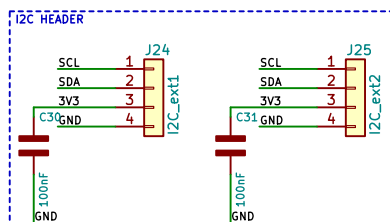
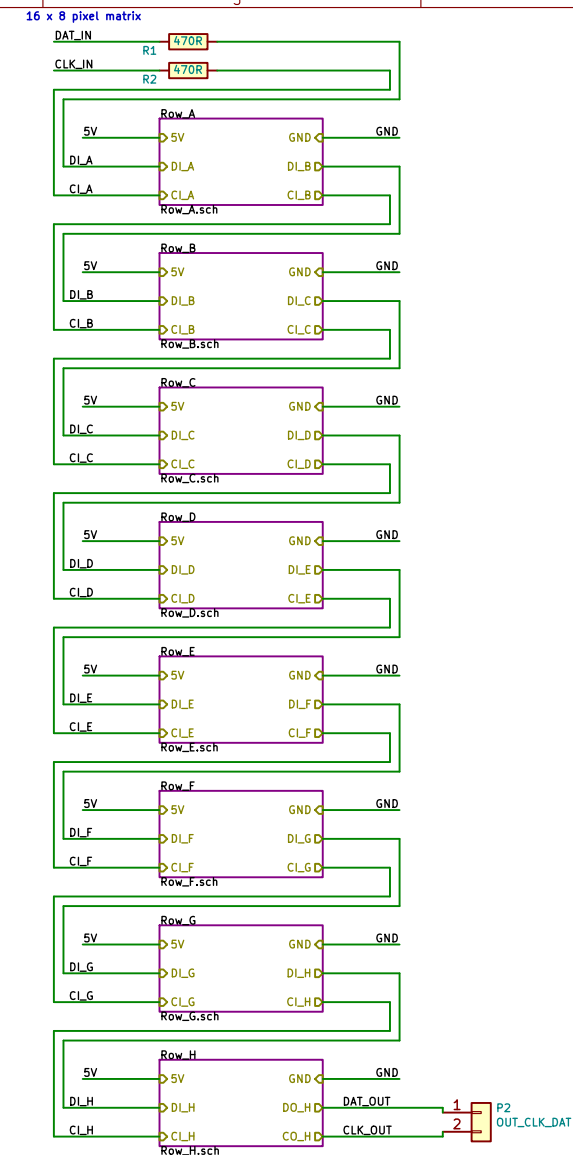
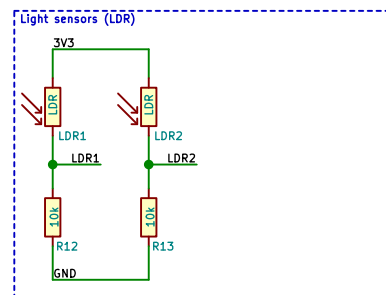
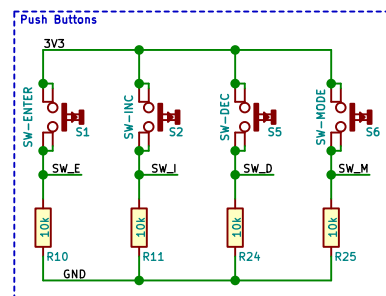
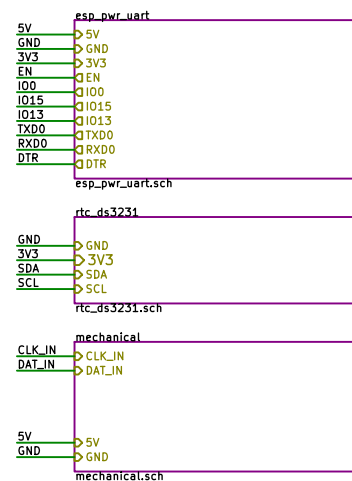


| SPI header with breakout pins.
| Connect with wire to appropriate
| pins on ESP32

- Native SPI pins are (clk, mosi, miso, cs):
 - SPI1: 6, 8, 7, 11
 - HSPI: 14,13,12,15
 - VSPI: 18,23,19, 5
- If using native pins max SPI clock can be set to 80 MHZ.
- Only HSPI & VSPI are supported by esp-idf driver.



I2C interface for external connections to sensors etc.



open source
hardware

Sheet: /

File: KlokTHREEjr.sch

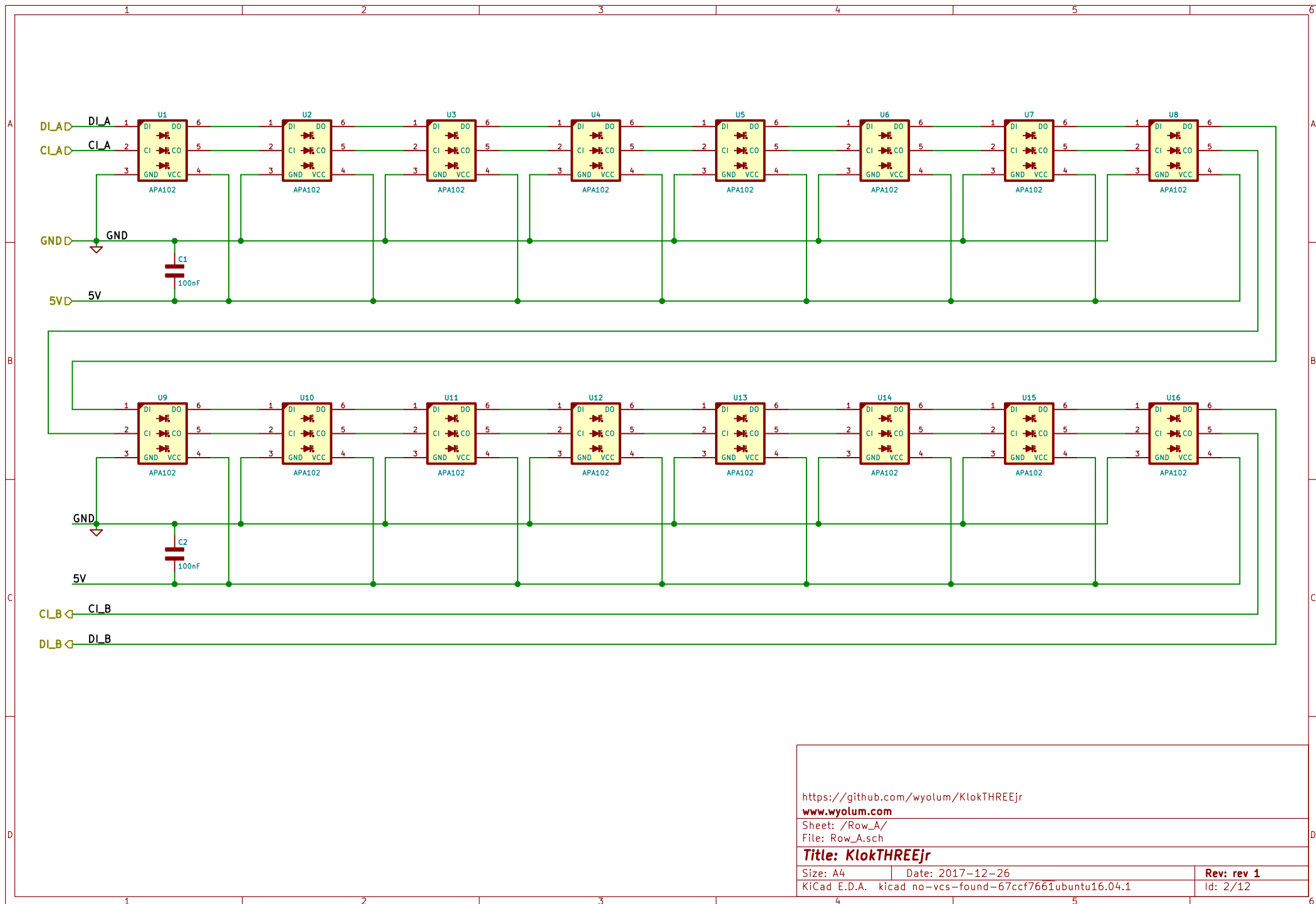
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Size: A4	Date: 2017-12-26
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Rev: rev 1

Id: 1/12



<https://github.com/wyolum/KlokTHREEjr>

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Sheet: /Row_A/

File: Row_A.sch

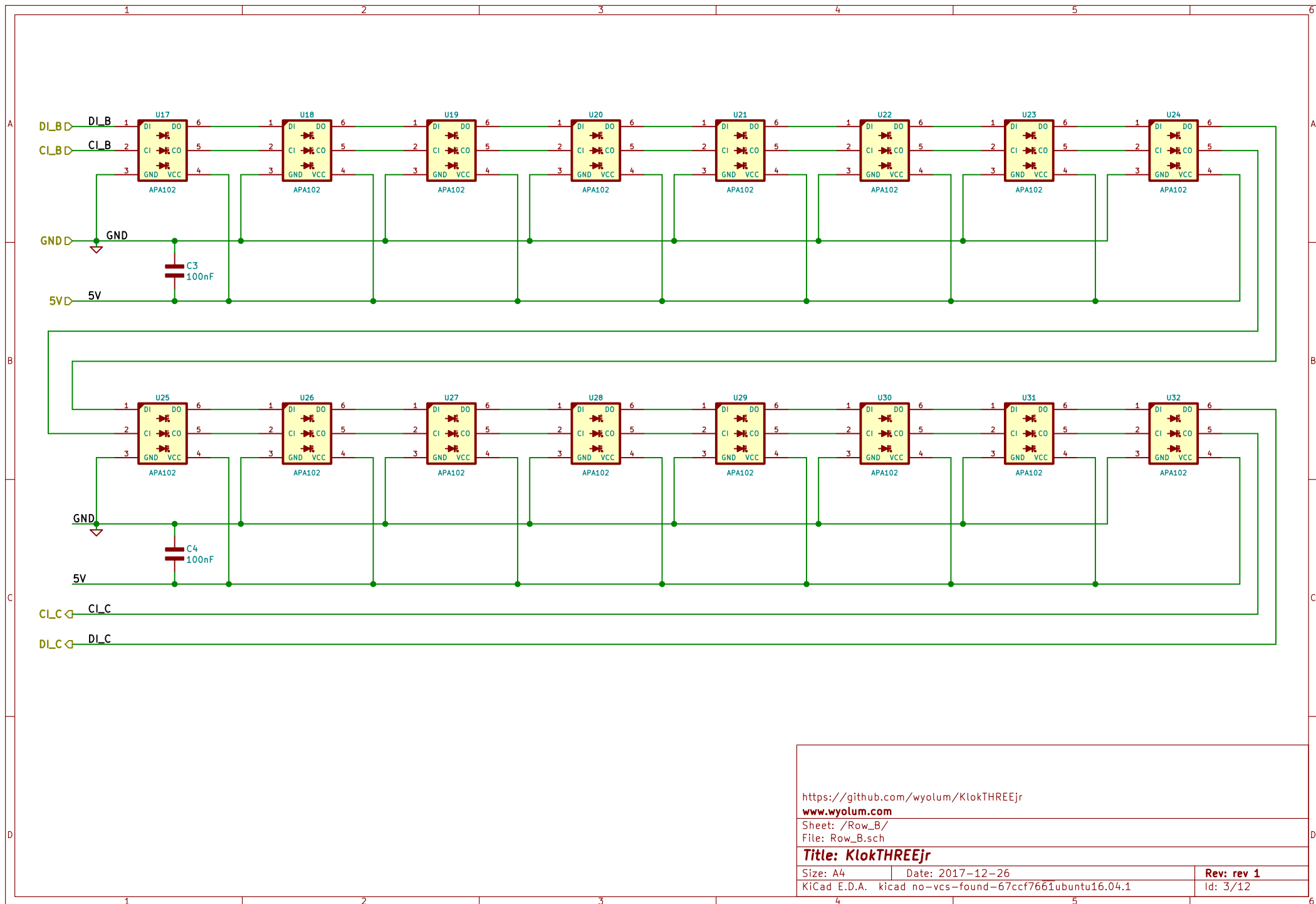
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Size: A4 Date: 2017-12-26

KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1

Rev: rev 1

Id: 2/12



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Sheet: /Row_B/

File: Row_B.sch

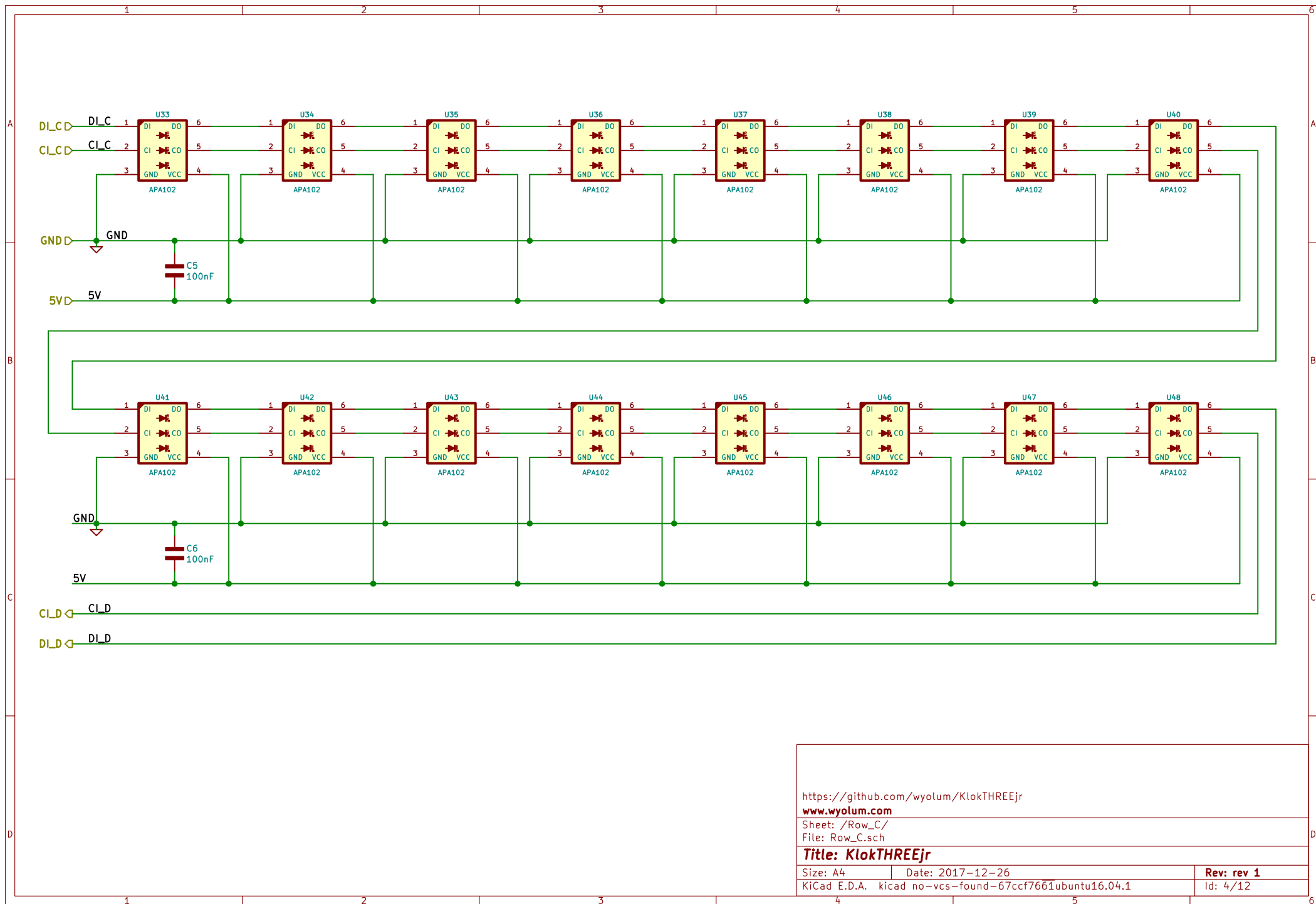
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Size: A4 Date: 2017-12-26

KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1

Rev: rev 1

Id: 3/12



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File: Row_C.sch

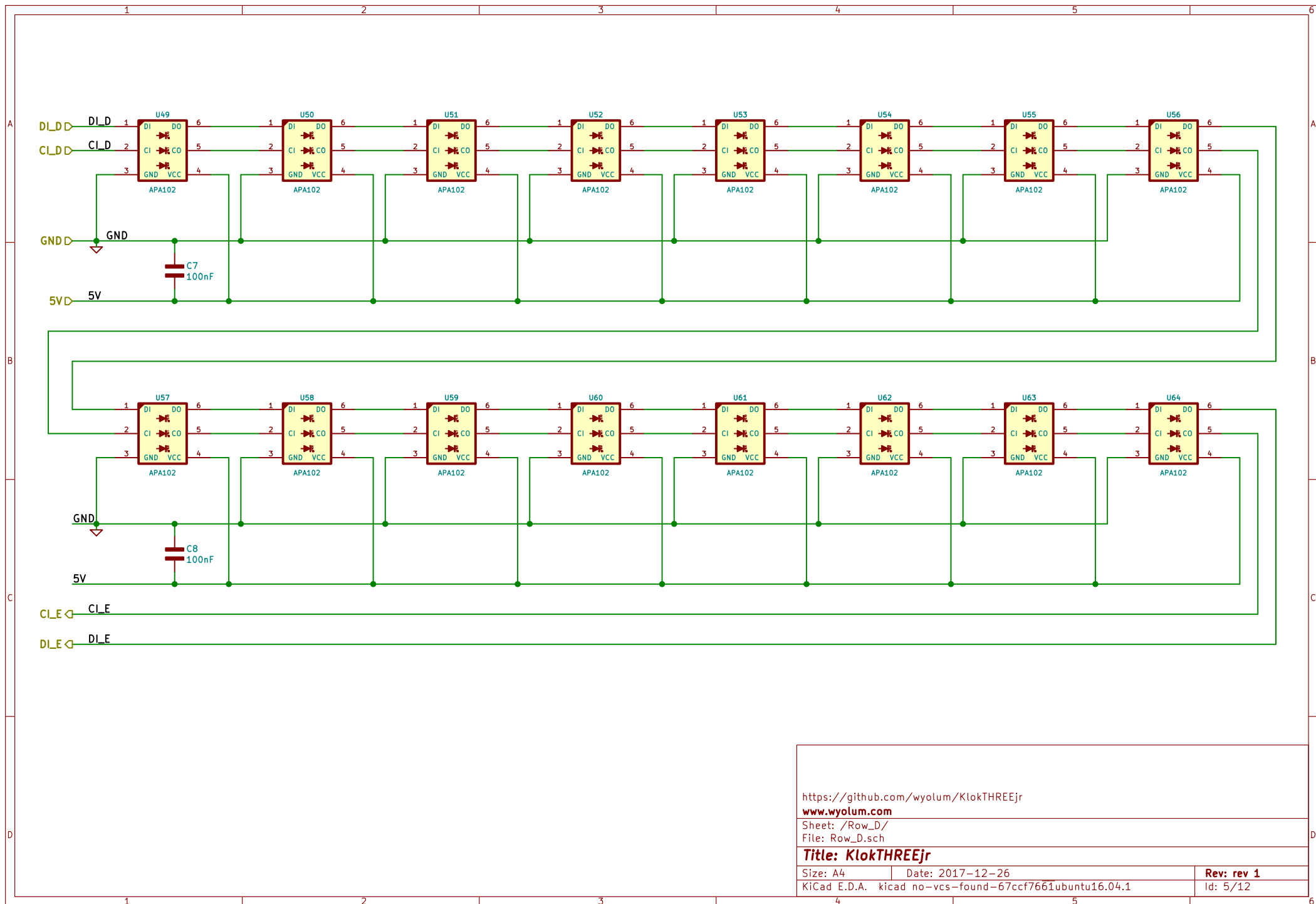
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Size: A4 Date: 2017-12-26

KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1

Rev: rev 1

Id: 4/12



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File: Row_D.sch

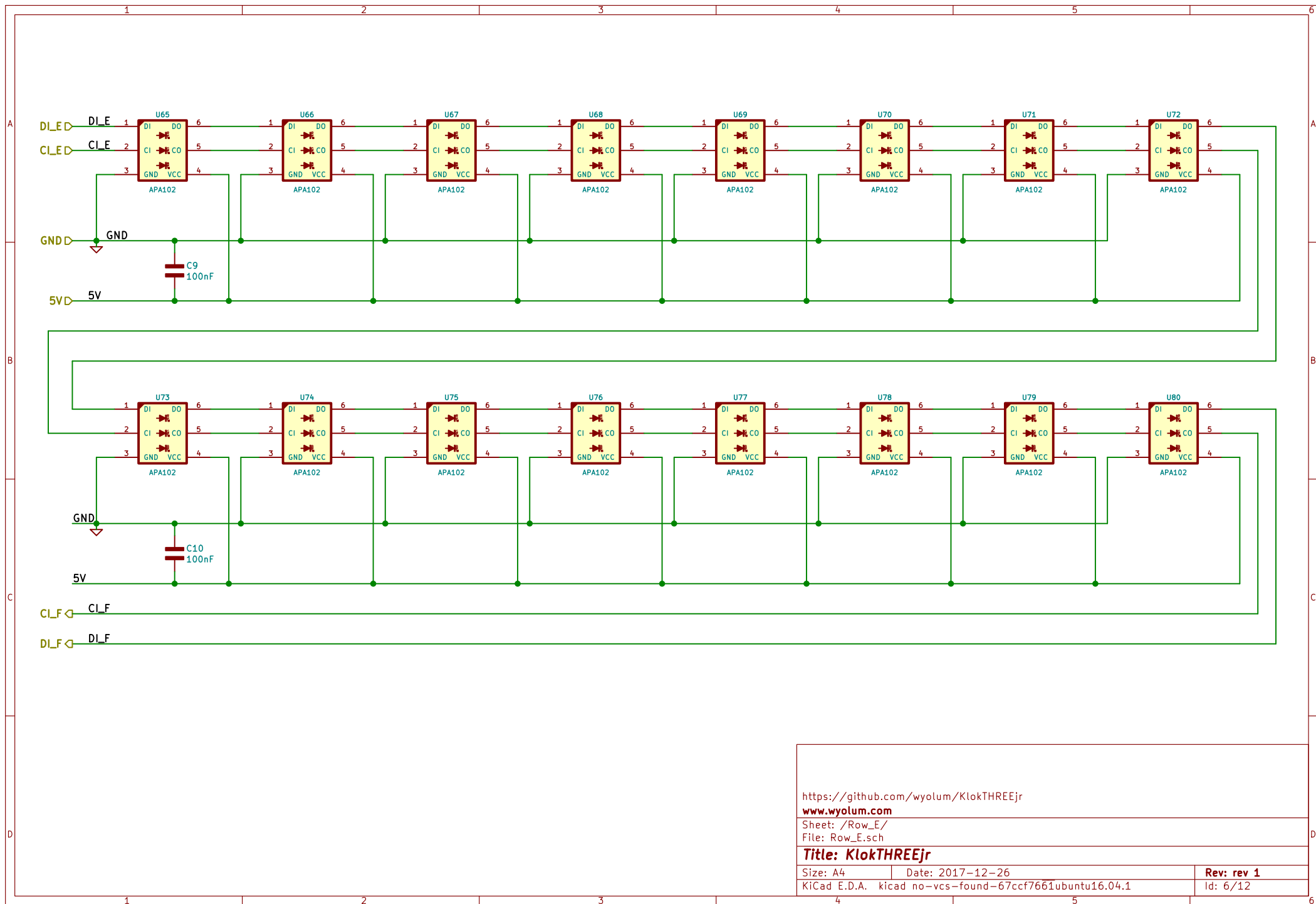
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Size: A4 Date: 2017-12-26

KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1

Rev: rev 1

Id: 5/12



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File: Row_E.sch

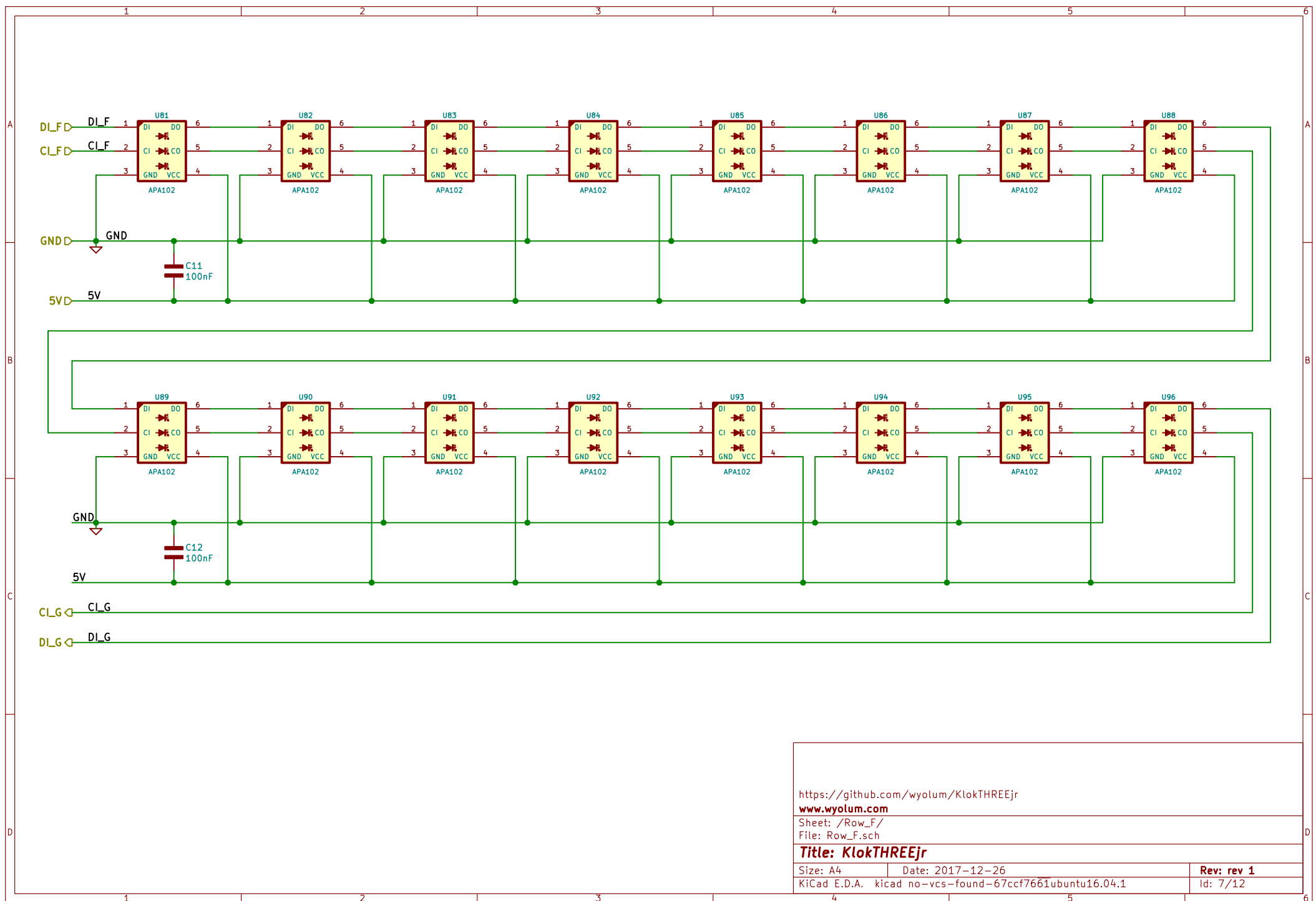
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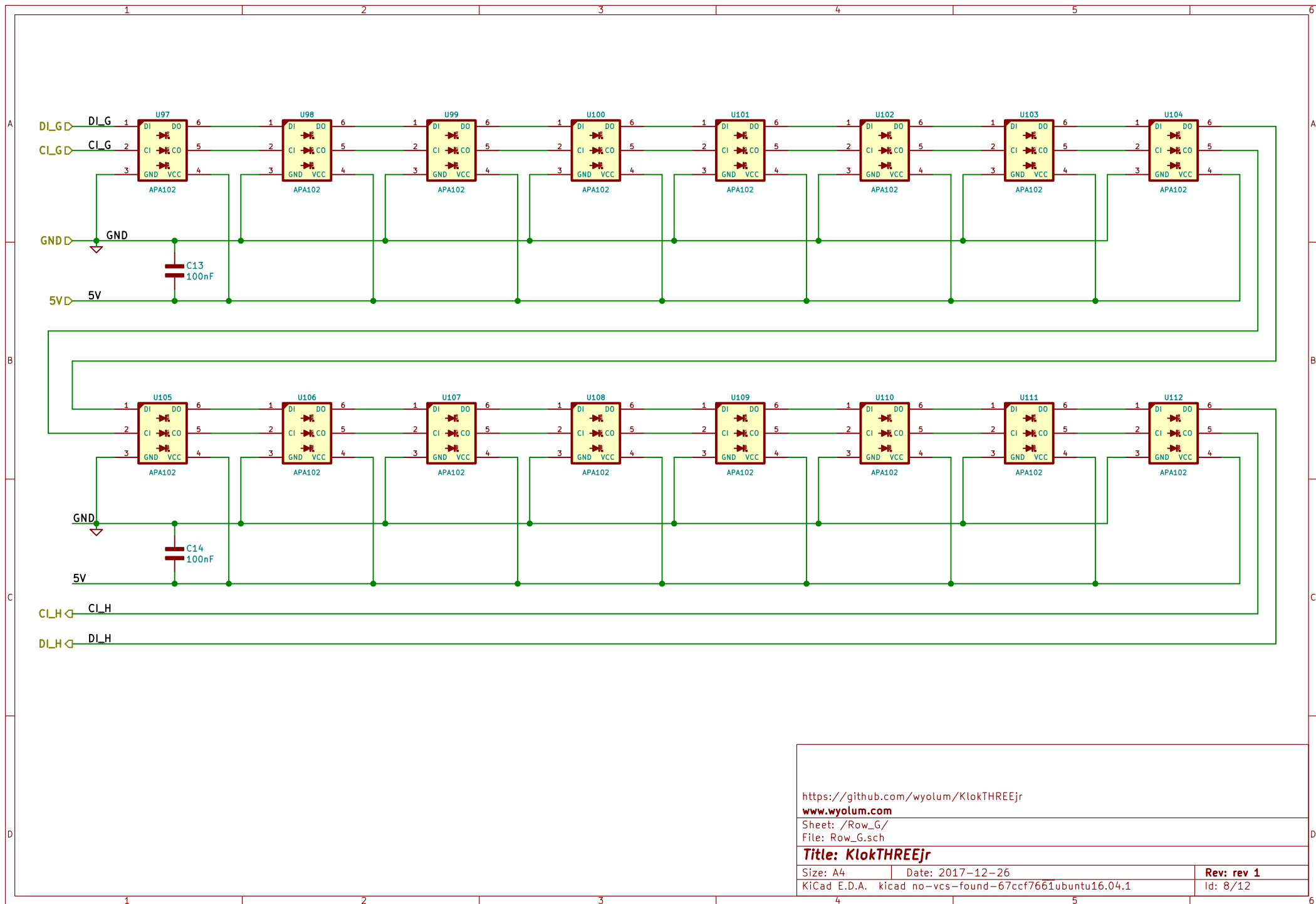
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Rev: rev 1

Id: 6/12





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File: Row_G.sch

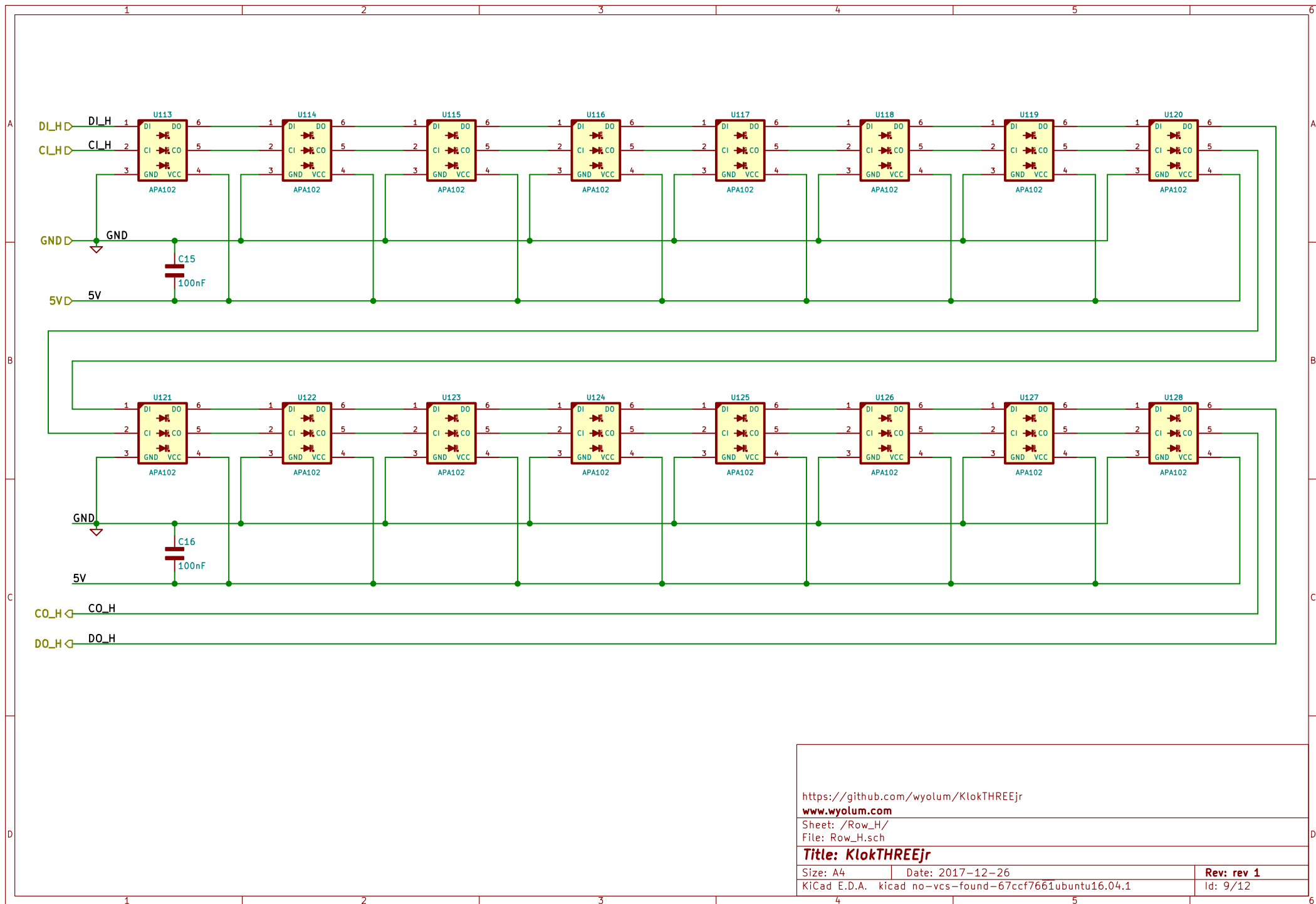
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Size: A4 Date: 2017-12-26

KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1

Rev: rev 1

Id: 8/12



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Sheet: /Row_H/

File: Row_H.sch

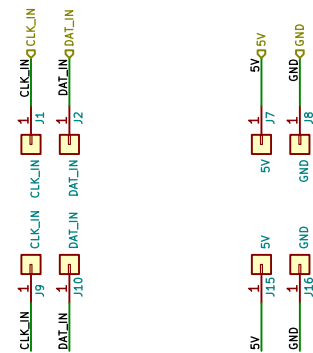
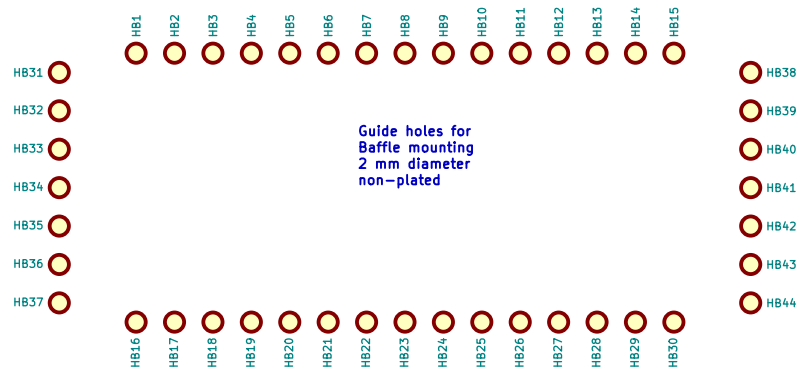
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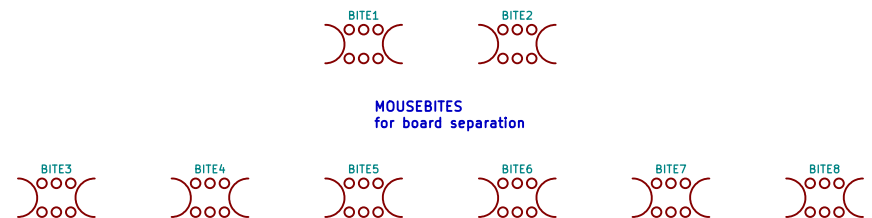
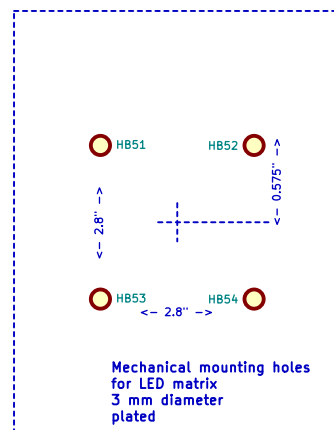
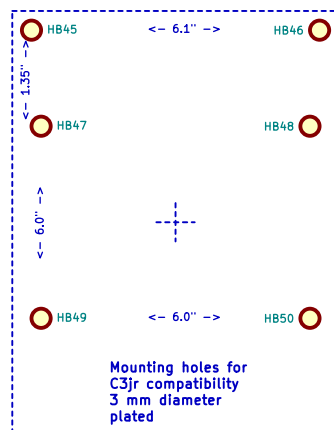
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Rev: rev 1

Id: 9/12



Mounting holes for piggy back attachment of "snap-off" control board. Use M3 HEX posts to connect LED board to control board



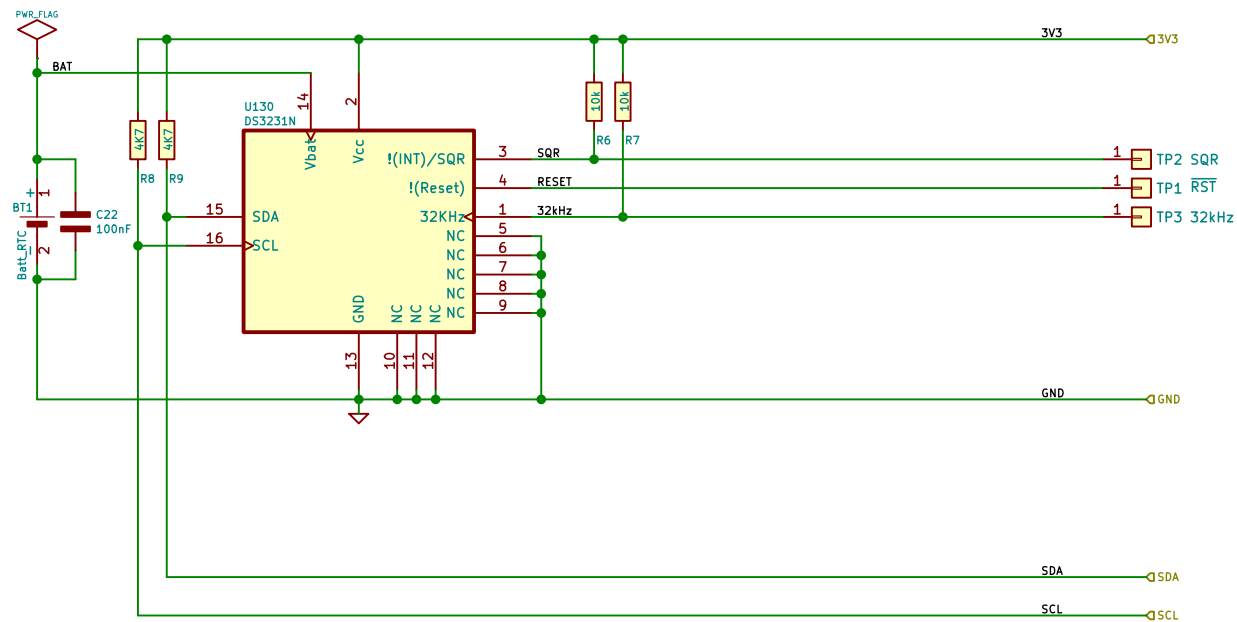
<https://github.com/wyolum/KlokTHREEjr>
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Size: A4 Date: 2017-12-26
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Rev: rev 1
Id: 10/12



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Sheet: /rtc_ds3231/

File: rtc_ds3231.sch

Title: KlokTHREEjr

Size: A4 Date: 2017-12-26

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Rev: rev 1

Id: 11/12

