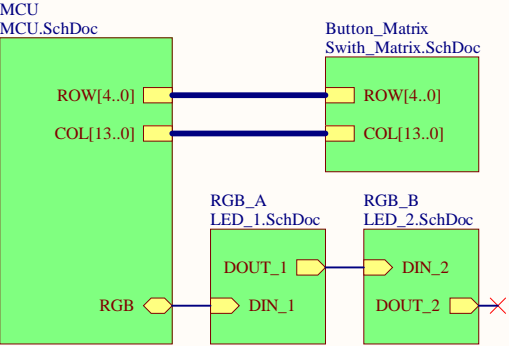


A



B

C

D

⚠ Slowblow fuse on MCU supply has a hold value of 100mA. CC1 @ CC2 are setup to request 3A on a USB-PD Port. This design is rated for <= 500mA operating current.

⚠ 12 Ohm Current Limiting Resistor, 3Watt, 5/12 = 416mA, 0.4*5=2.08 Watts < 3Watts.

⚠ Factory PCB has 19mm switch spacing, not 19.05mm.

⚠ CC1 & CC2 have no TVS diodes, as they are not connected to the MCU.

⚠ RGB Led's are SK6812MINI-E, similar to WS2812.

⚠ USB D+ & D- are differential coplanar, target impedance is 90 with a 10% tolerance.

⚠ MX Switches will be in the north facing orientation. Due to USB placement, south facing is impossible, there is interference with the Kailh socket footprint.

⚠ The PCB tactile switch will force the MCU into DFU mode after power has been applied.

The VCC supervisor ensures the MCU will jump to the APP on powerup

⚠ This PCB is designed to replace the RK Royal Kludge RK61 stock PCB.
<https://www.amazon.com/dp/B089GNB1GF/>

PCB will be compatable with QMK and VIA.

Title		
The Black Hellebore, RK61 PCB		
Size	Number	Revision
A4		
Date:	1/01/2023	Sheet of
File:	C:\Users\...\TOP.SchDoc	Drawn By: MJM

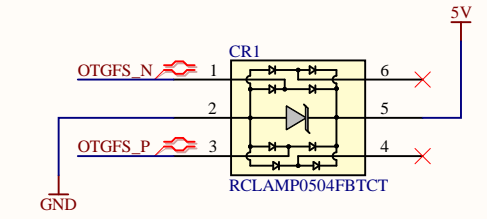
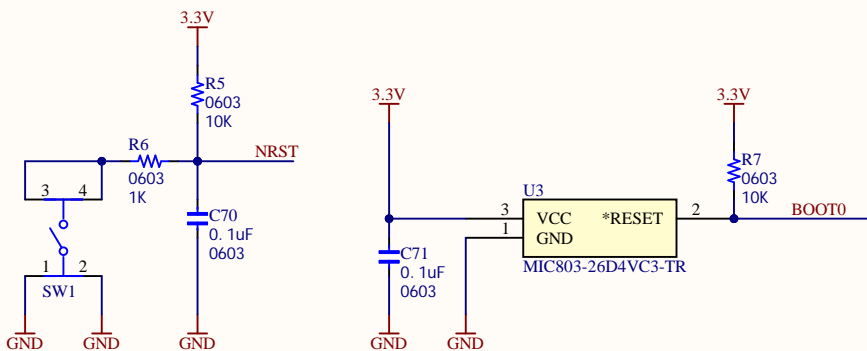
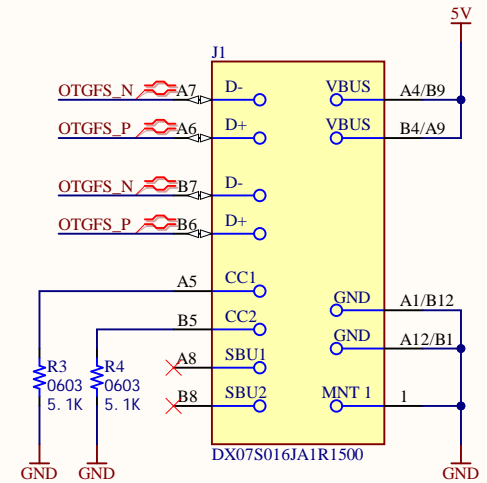
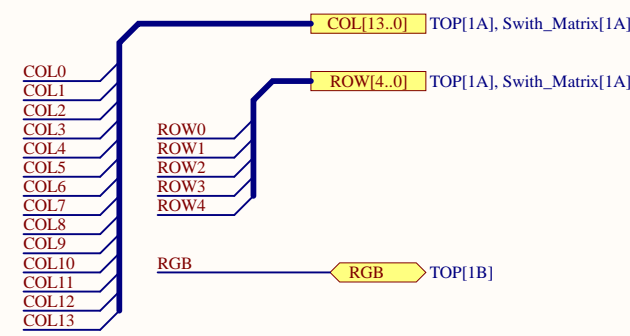
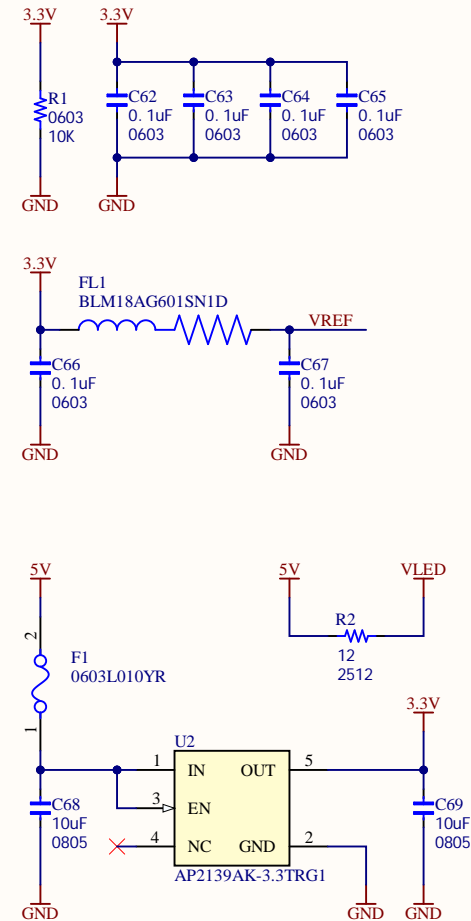
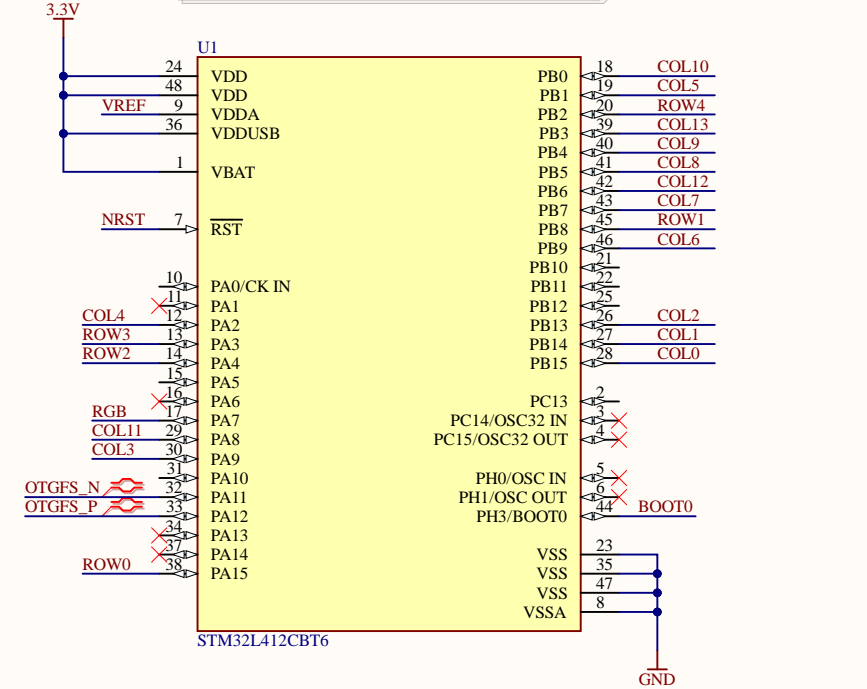
A

B

C

D

```
----- | Using Internal OSC | -----  
  
#define STM32_HSI16_ENABLED      TRUE  
#define STM32_HSI48_ENABLED     TRUE  
#define STM32_LSI_ENABLED       FALSE  
#define STM32_HSE_ENABLED       FALSE  
#define STM32_LSE_ENABLED       FALSE
```



Title		
The Black Hellebore, RK61 PCB		
Size	Number	Revision
A4		
Date:	1/01/2023	Sheet of
File:	C:\Users\...\MCU.SchDoc	Drawn By: MJM

A

A

B

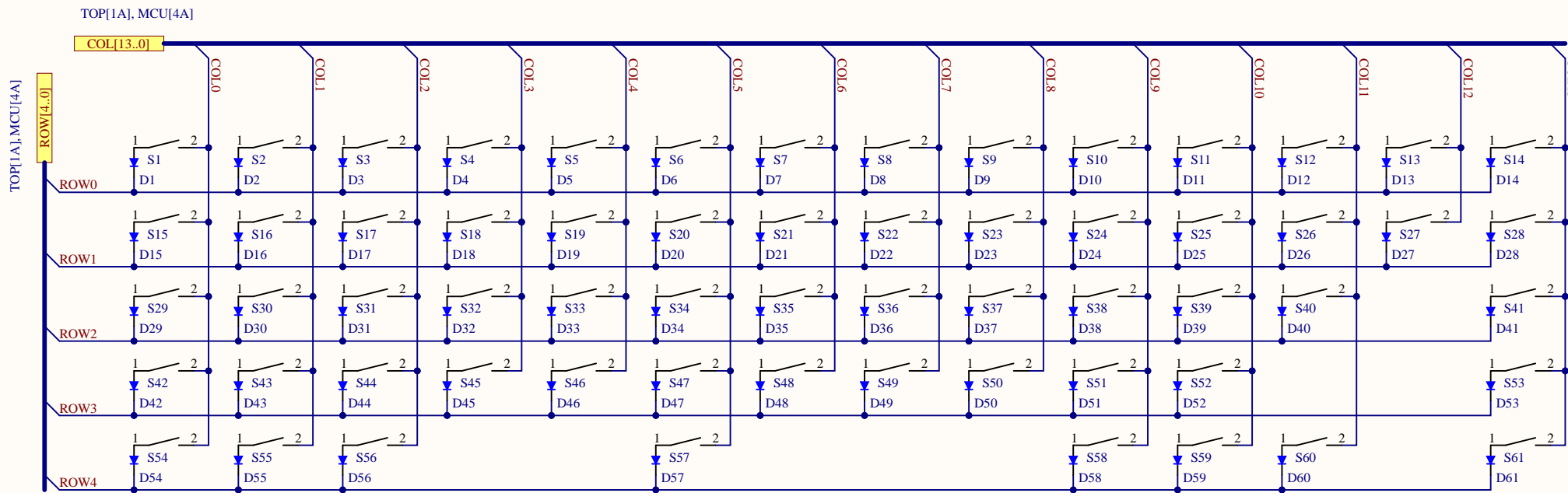
B

C

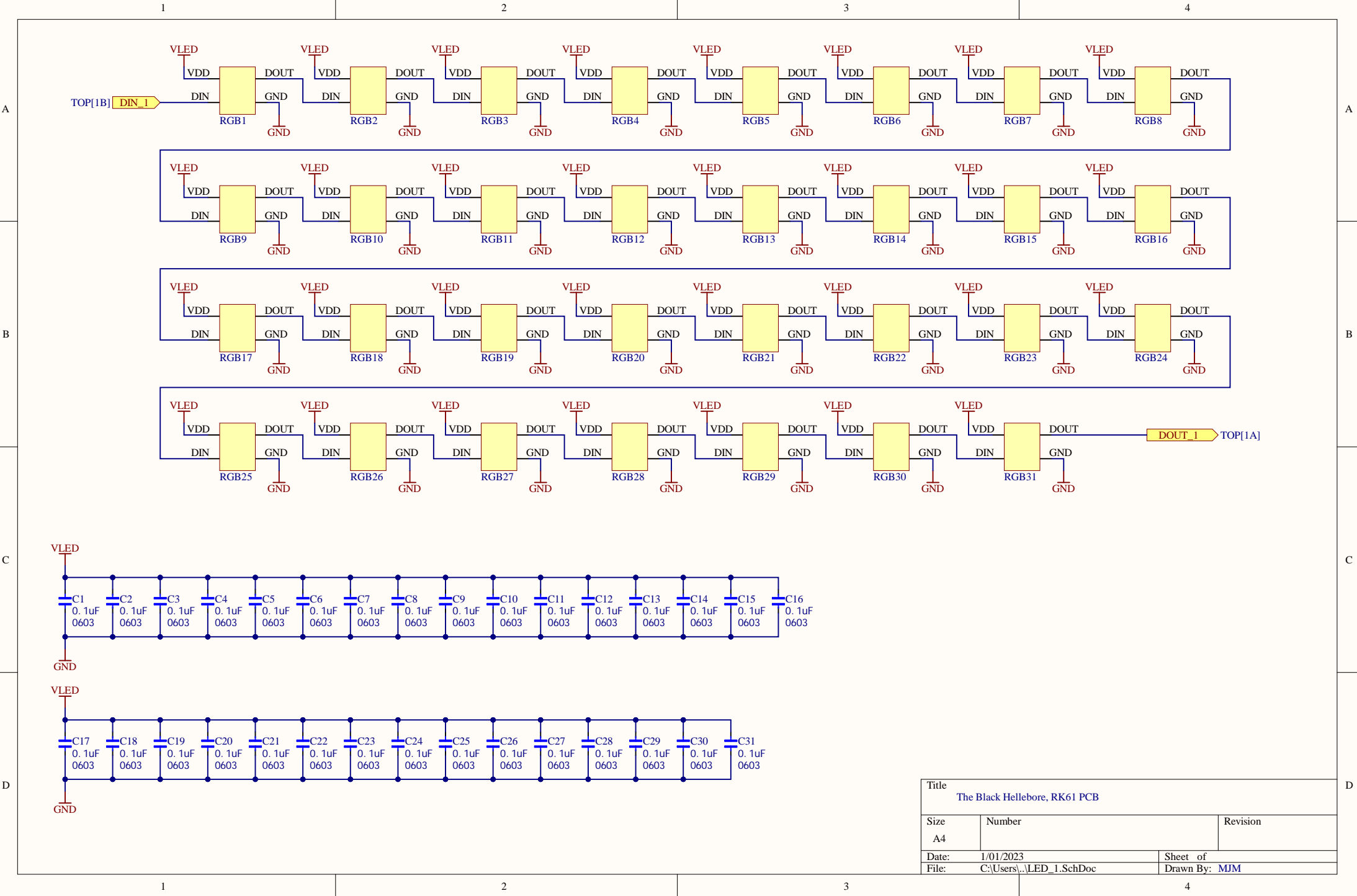
C

D

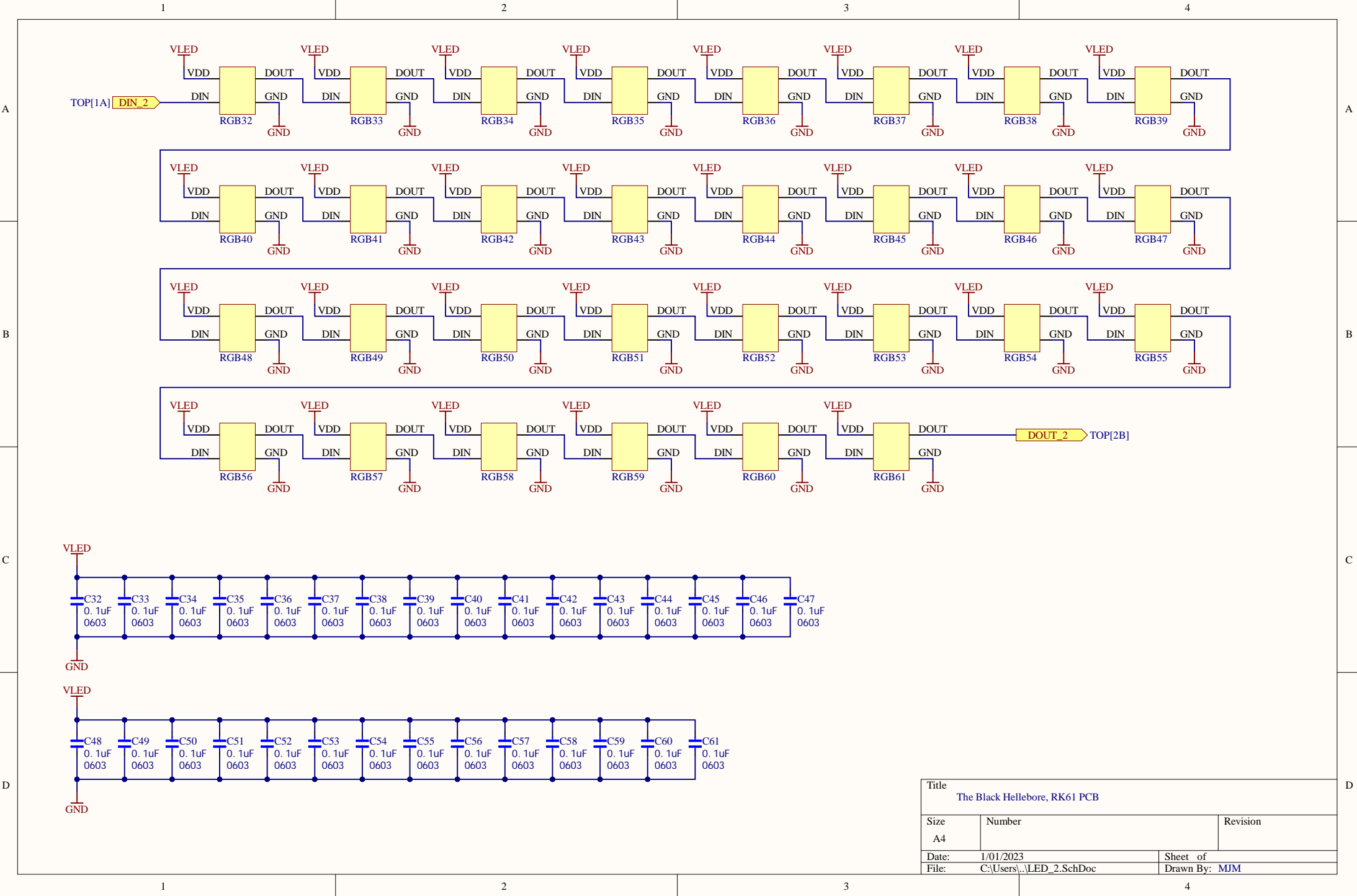
D



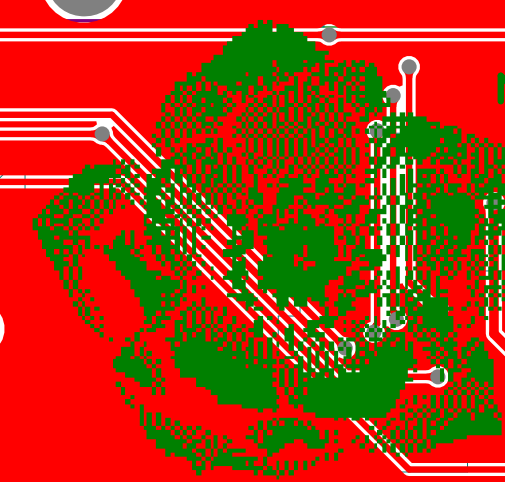
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Size	Number	Revision
A4		
Date:	1/01/2023	Sheet of
File:	C:\Users\...\Swith_Matrix.SchDoc	Drawn By: MJM



Title		
The Black Hellebore, RK61 PCB		
Size	Number	Revision
A4		
Date:	1/01/2023	Sheet of
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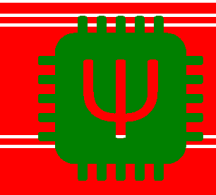
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Size	Number	Revision
A4		
Date:	1/01/2023	Sheet of
File:	C:\Users\...\LED_2.SchDoc	Drawn By: MJM



MJM - 2023
REV 1.0.0

The Black
Hellebore

RK61 AFTERMARKET PCB
NOT AFFILIATED WITH (RK ROYAL KLUDGE)



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