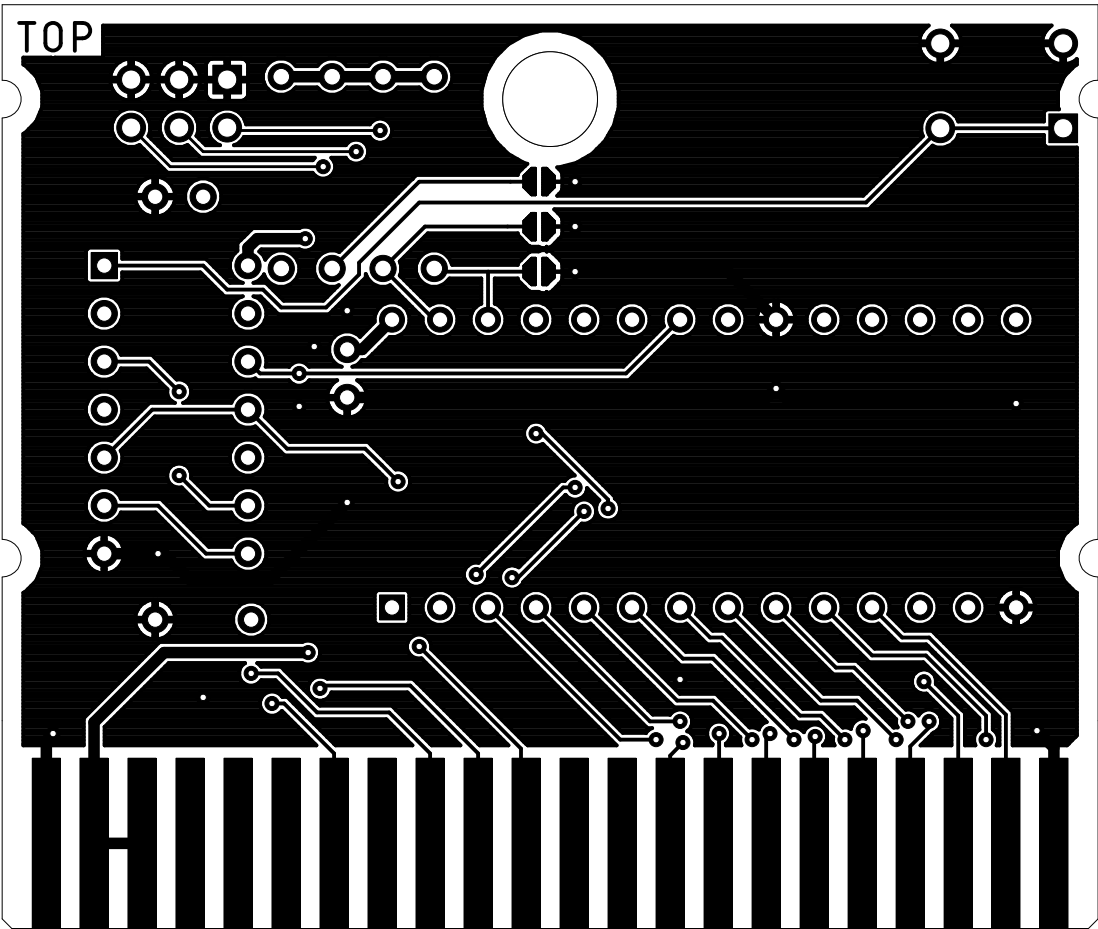


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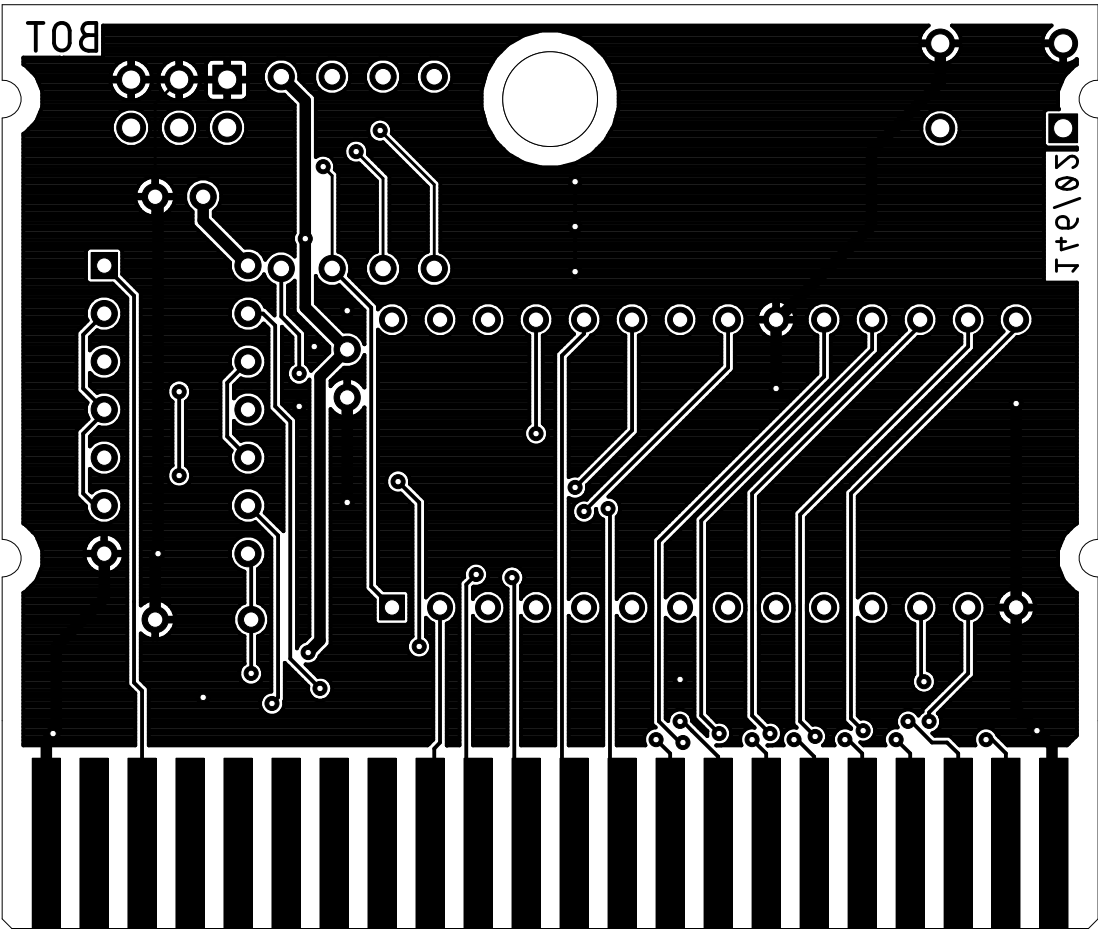
Sven Petersen 2022	Doc.-No.:146-2-01-02	
	Cu: 35μm	Cu-Layers: 2
EpyxFastLoad		
24.10.2022 15:44		Rev.: 2
placement component side		



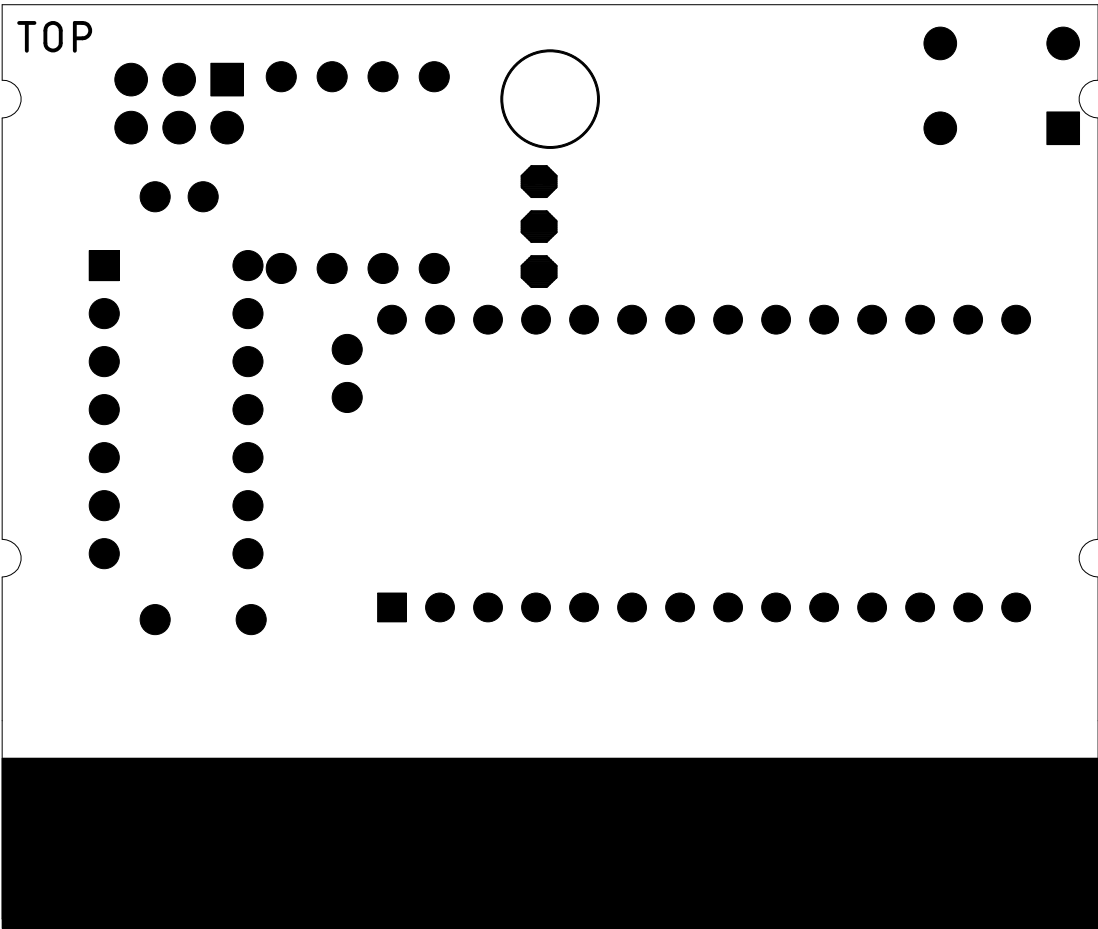
Sven Petersen 2022	Doc.-No.:146-2-01-02	
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EpyxFastLoad		
24.10.2022 15:44		Rev.: 2
top		



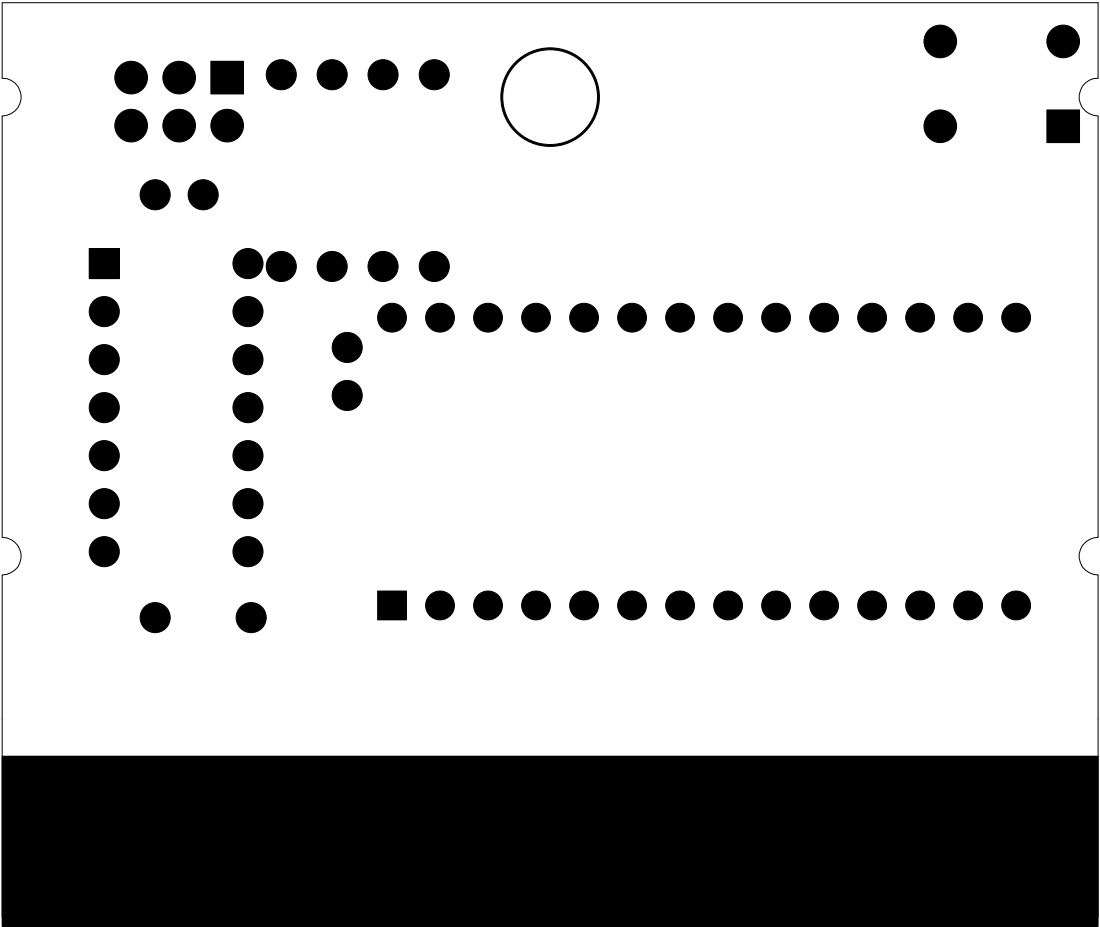
Sven Petersen 2022	Doc.-No.:146-2-01-02	
	Cu: 35µm	Cu-Layers: 2
EpyxFastLoad		
24.10.2022 15:44		Rev.: 2
bottom		



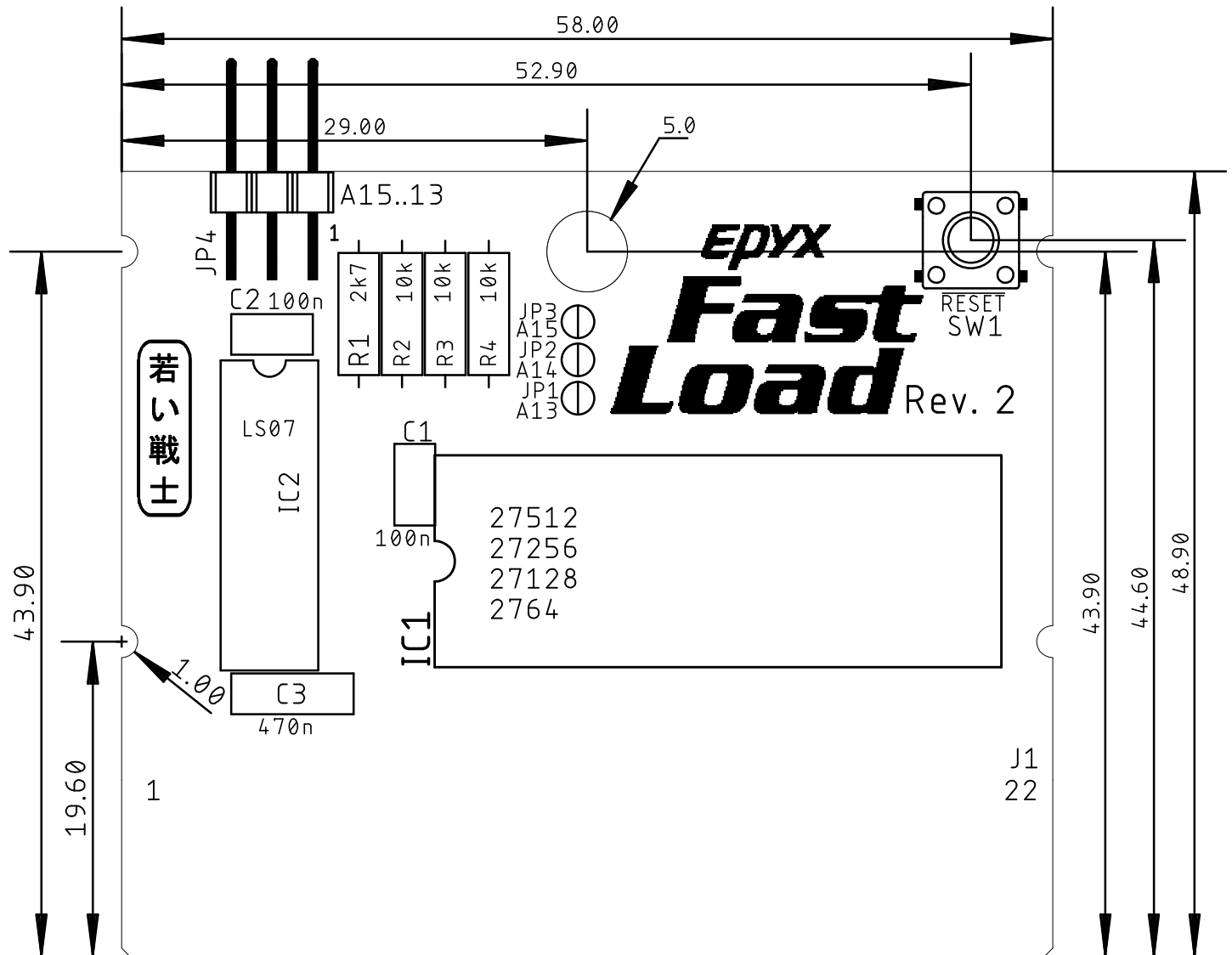
Sven Petersen 2022	Doc.-No.:146-2-01-02	
	Cu: 35µm	Cu-Layers: 2
EpyxFastLoad		
24.10.2022 15:44		Rev.: 2
stopmask component side		



Sven Petersen 2022	Doc.-No.:146-2-01-02	
	Cu: 35µm	Cu-Layers: 2
EpyxFastLoad		
24.10.2022 15:44		Rev.: 2
stopmask solder side		



Sven Petersen 2022	Doc.-No.:146-2-01-02	
	Cu: 35μm	Cu-Layers: 2
EpyxFastLoad		
24.10.2022 15:44		Rev.: 2
placement component side		measures



Epyx FastLoad Cartridge for the C64 Rev. 2

Testing

Tests

The tests were carried out with the prototype Rev. 0 and Rev. 2. The software was stored on an AT27C256R (Atmel) and an ST M27C512 EPROM.

The Epyx FastLoad cartridge was tested with:

- ASSY 250469
- ASSY 250425
- ASSY 250407
- Ultimate 64 Elite (Firmware v1.26)

The Ultimate 64 Elite did not boot. This is a known issue. This was not tested with Rev. 2 again.

All original C64, that were tested, booted without a problem. The FDD 1541 could be accessed.

Rev. 2 was tested on ASSY250469 (the circuitry of the cartridge did not change).

- Several times switched on
- Several times reset button

The software always loaded, the menu could be loaded with the £ key. Some menu functions were tested. The directory, some 1541 commands worked and programs could be loaded.

Conclusion

Rev. 2 is fully functional.

Epxy FastLoad Cartridge Rev. 2

Bill of Material Rev. 2.0

Pos.	Qty	Value	Footprint	Ref.-No.	Comment
1	1	146-2-01-02	2 Layer	PCB Rev. 2	2 layer, Cu 35 μ , HASL, 58.0mm x 48.9mm, 1.6mm FR4
2	3	not an actual part	CP_OP	JP1, JP2, JP3	Solder bridge. Configure according to doc. no. 146-6-01- **
3	2	100n	C-2,5	C1, C2	ceramic capacitor, pitch 2.54mm
4	3	10k	R-10	R2, R3, R4	resistor, metal film, 0.6W, 10% or better
5	1	27C512	DIL28-6	IC1	EPROM. Alternative: 27C64, 27C128, 27C256
6	1	2k7	R-10	R1	resistor, metal film, 0.6W, 10% or better
7	1	470n	C-5	C3	ceramic capacitor, pitch 5.08mm
8	1	JTP-1130	JTP-1130	SW1	tact switch, 6x6mm,
9	1	SN74LS07N	DIL-14	IC2	e.g. Texas Instruments SN74LS07N
10	1	Pin header, 2x3, 90°	2x3, 90°	JP4	Optional Pinheader
11	3	Jumper 2.54mm		(JP4)	Optional Jumper

Rev. History

Pos.	Rev. 1
1	Board revision
Pos.	10 new
Pos.	11 new
	Rev. 2
Pos.	1 Board revision