

A

A

B

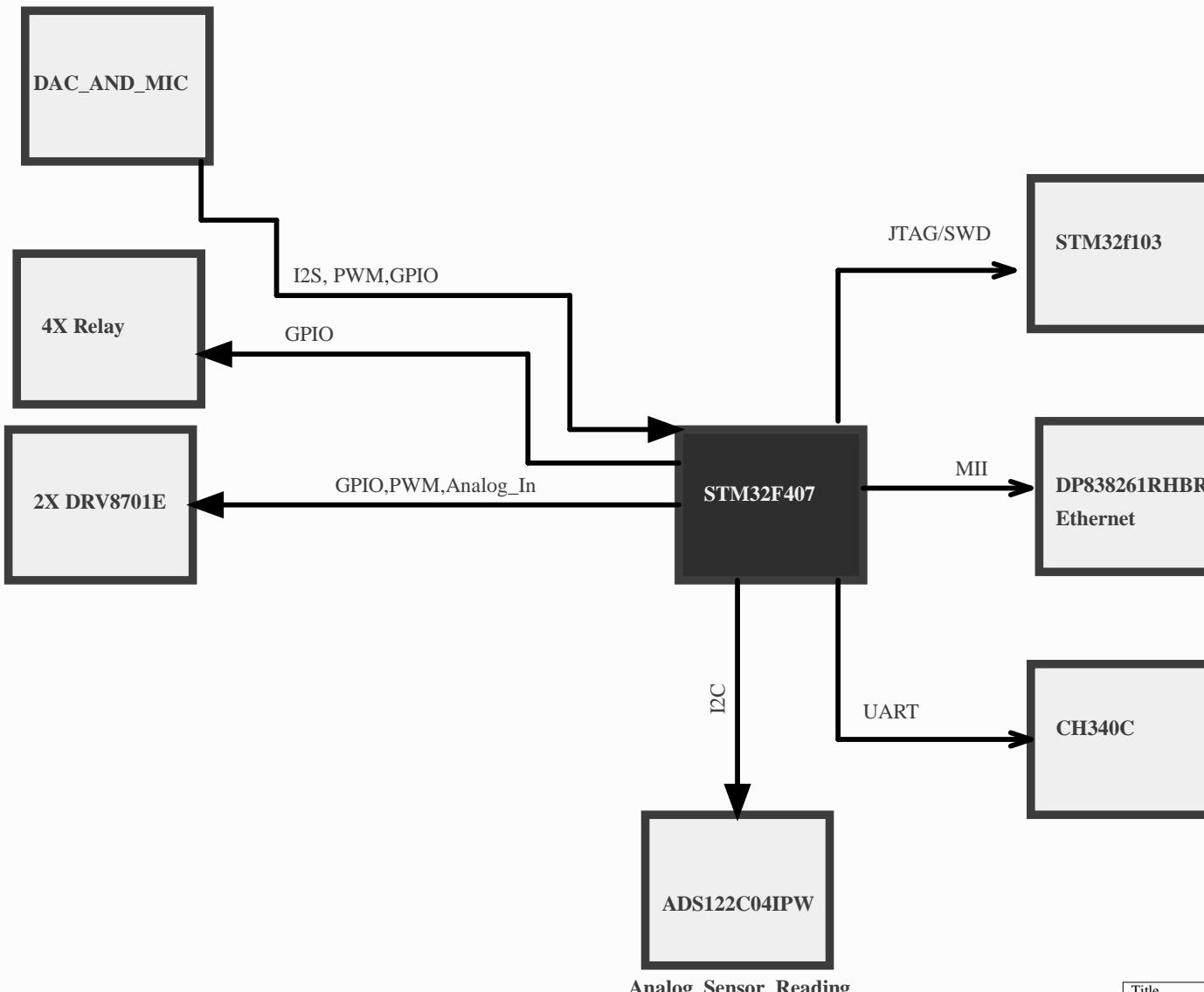
B

C

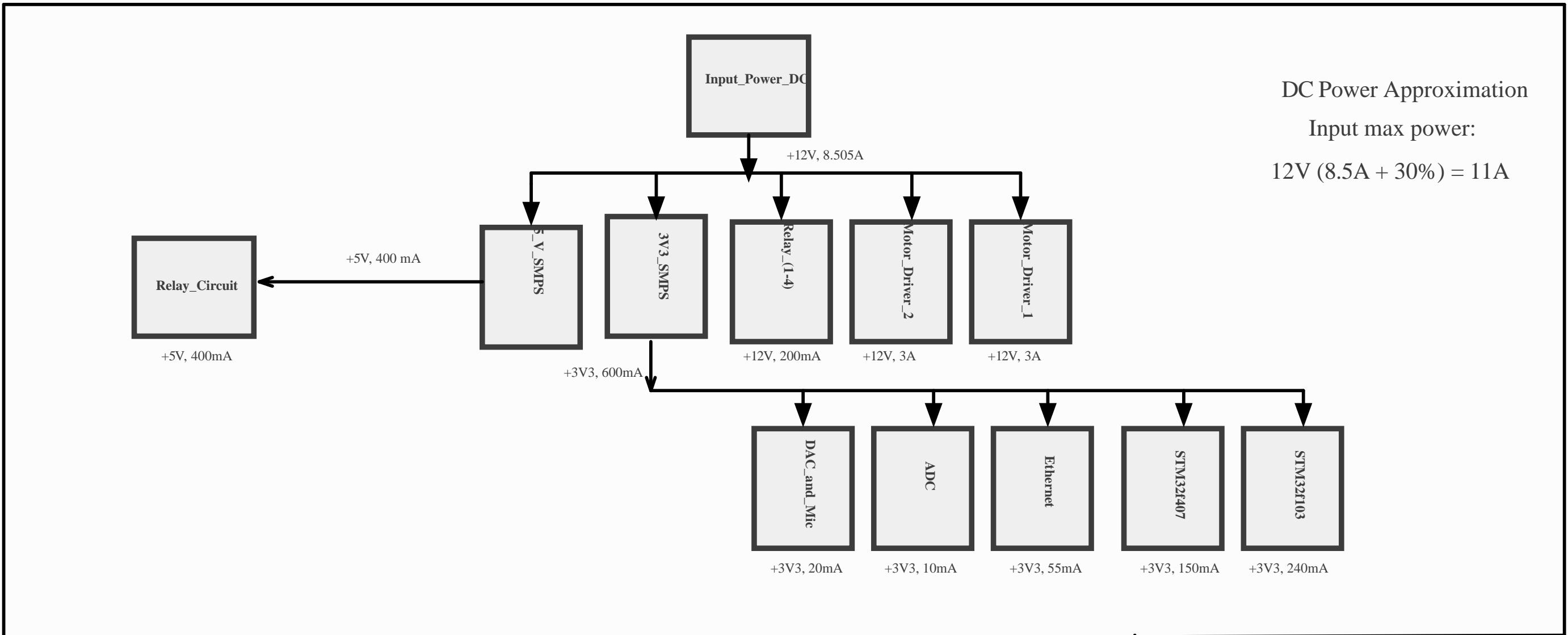
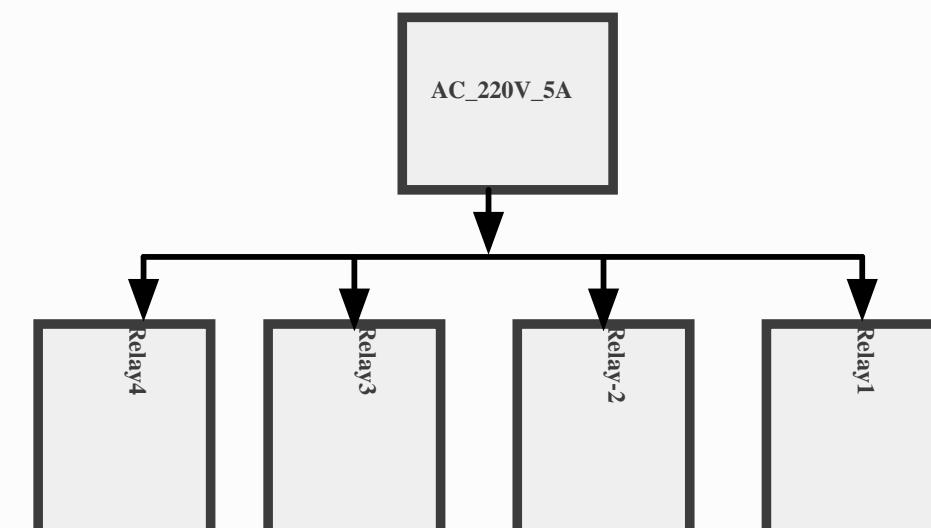
C

D

D

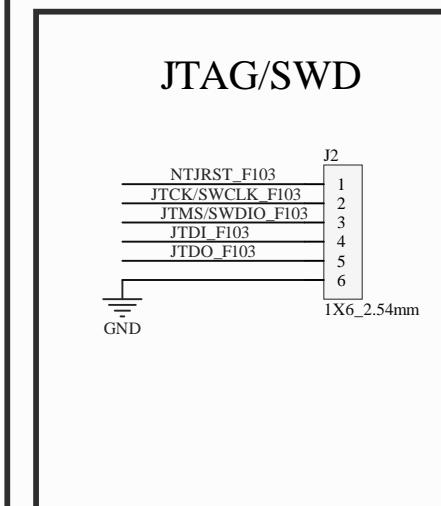
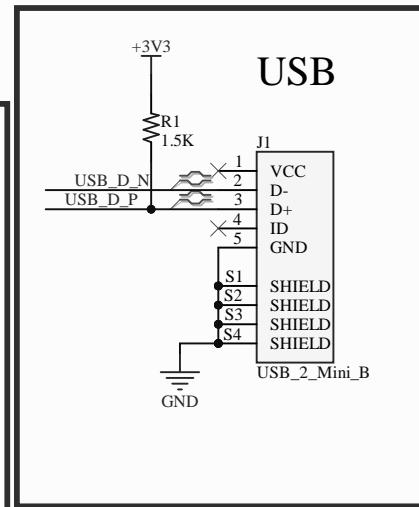
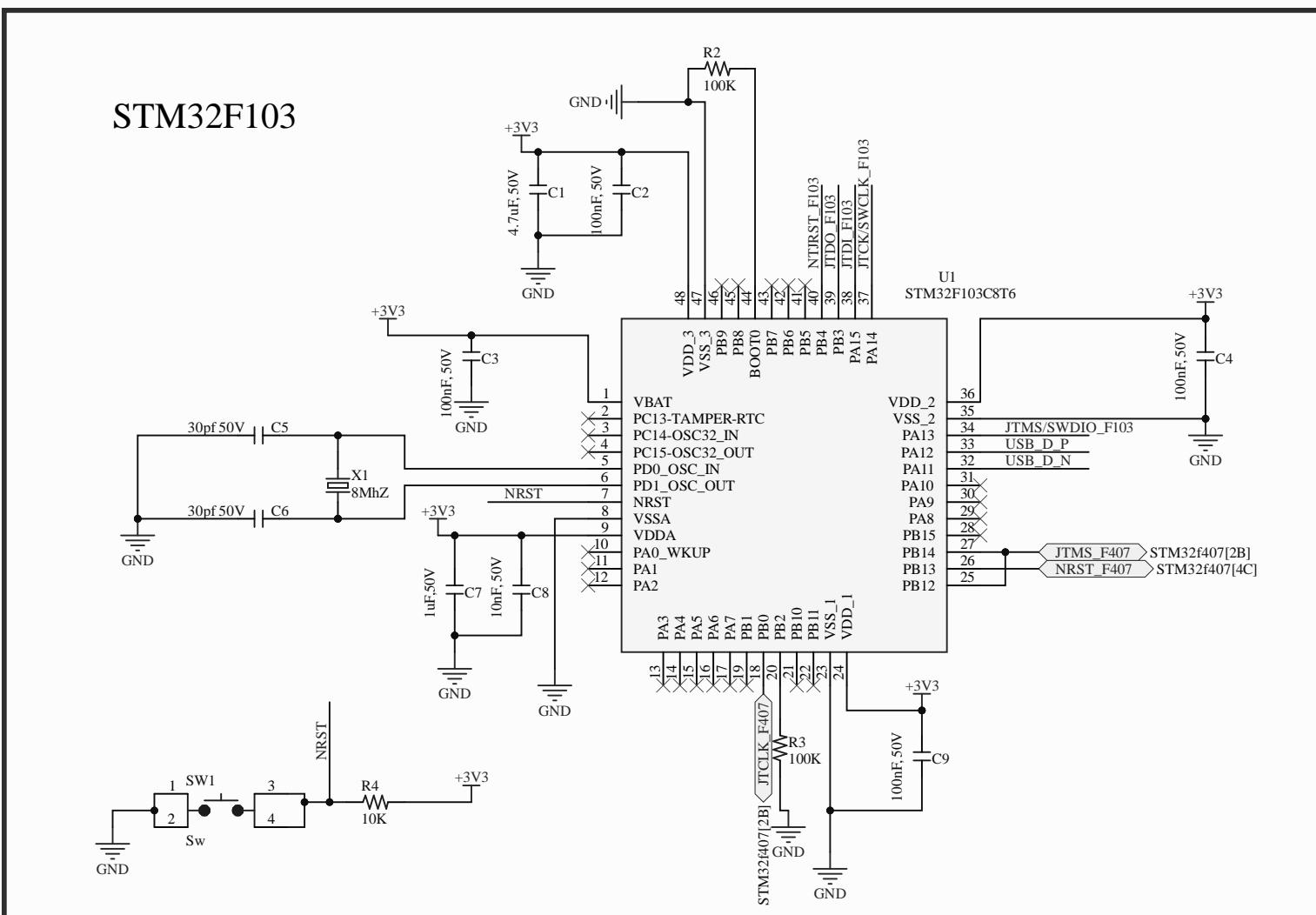


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| A4 | | |
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| File: D:\PCB Design Course\..\Schematic_Blocks\ | | Block Diagram |

**AC Power Approximation****110V 5 A**

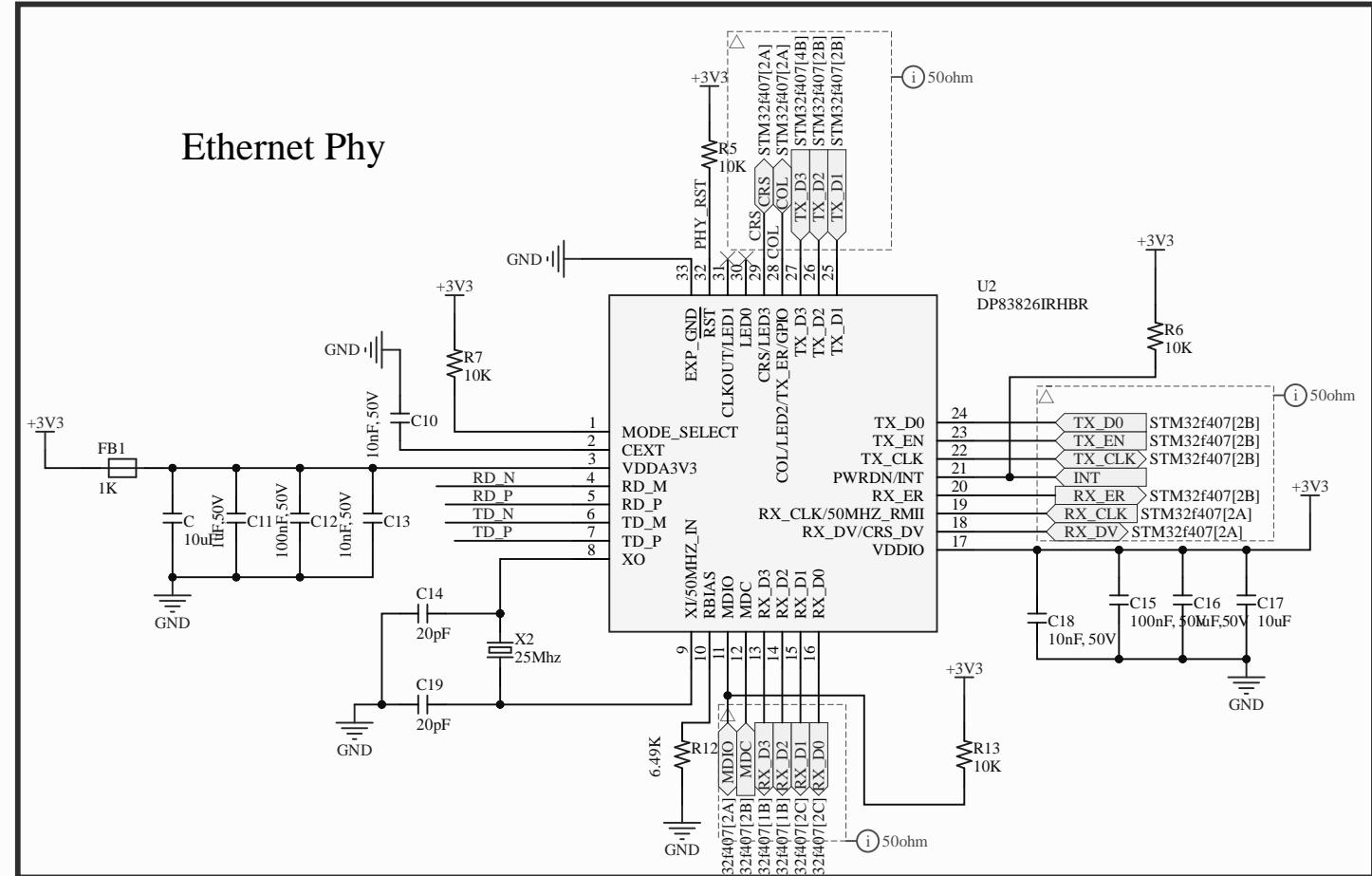
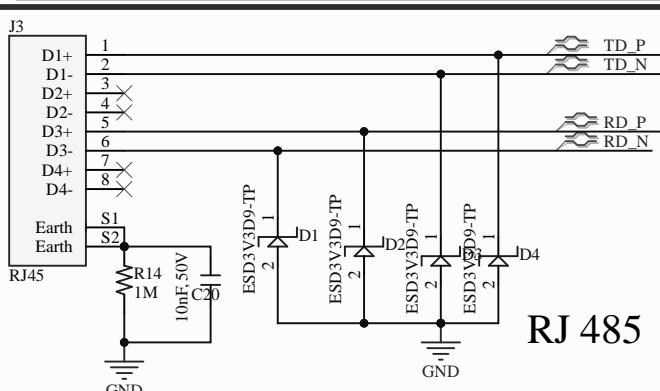
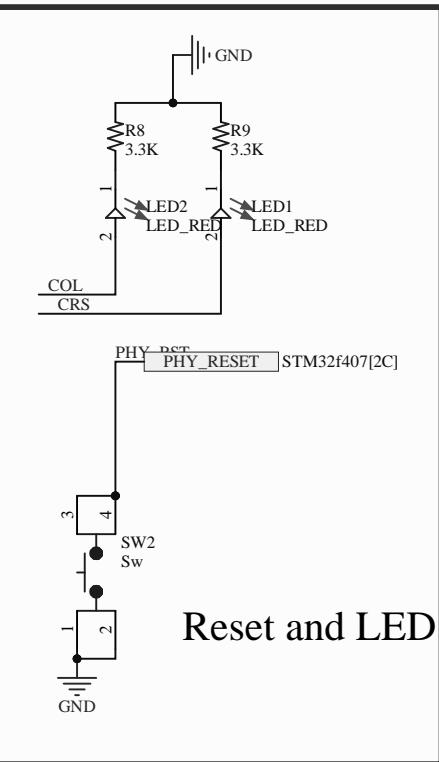
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Debugger



| Title | | |
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| A4 | | |
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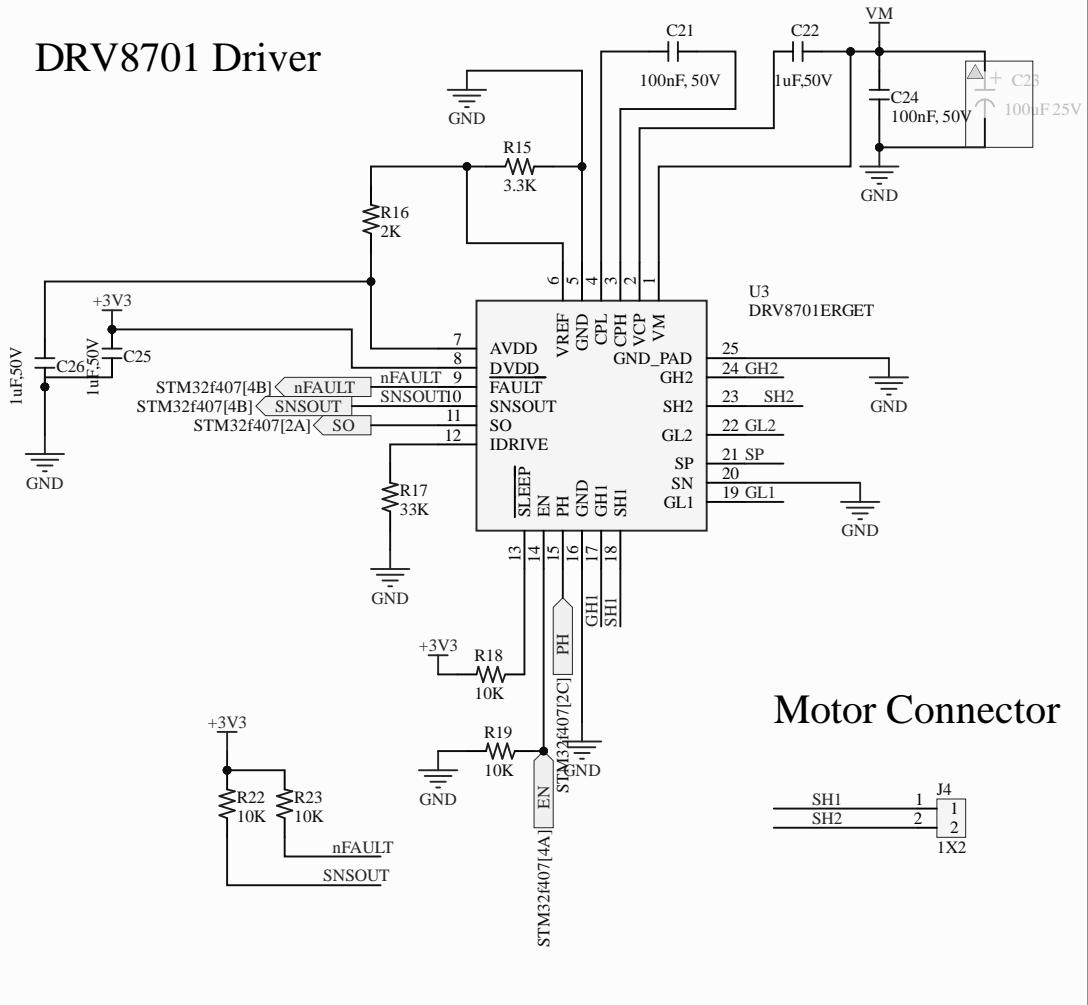
Ethernet



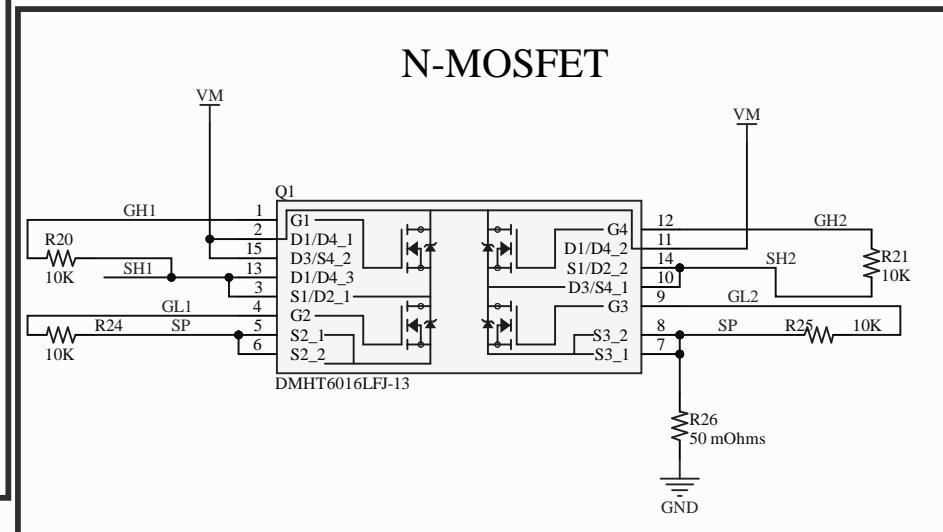
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| A4 | | |
| Date: | 4/07/2025 | Sheet of |
| File: | D:\PCB Design Course\..\Ethernet.SchDoc | Drawn By: |

Motor Driver

DRV8701 Driver



N-MOSFET



Title

Size

A4

Number

Revision

Date: 4/07/2025

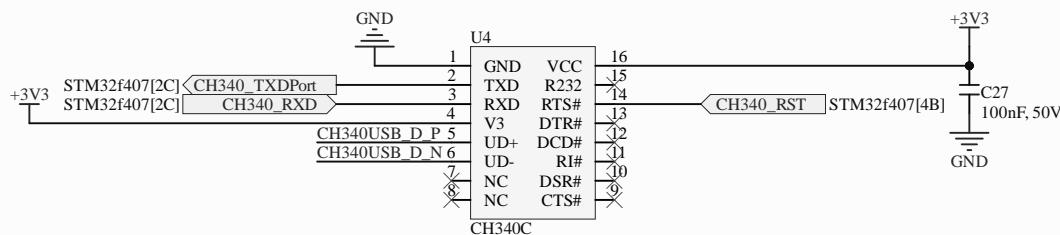
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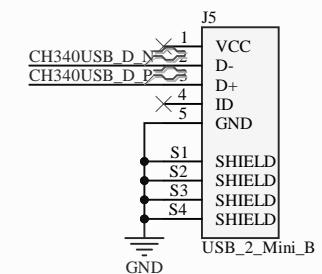
Drawn By:

USB To Serial Converter

CH340C Converter



USB Mini

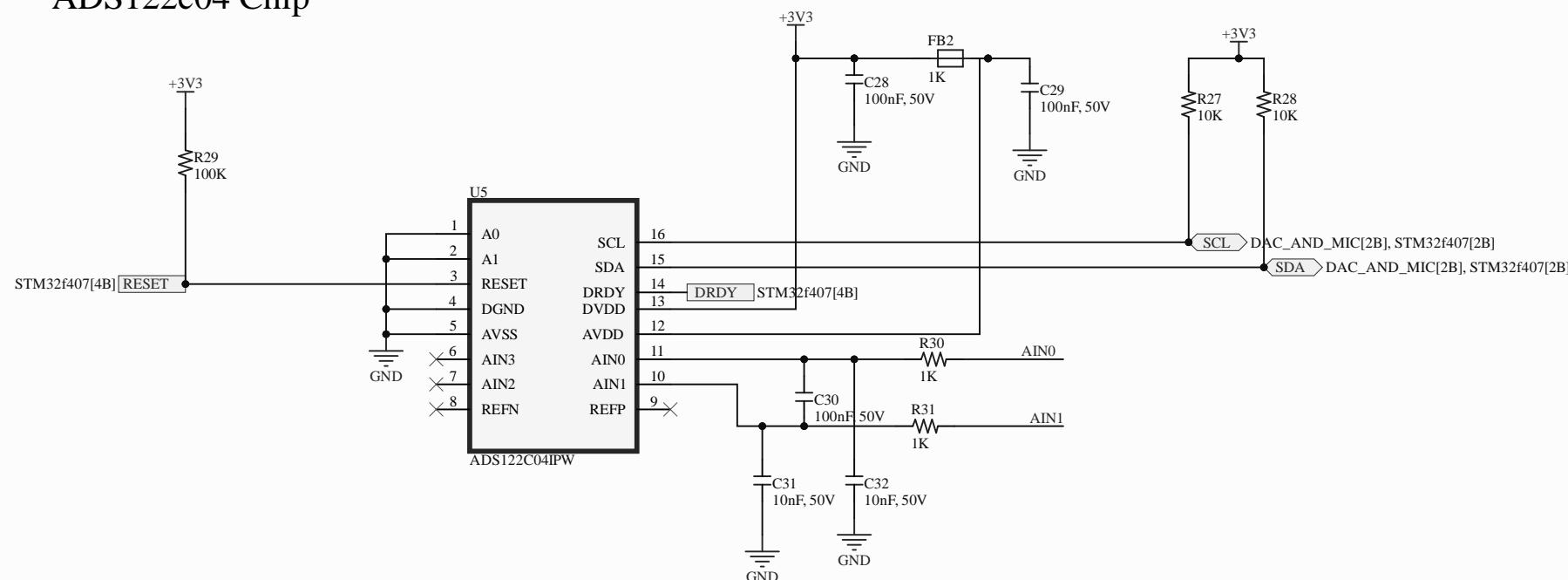


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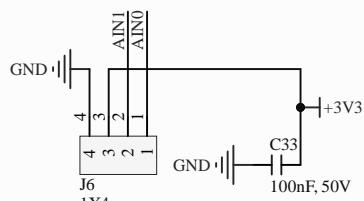
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24 Bit ADC

ADS122c04 Chip

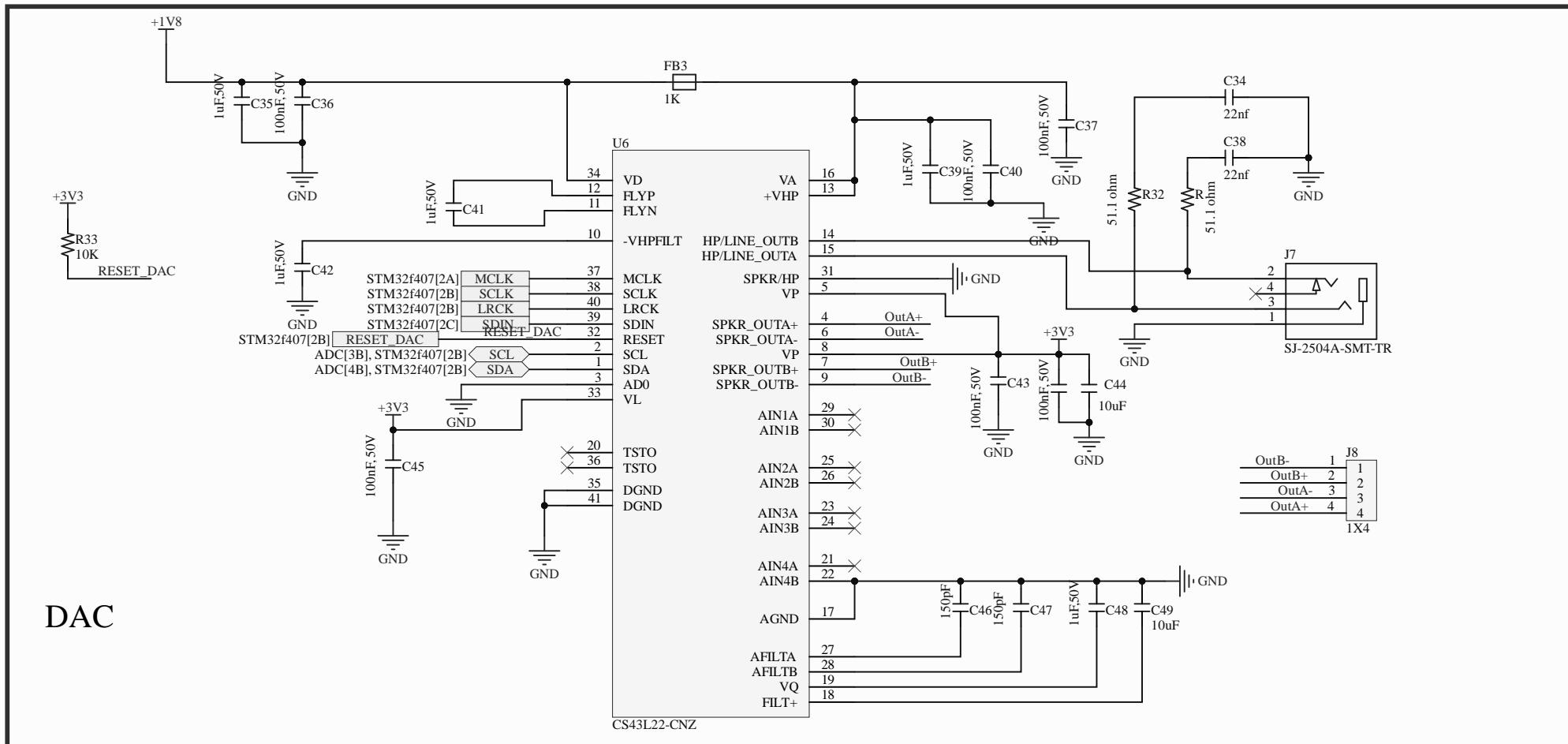


Connector



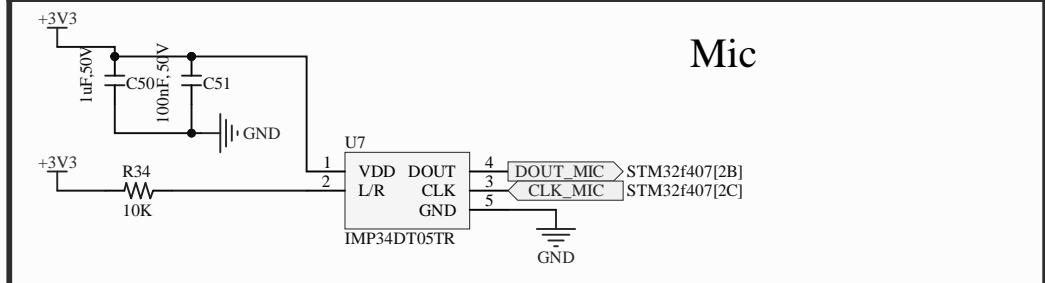
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Stereo DAC and Microphone



DAC

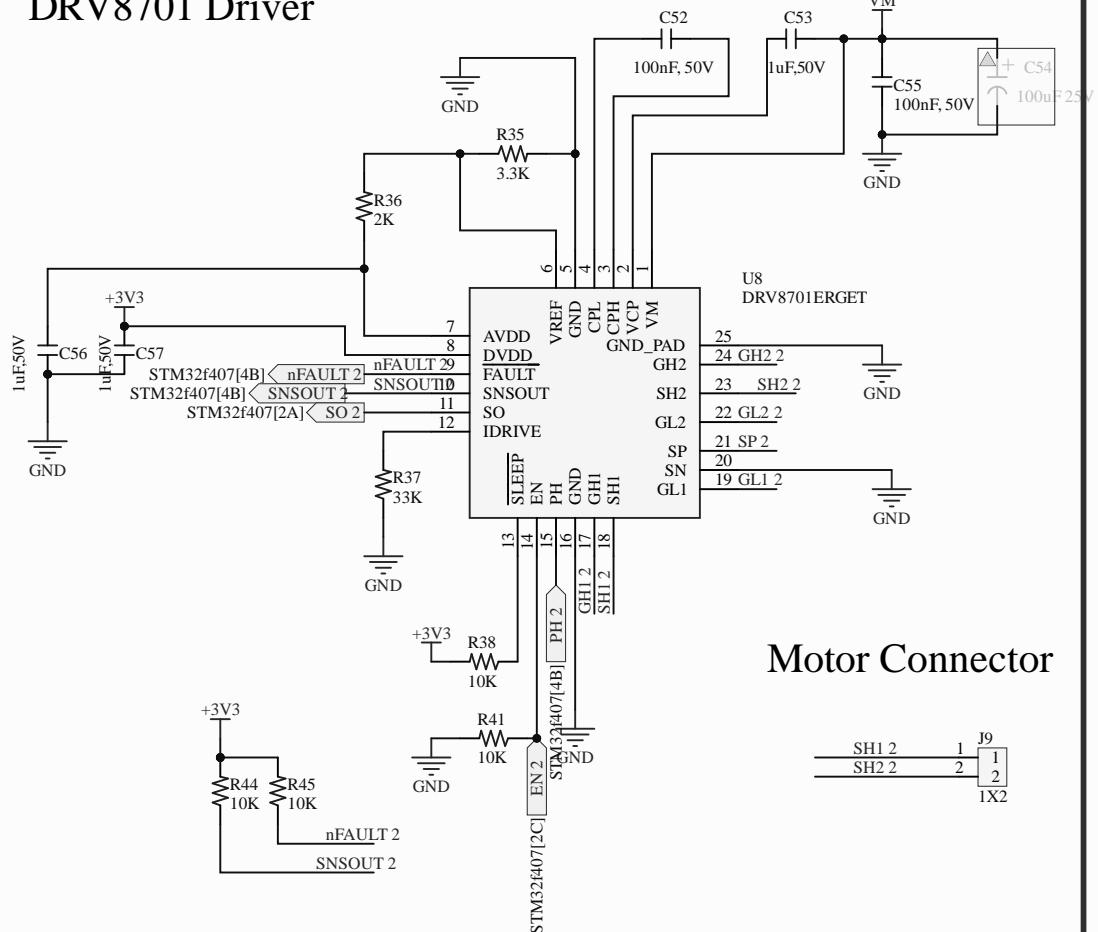
Mic



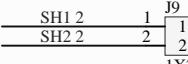
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Motor Driver

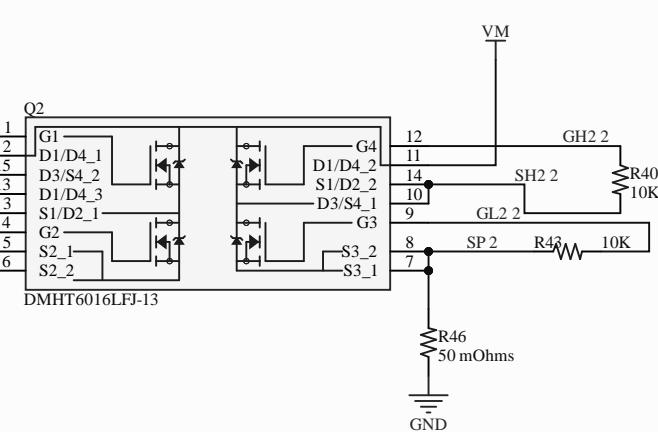
DRV8701 Driver



Motor Connector



N-MOSFET



Title

Size A4 Number

Revision

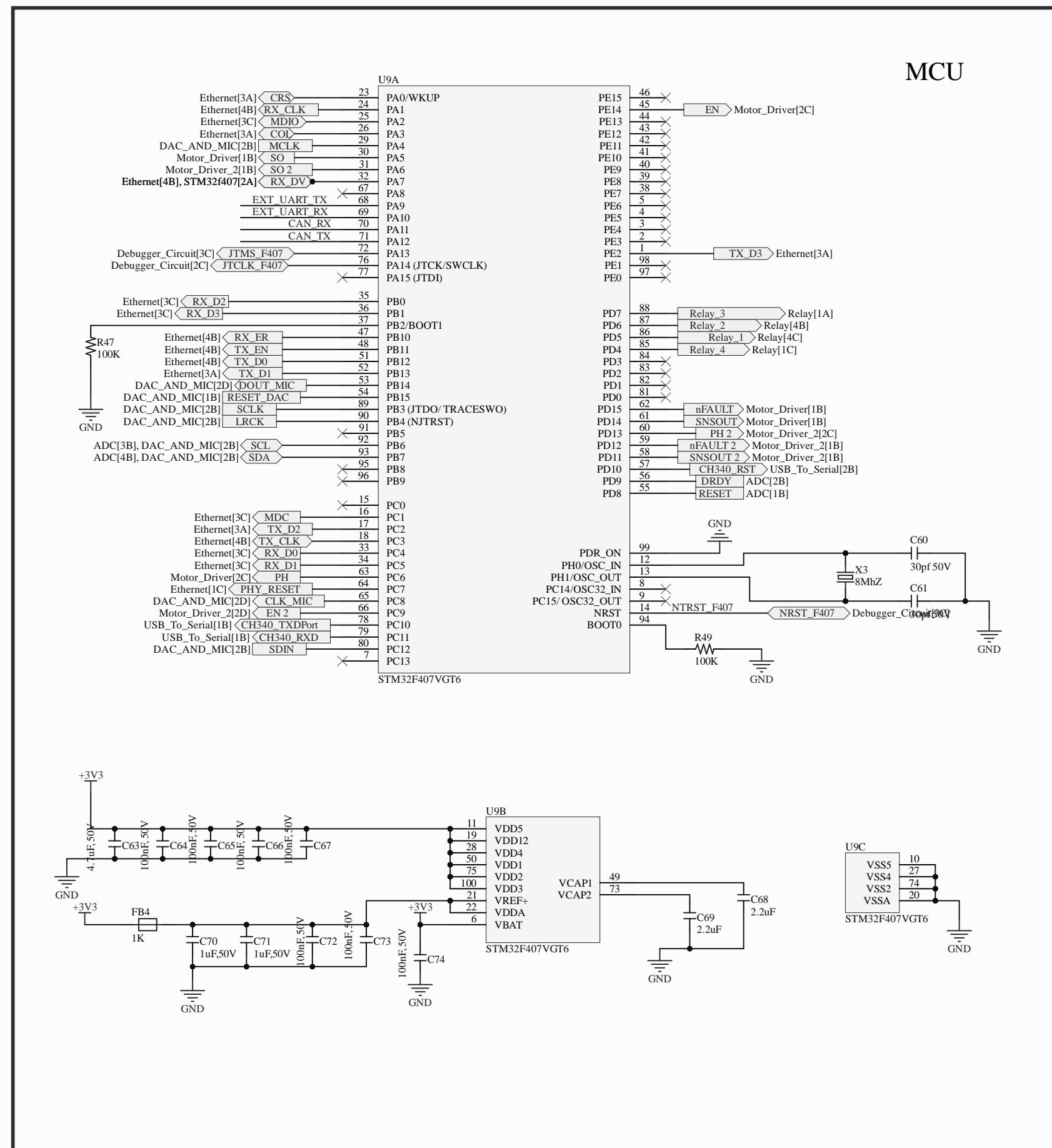
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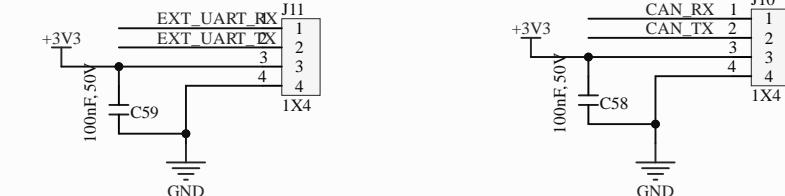
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Design By:

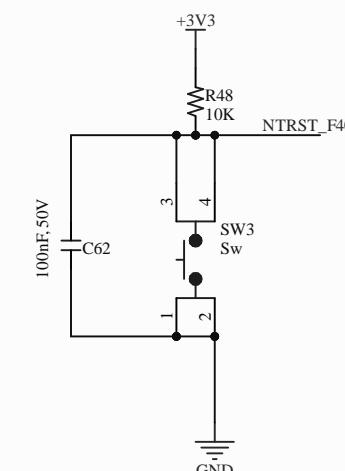
STM32F407 Controller



UART and CAN



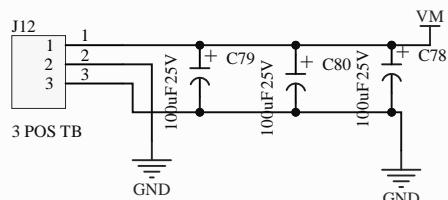
RESET



| Title | | |
|---|--------------|----------|
| Size | Number | Revision |
| A3 | | |
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| File: D:\PCB Design Course\STM32f407.SchDoc | Download By: | |

Power Supply

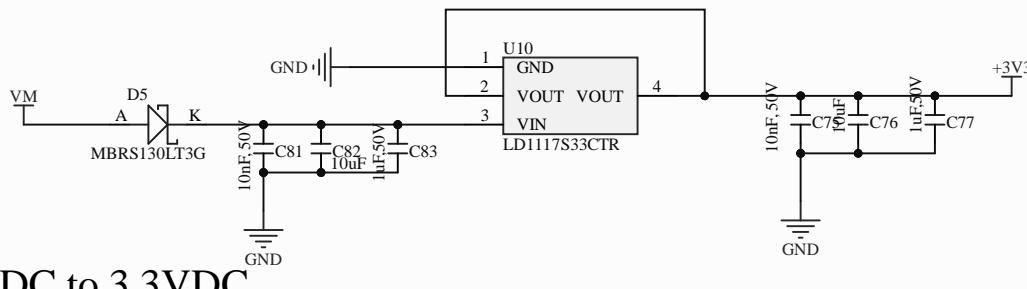
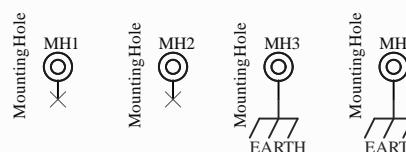
DC 12V Input



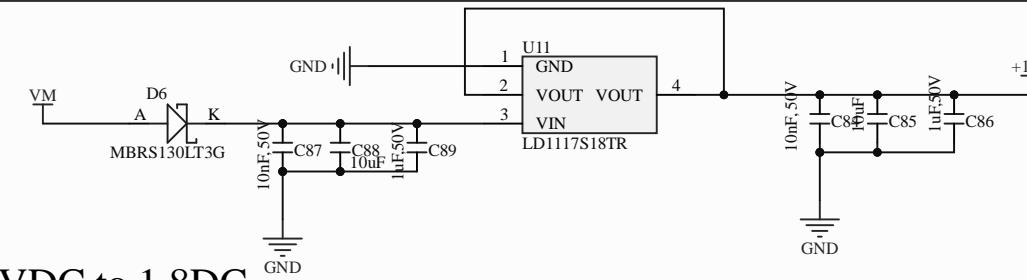
AC 110V Input



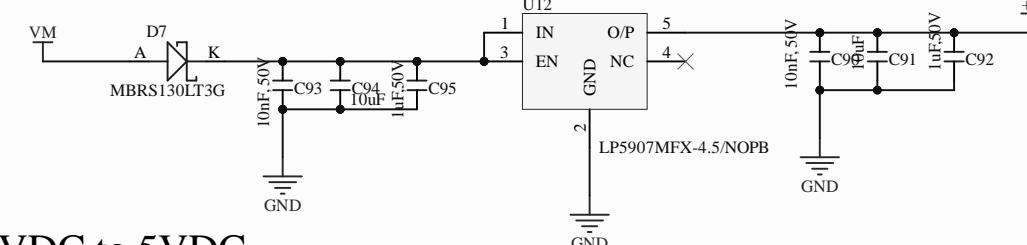
Mounting holes



12VDC to 1.8DC



12VDC to 5VDC



Title

Size A4

Number

Revision

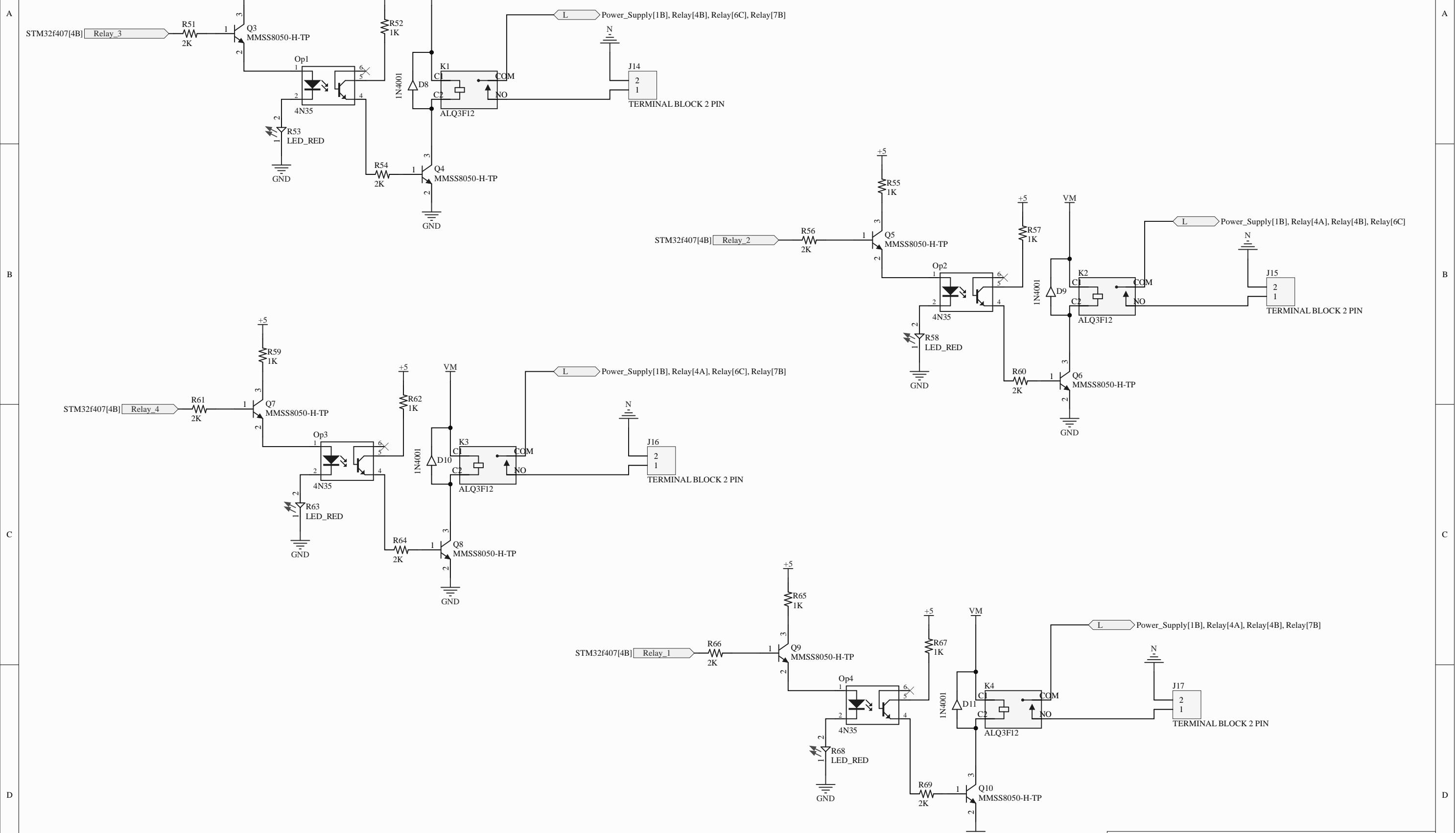
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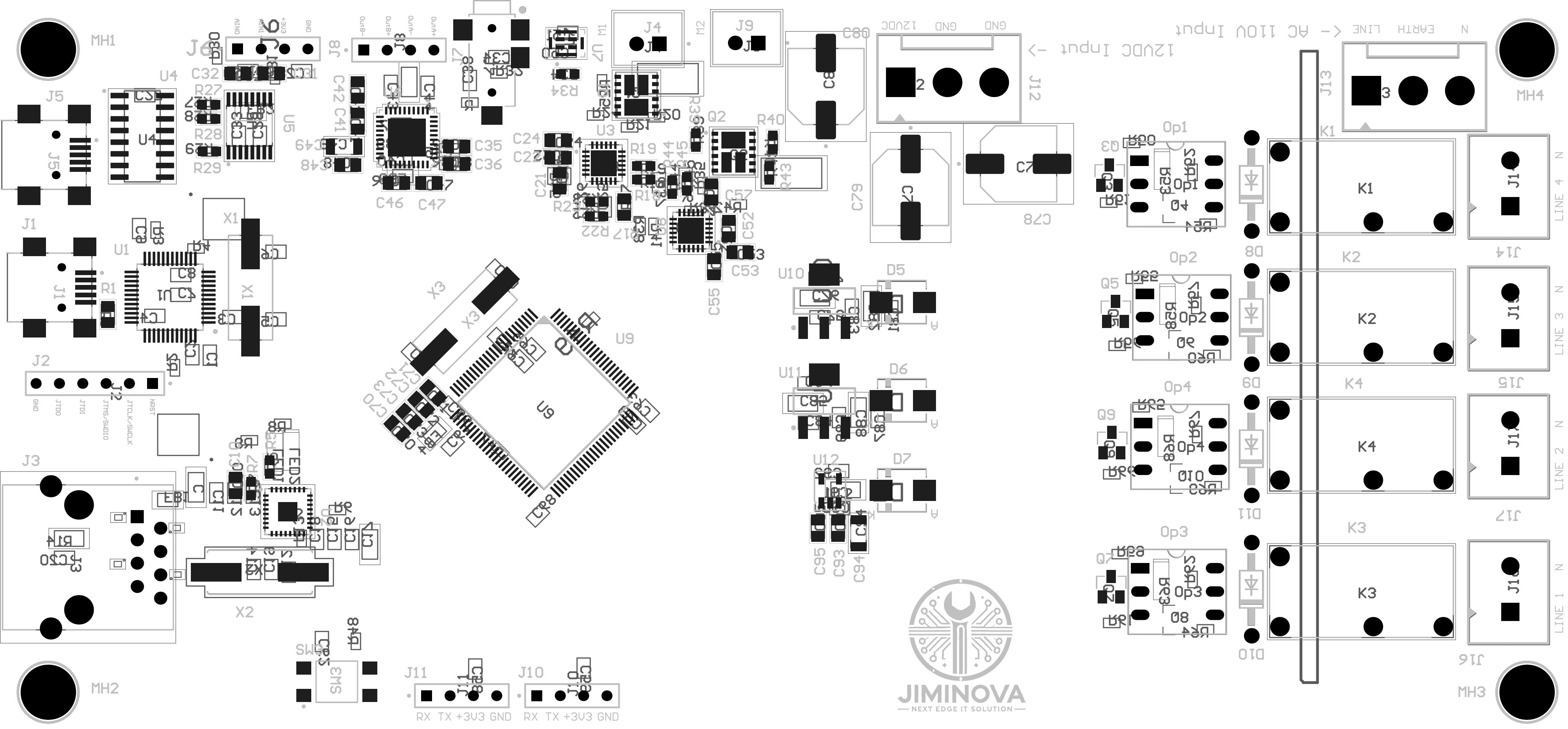
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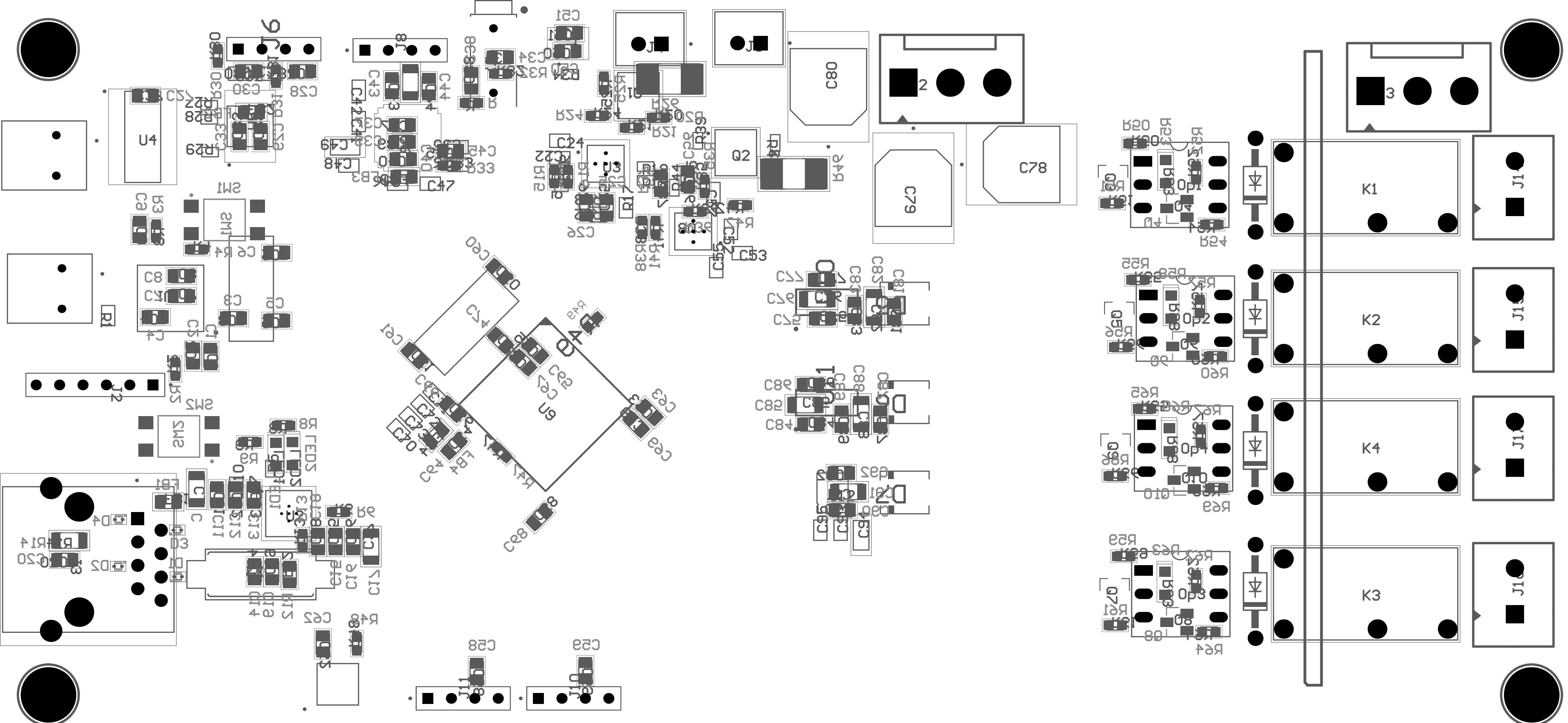
Submitted By:

4 channel Relay



| | | |
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| Title | | |
| Size A3 | Number | Revision |
| Date: 4/07/2025 | Sheet of | |
| File: D:\PCB Design Course\Relay.SchDoc | Drawn By: | |





Design Rules Verification Report

Filename : D:\PCB Design Course\Mixed signal\Mixed signal PCB board\Mixed_Signal_PC

Warnings 0

Rule Violations 0

| Warnings | |
|---|---|
| Total | 0 |
| Rule Violations | |
| Clearance Constraint (Gap=0.1mm) (All),(All) | 0 |
| Short-Circuit Constraint (Allowed=No) (All),(All) | 0 |
| Un-Routed Net Constraint (All) | 0 |
| Modified Polygon (Allow modified: No), (Allow shelved: No) | 0 |
| Width Constraint (Min=0.1mm) (Max=0.254mm) (Preferred=0.254mm) (All) | 0 |
| Routing Topology Rule(Topology=Shortest) (All) | 0 |
| Routing Layers(All) | 0 |
| Routing Via (MinHoleWidth=0.25mm) (MaxHoleWidth=0.5mm) (PreferredHoleWidth=0.711mm) (MinWidth=0.45mm) | 0 |
| Differential Pairs Uncoupled Length using the Gap Constraints (Min=0.127mm) (Max=0.127mm) (Preferred=0.127mm) | 0 |
| Differential Pairs Uncoupled Length using the Gap Constraints (Min=0.127mm) (Max=0.127mm) (Preferred=0.127mm) | 0 |
| Power Plane Connect Rule(Direct Connect)(Expansion=0.508mm) (Conductor Width=0.254mm) (Air Gap=0.254mm) | 0 |
| Hole Size Constraint (Min=0.025mm) (Max=6mm) (All) | 0 |
| Hole To Hole Clearance (Gap=0.1mm) (All),(All) | 0 |
| Minimum Solder Mask Sliver (Gap=0.07mm) (All),(All) | 0 |
| Silk To Solder Mask (Clearance=0.1mm) (IsPad),(All) | 0 |
| Silk to Silk (Clearance=0.1mm) (All),(All) | 0 |
| Net Antennae (Tolerance=0mm) (All) | 0 |
| Height Constraint (Min=0mm) (Max=25.4mm) (Preferred=12.7mm) (All) | 0 |
| Total | 0 |