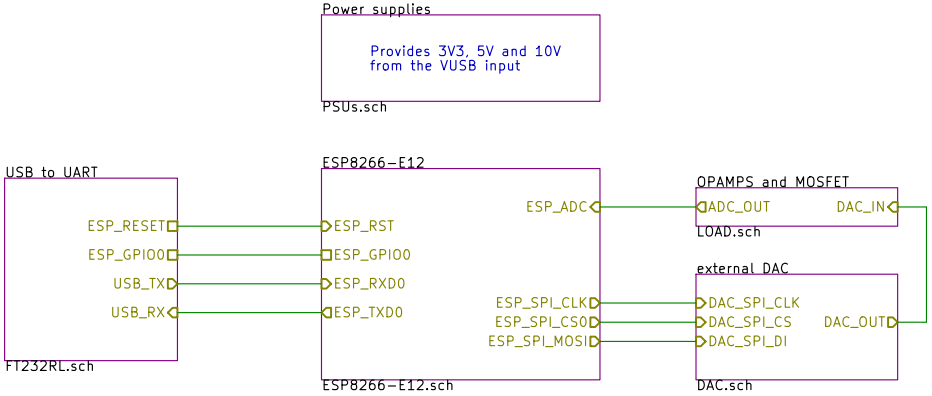
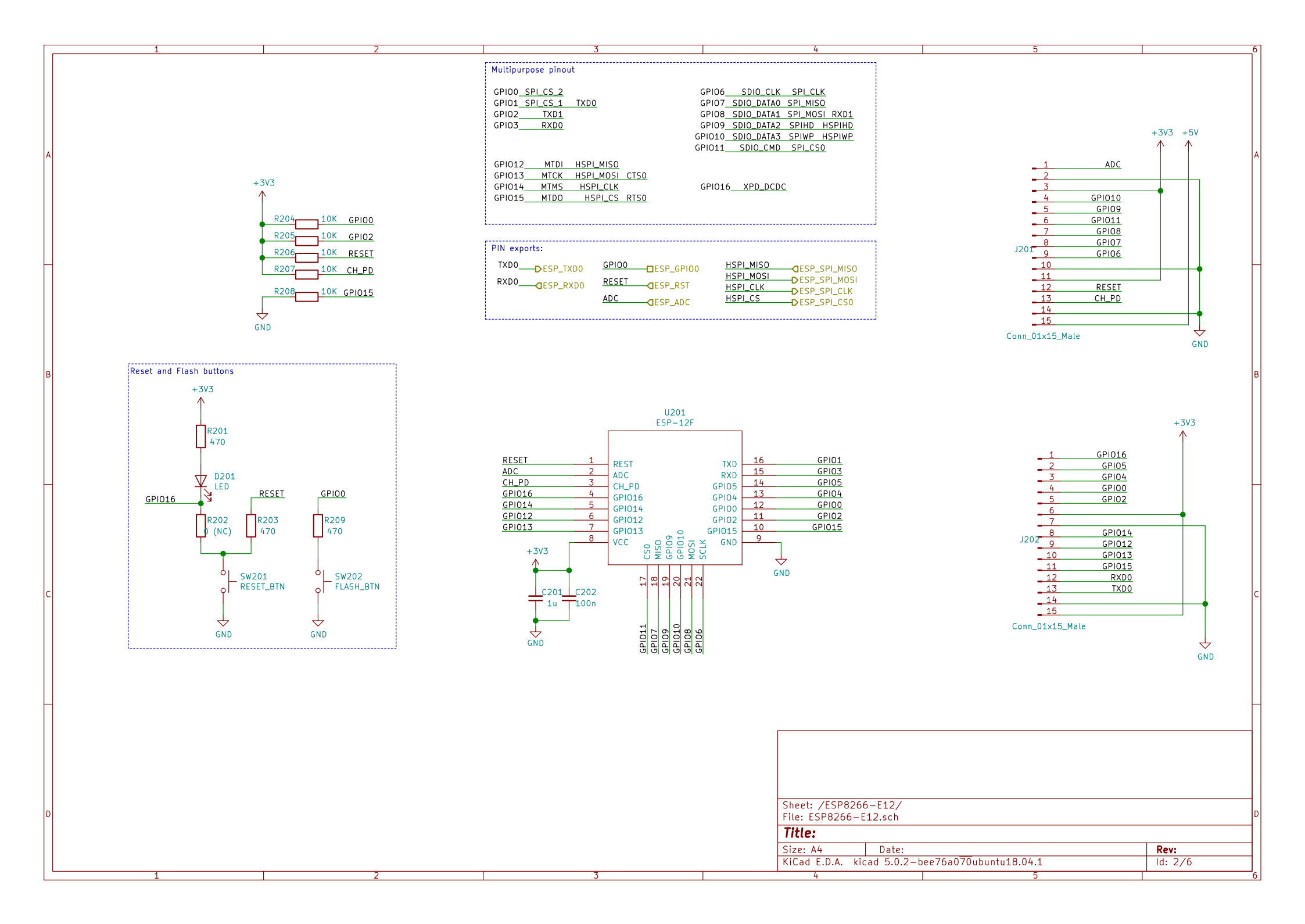


This project uses a USB powered ESP8266, a DAC, a few opamps and a N-MOSFET to create an electronic load. The source code is available at:

Sheet: / File: eload.sch	Dimitris Tassopoulos	
Title: Electronic load using an ESP8266 and external DAC		
Size: A4	Date: 01.10.2018	**Rev:** 1.0
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1		Id: 1/6


Multipurpose pinout
GPIO0 SPI_CS_2
GPIO1 SPI_CS_1 TXD0
GPIO2 TXD1
GPIO3 RXD0
GPIO6 SDIO_CLK SPI_CLK
GPIO7 SDIO_DATA0 SPI_MISO
GPIO8 SDIO_DATA1 SPI_MOSI RXD1
GPIO9 SDIO_DATA2 SPIHD HSPIHD
GPIO10 SDIO_DATA3 SPIWP HSPIWP
GPIO11 SDIO_CMD SPI_CS0
GPIO12 MTDI HSPI_MISO
GPIO13 MTCK HSPI_MOSI CTS0
GPIO14 MTMS HSPI_CLK
GPIO15 MTDO HSPI_CS RTS0
GPIO16 XPD_DCDC
PIN exports:
TXD0 ESP_TXD0
RXD0 ESP_RXD0
GPIO0 ESP_GPIO0
RESET ESP_RST
ADC ESP_ADC
HSPI_MISO ESP_SPI_MISO
HSPI_MOSI ESP_SPI_MOSI
HSPI_CLK ESP_SPI_CLK
HSPI_CS ESP_SPI_CS0
+3V3
R204 10K GPIO0
R205 10K GPIO2
R206 10K RESET
R207 10K CH_PD
R208 10K GPIO15
GND
+3V3 +5V
J201
1 ADC
3
4 GPIO10
5 GPIO9
6 GPIO11
7 GPIO8
8 GPIO7
9 GPIO6
10
11
12 RESET
13 CH_PD
14
15
Conn_01x15_Male
GND
Reset and Flash buttons
+3V3
R201 470
D201 LED
GPIO16
RESET
GPIO0
R202 0 (NC)
R203 470
R209 470
SW201 RESET_BTN
SW202 FLASH_BTN
GND
U201
ESP-12F
RESET 1 REST
ADC 2 ADC
CH_PD 3 CH_PD
GPIO16 4 GPIO16
GPIO14 5 GPIO14
GPIO12 6 GPIO12
GPIO13 7 GPIO13
8 VCC
TXD 16 GPIO1
RXD 15 GPIO3
GPIO5 14 GPIO5
GPIO4 13 GPIO4
GPIO0 12 GPIO0
GPIO2 11 GPIO2
GPIO15 10 GPIO15
GND 9
CS0 17 GPIO11
MISO 18 GPIO7
GPIO9 19 GPIO9
GPIO10 20 GPIO10
MOSI 21 GPIO8
SCLK 22 GPIO6
+3V3
C201 1u
C202 100n
GND
+3V3
J202
1 GPIO16
2 GPIO5
3 GPIO4
4 GPIO0
5 GPIO2
6
7
8 GPIO14
9 GPIO12
10 GPIO13
11 GPIO15
12 RXD0
13 TXD0
14
15
Conn_01x15_Male
GND
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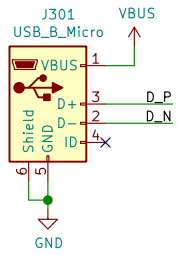
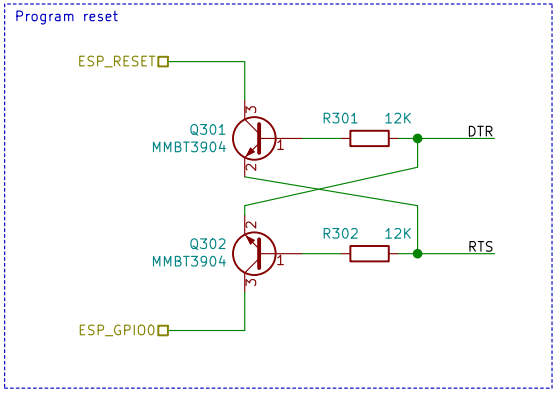
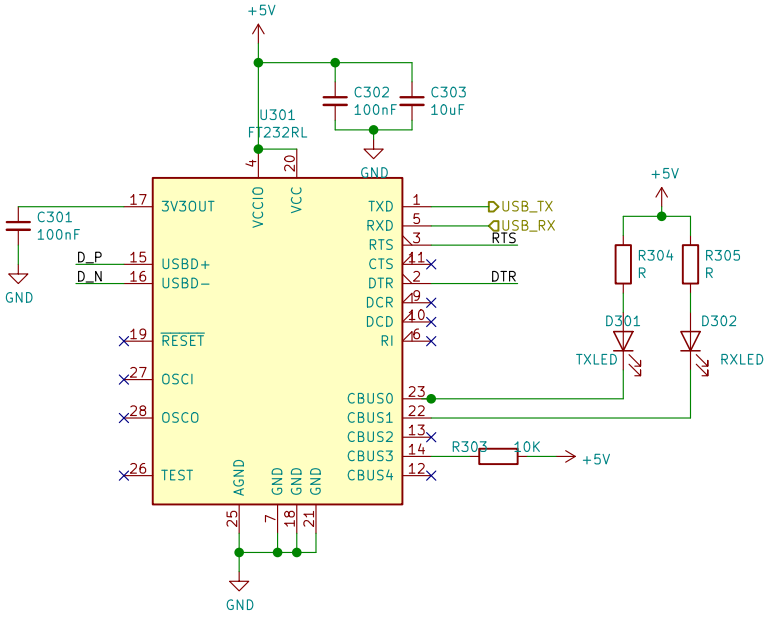
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1
Id: 2/6







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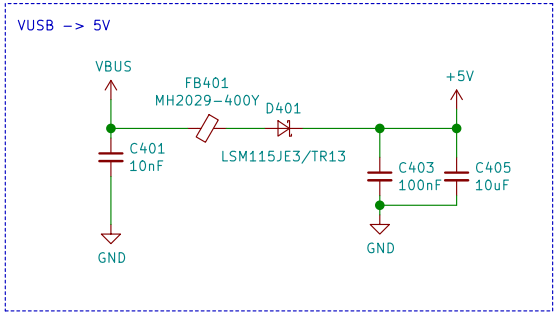
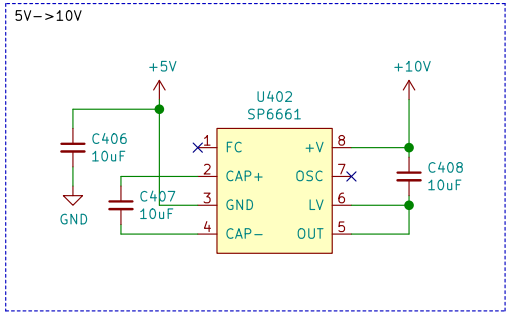
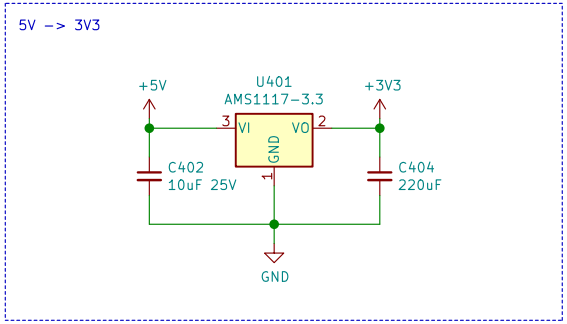
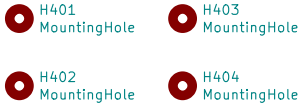
File: FT232RL.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1		Id: 3/6









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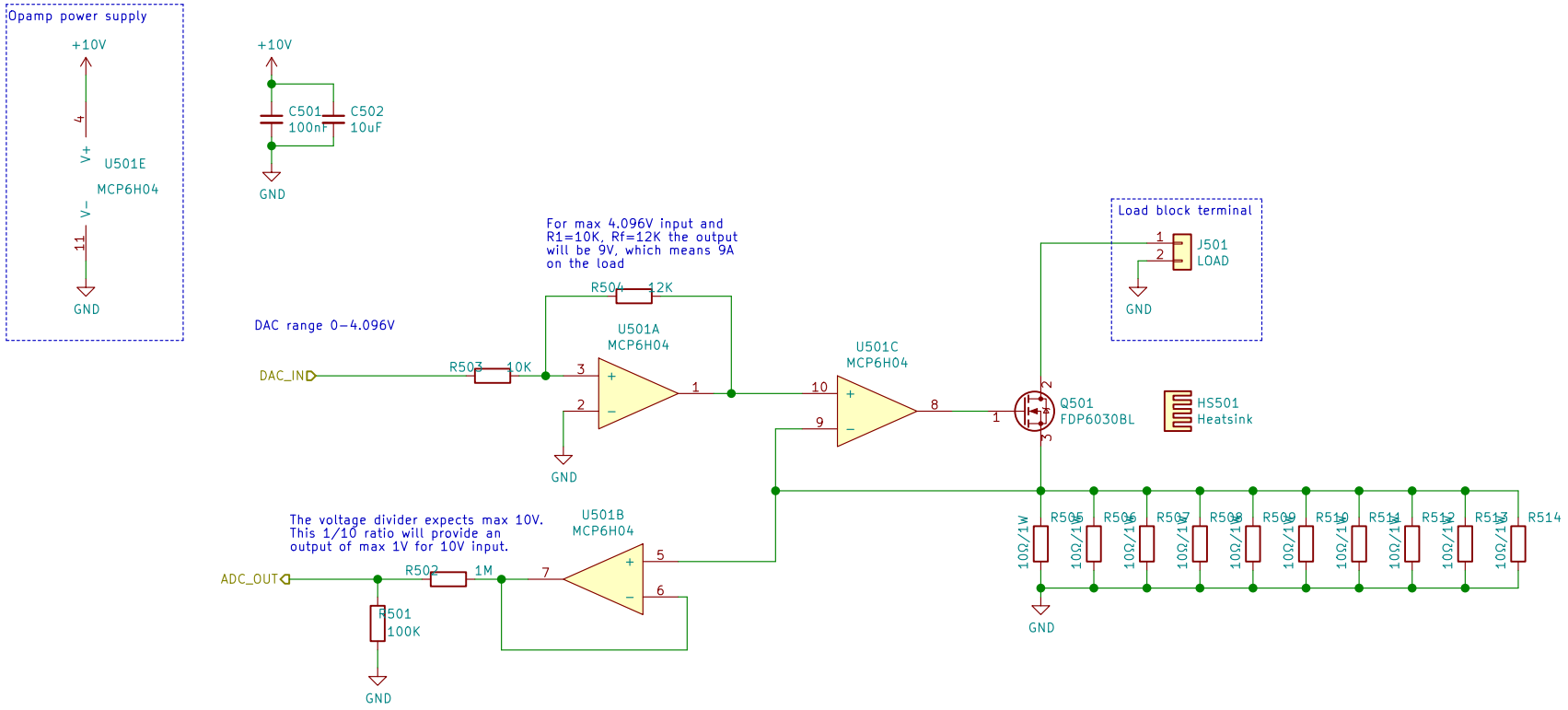
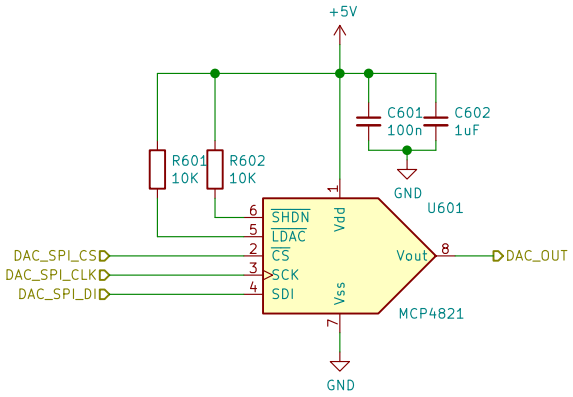
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1		Id: 4/6



Sheet: /OPAMPS and MOSFET/		
File: LOAD.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1		Id: 5/6



Sheet: /external DAC/		
File: DAC.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1		Id: 6/6