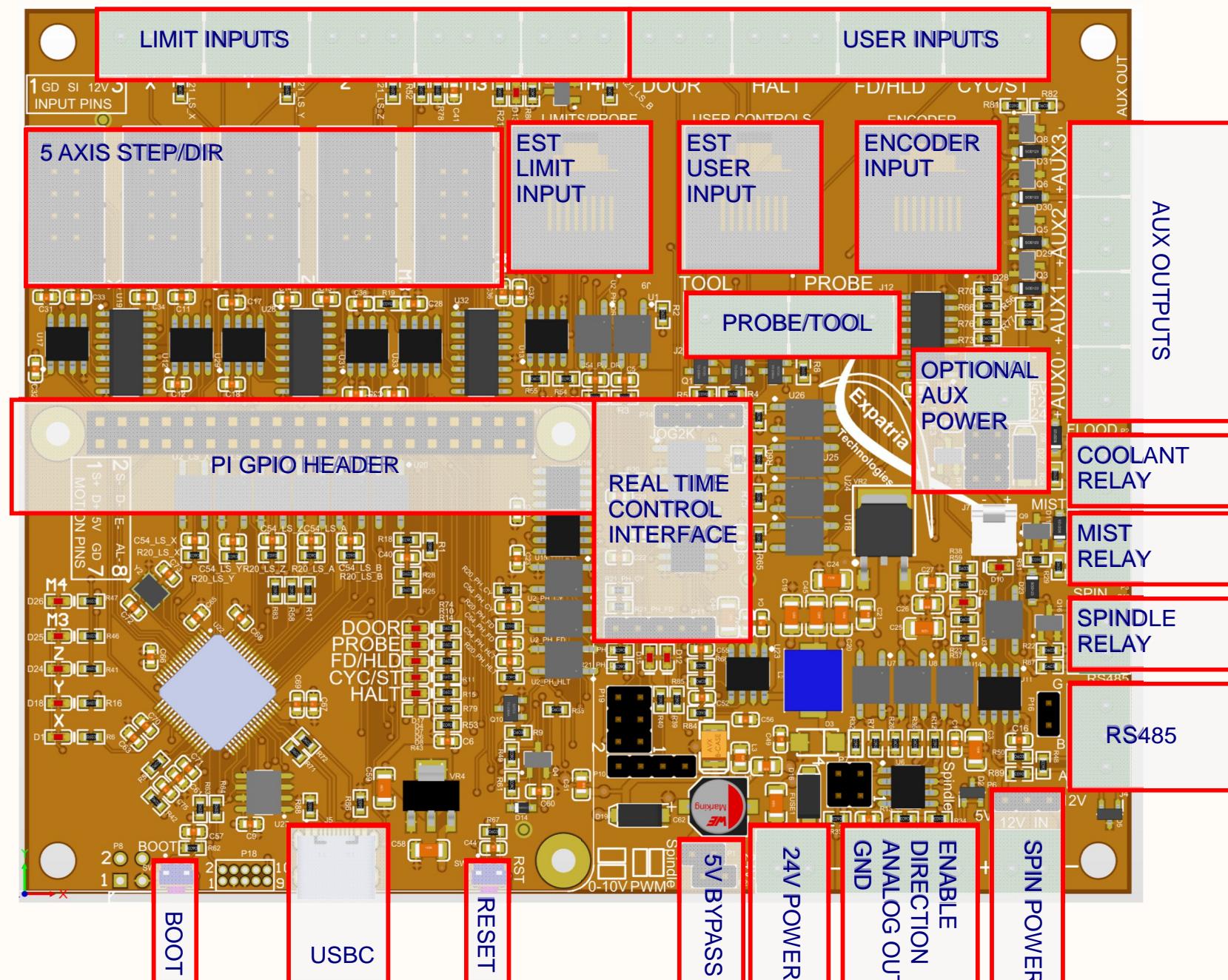


Flexi-HAL 2000 CNC Controller



ZZ1
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

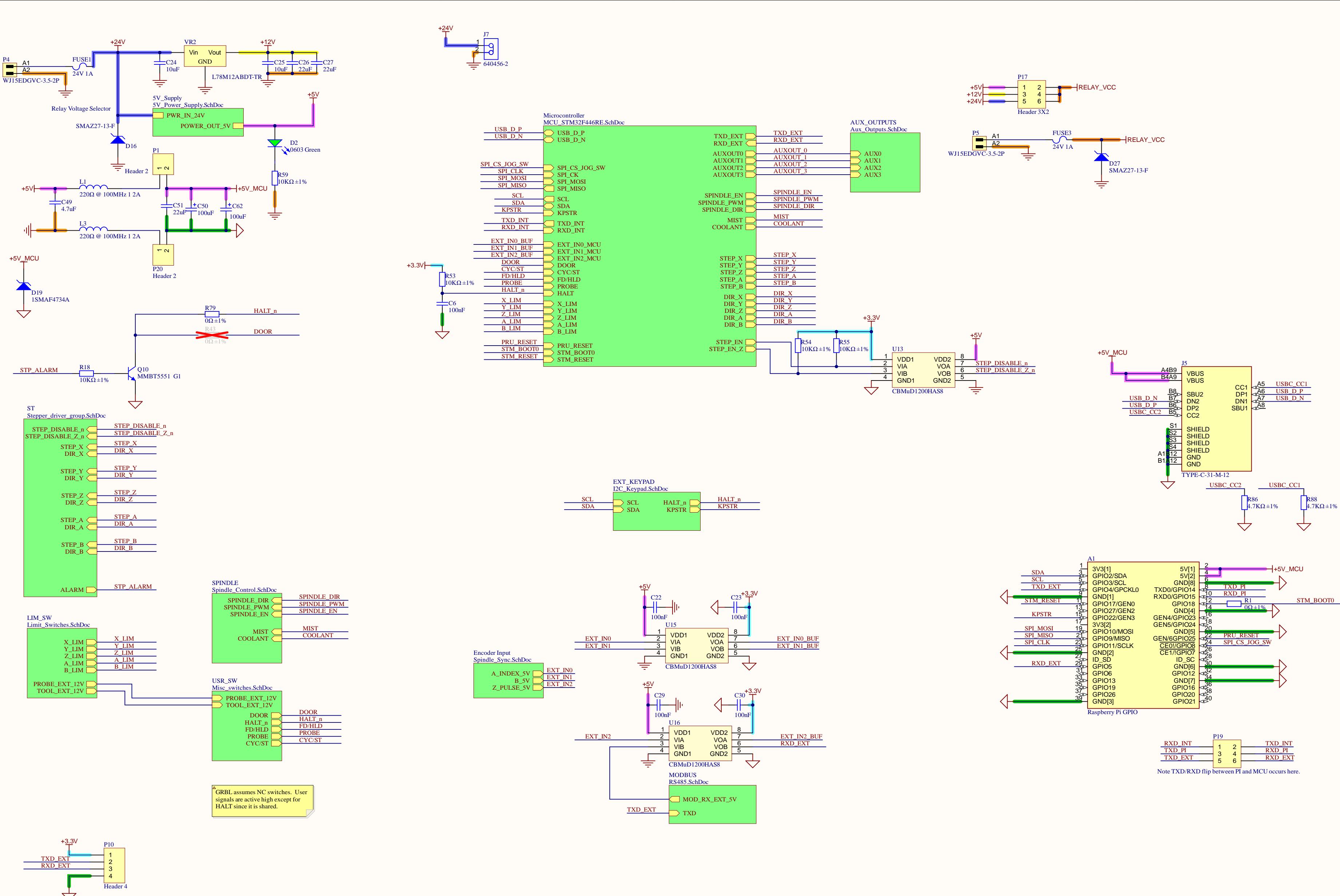
ZZ3
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

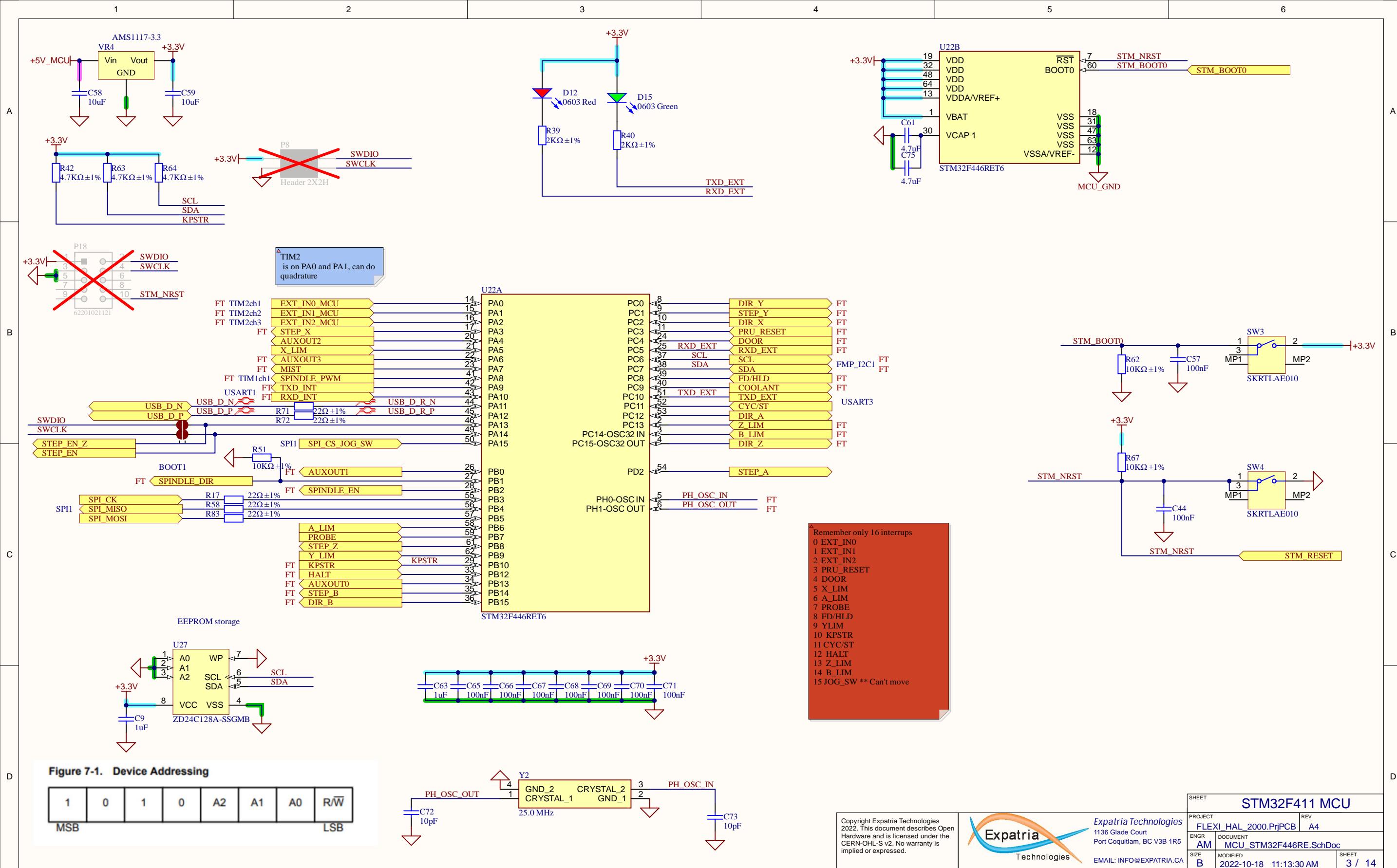
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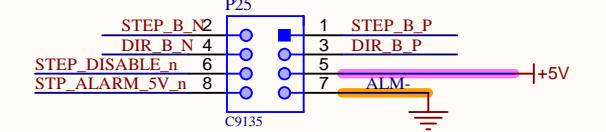
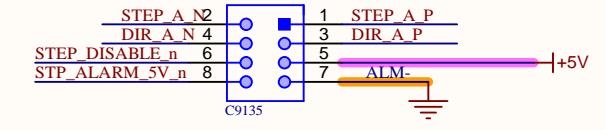
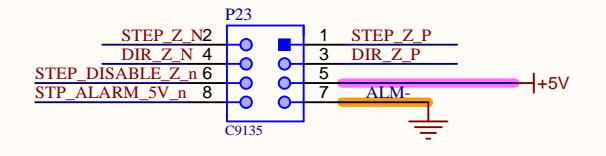
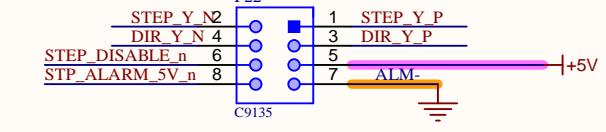
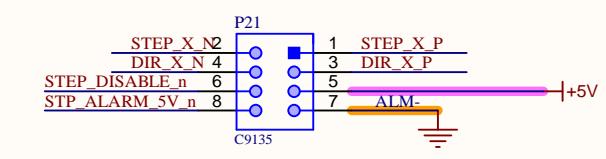
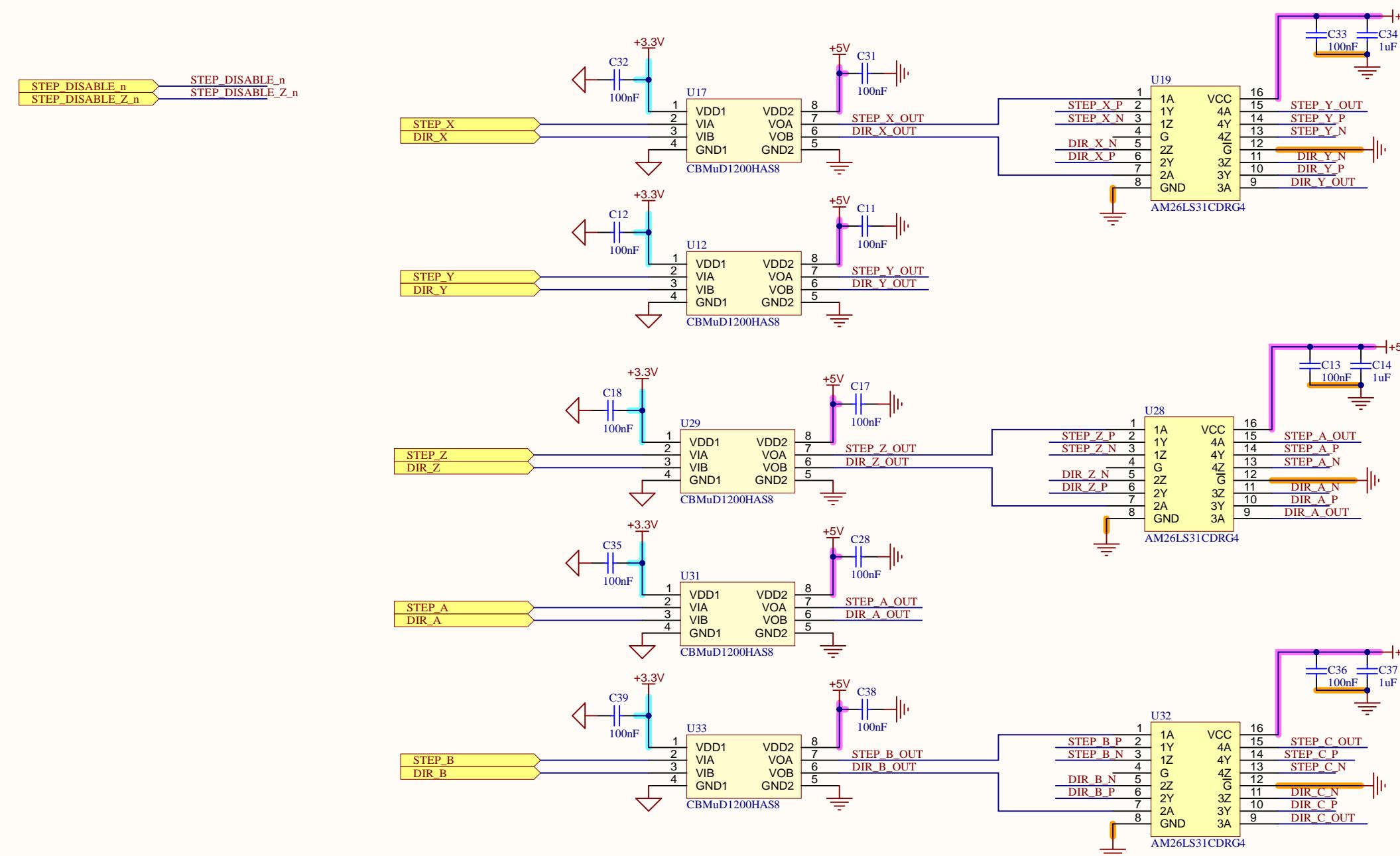
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| Title Sheet | | |
|----------------------|------------------------|--------|
| PROJECT | REV | |
| FLEXI_HAL_2000.PjPCB | A4 | |
| ENGR | DOCUMENT | |
| AM | Title Sheet.SchDoc | |
| SIZE | MODIFIED | SHEET |
| B | 2022-10-18 11:13:29 AM | 1 / 14 |





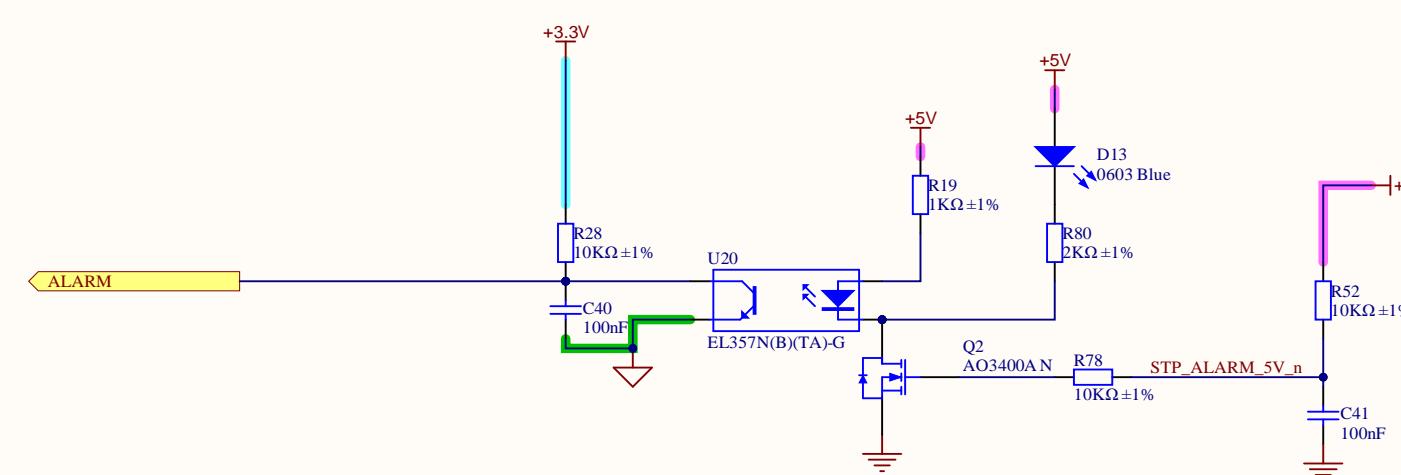
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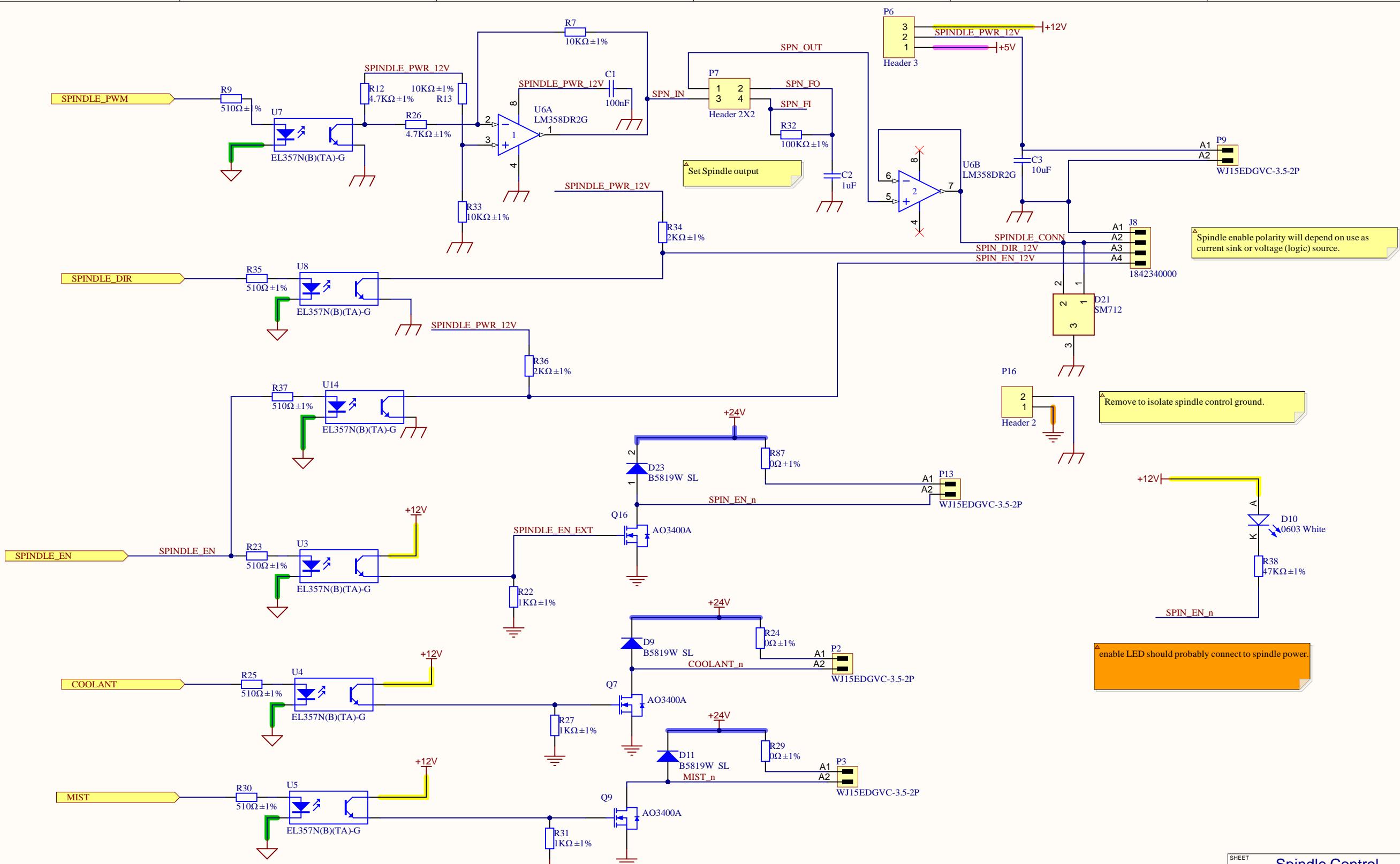


B

C

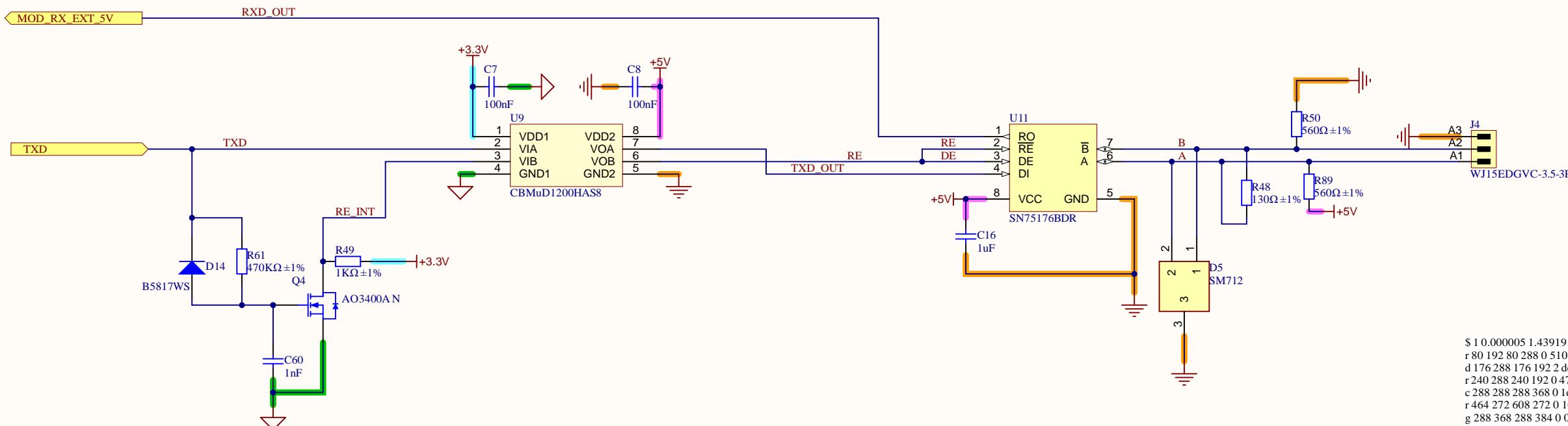
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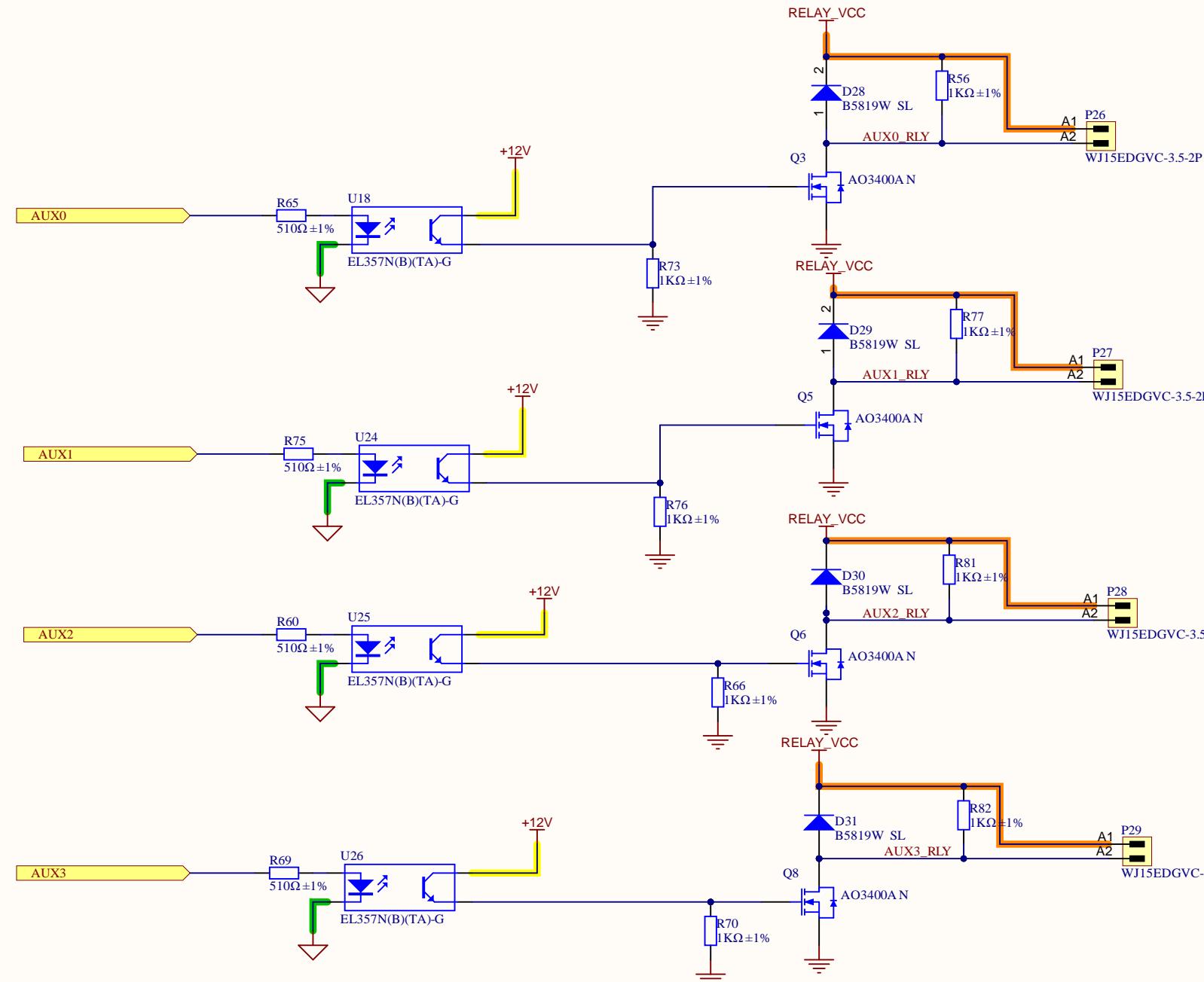


555 version

```
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R 432 160 432 96 0 0 40 5 0 0 0.5
368 656 192 656 16 0 0
x -64 166 -16 169 4 24 TXD
w 608 192 656 192 0
368 80 192 0 192 0 0
165 368 240 592 240 14 0
g 464 400 464 448 0 0
R 64 64 -32 64 0 0 40 5 0 0 0.5
c 304 272 224 272 0 1e-8 0.012789433753451459 0.001
g 224 272 160 272 0 0
w 496 304 608 304 0
```



```
$ 1.000005 1.4391916095149893 18 5 43 5e-11
r 80 192 80 288 0 510
d 176 288 176 192 2 default
r 240 288 240 192 0 470000
c 288 288 368 0 1e-8 4.491582898305804 0.001
r 464 272 608 272 0 1000
g 288 368 288 384 0 0
g 80 288 80 320 0 0
R 80 112 80 48 0 0 40 5 0 0 0.5
R 608 272 608 208 0 0 40 5 0 0 0.5
w 80 192 176 192 0
w 176 192 240 192 0
368 464 272 464 96 0 0
x -64 166 -16 169 4 24 TXD
f 352 288 416 288 32 1.5 0.02
w 176 288 240 288 0
w 240 288 288 288 0
w 288 288 352 288 0
w 288 368 416 368 0
w 416 304 416 368 0
w 416 272 464 272 0
s 80 112 80 192 0 0 false
368 80 192 0 192 0 0
368 288 288 240 0 0
o 11 2 0 4099 10 6.4 0 4 11 3 21 0 21 3
```



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| Spindle Control | |
|-----------------------|------------------------|
| PROJECT | REV |
| FLEXI_HAL_2000.PrjPCB | A4 |
| ENGR | DOCUMENT |
| AM | Aux_Outputs.SchDoc |
| SHEET | MODIFIED |
| B | 2022-10-18 11:13:30 AM |
| | 10' 14 |

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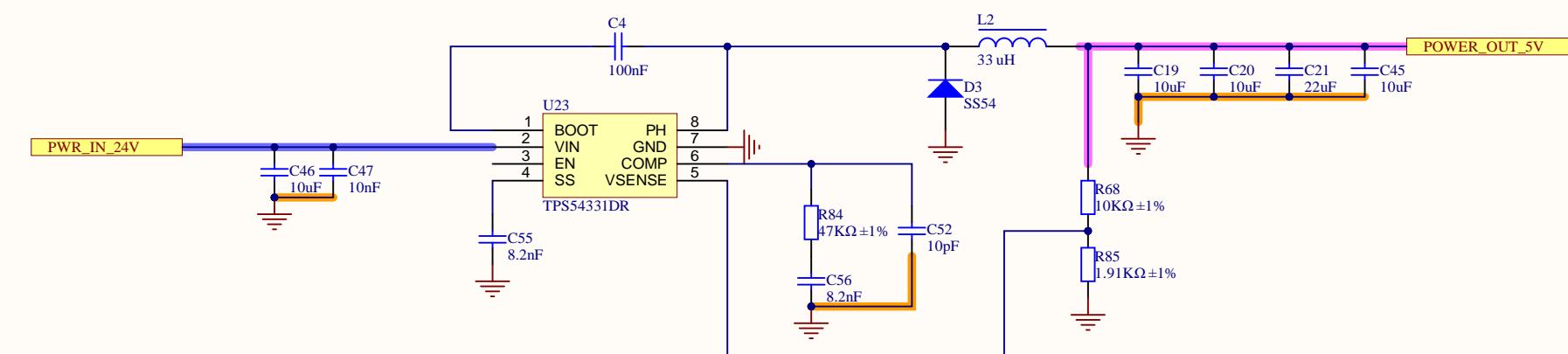
B

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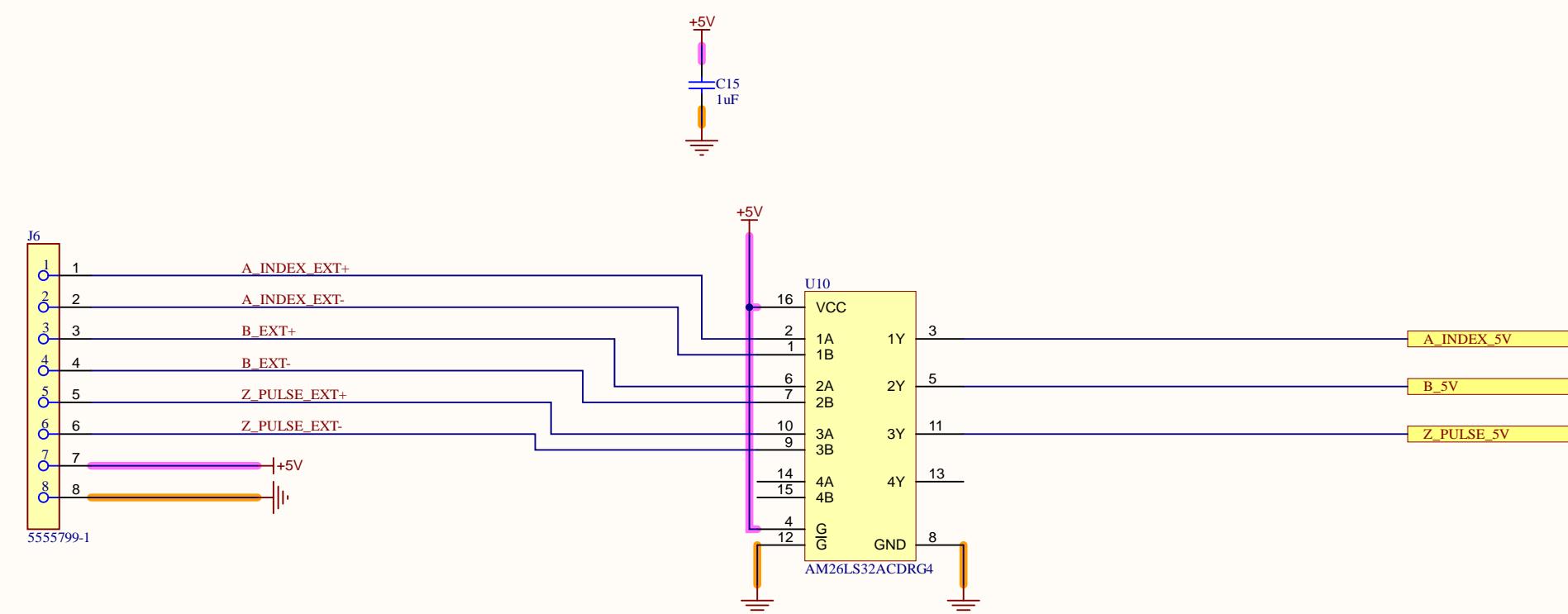


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| SHEET 5V Power Supply | |
|-------------------------------|---------------------------------|
| PROJECT FLEXI_HAL_2000.PrjPCB | REV A4 |
| ENGR AM | DOCUMENT 5V_Power_Supply.SchDoc |
| SIZE B | MODIFIED 2022-10-18 11:13:30 AM |
| | SHEET 9 / 14 |

A

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| SHEET | | | Spindle_Sync | |
|---------|----------|--|-----------------------|------------------------|
| PROJECT | REV | | FLEXI_HAL_2000.PrjPCB | A1 |
| ENGR | DOCUMENT | | AM | Spindle_Sync.SchDoc |
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| | | | | SHEET 11/ 14 |

A

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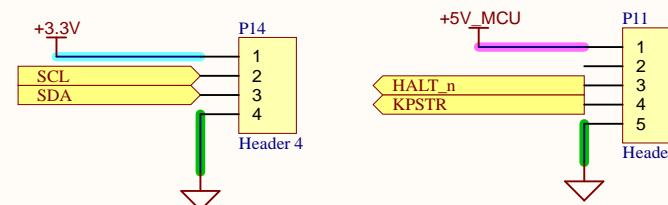
C

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△ Pendant is in MCU domain
HALT is active low.



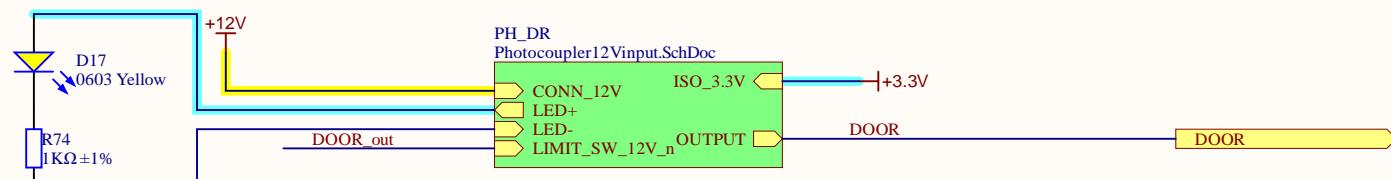
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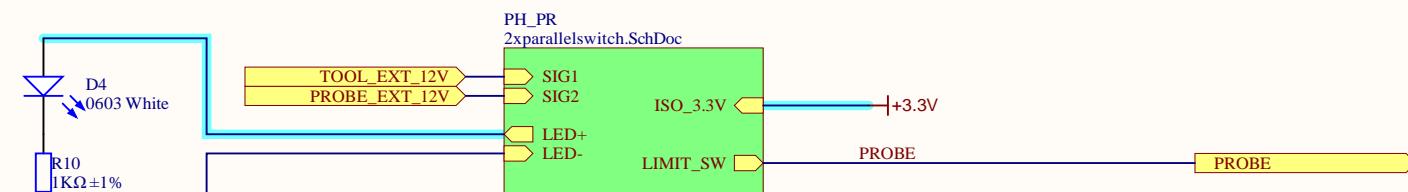
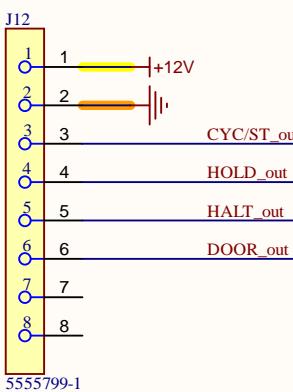
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| SHEET | | Misc Switches | REV |
|---------|------------------------|-----------------------|-----|
| PROJECT | DOCUMENT | FLEXI_HAL_2000.PrjPCB | A4 |
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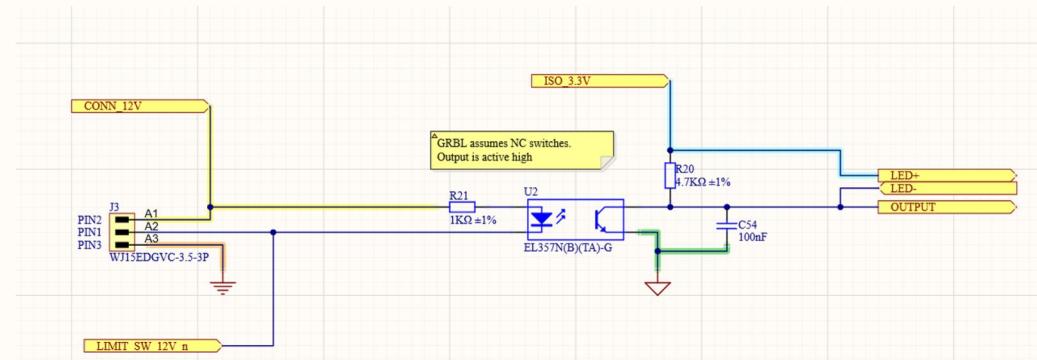
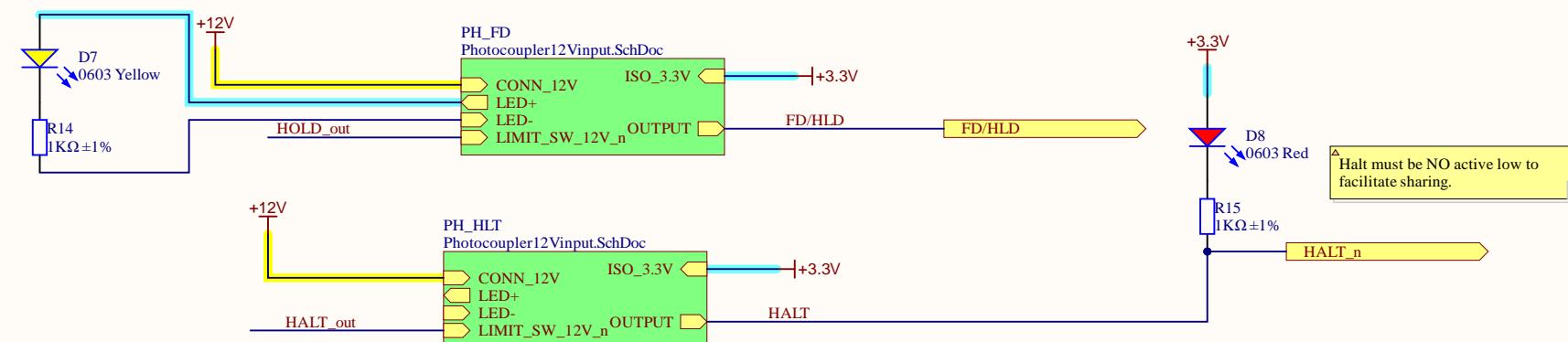
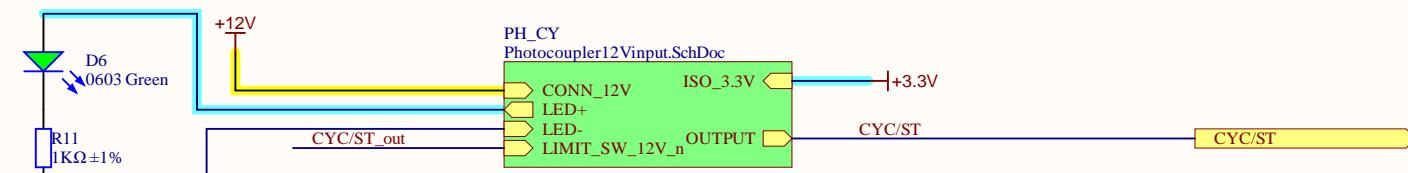
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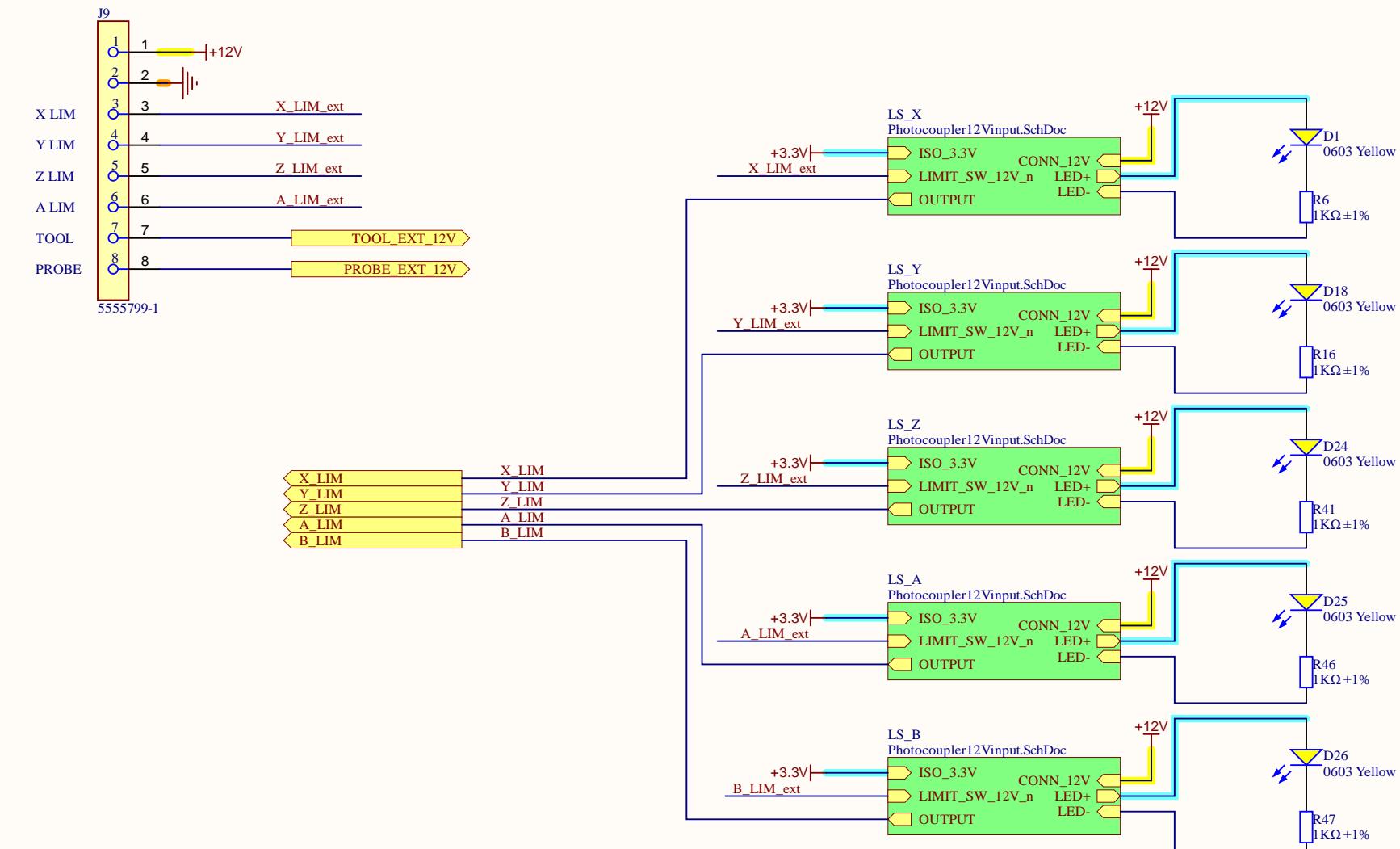
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ENGR AM DOCUMENT Misc_switches.SchDoc
SIZE B MODIFIED 2022-10-18 11:13:30 AM
EMAIL: INFO@EXPATRIA.CA

| Misc Switches | |
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| | SHEET 8 / 14 |

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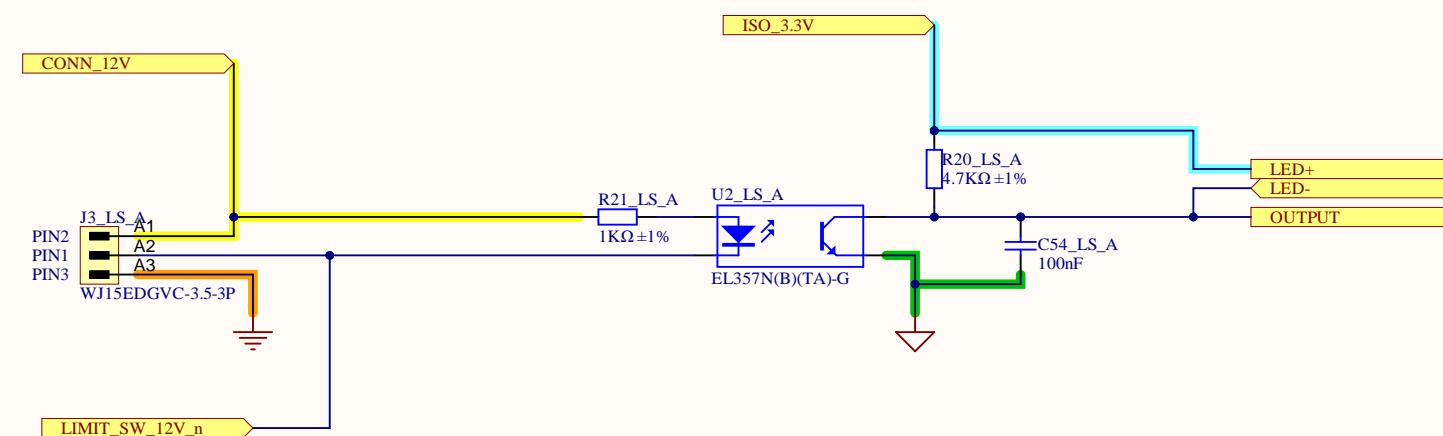
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| SHEET Coupler 12V input | | |
|-------------------------|-----------------------------|--------|
| PROJECT | REV | |
| FLEXI_HAL_2000.PrjPCB | A4 | |
| ENGR | DOCUMENT | |
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| SIZE | MODIFIED | SHEET |
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B

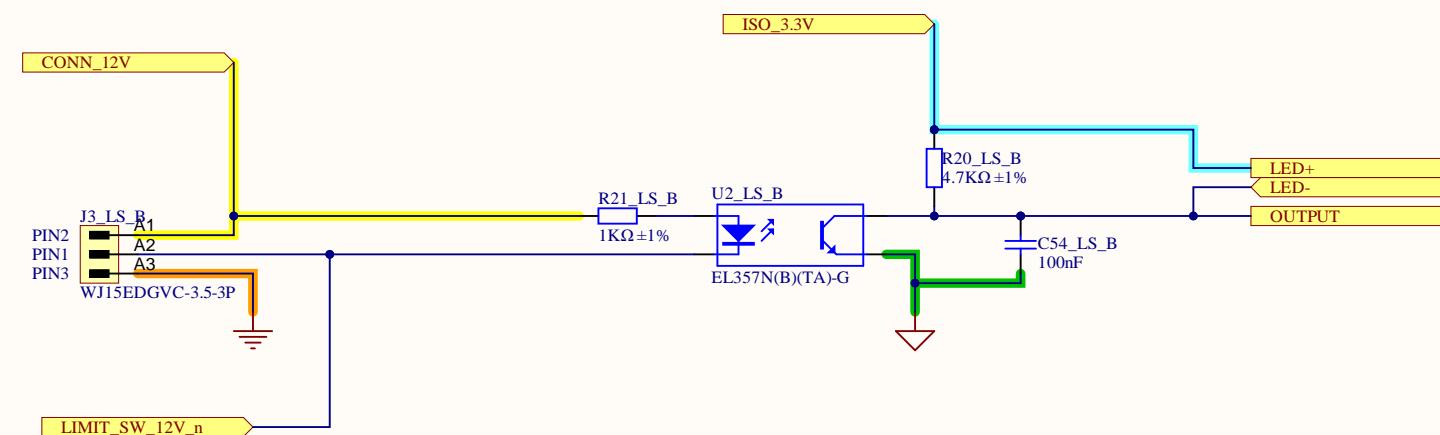
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| SHEET Coupler 12V input | | |
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| PROJECT | REV | |
| FLEXI_HAL_2000.PrjPCB | A4 | |
| ENGR | DOCUMENT | |
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| B | 2022-10-18 11:13:31 AM | 14' 14 |

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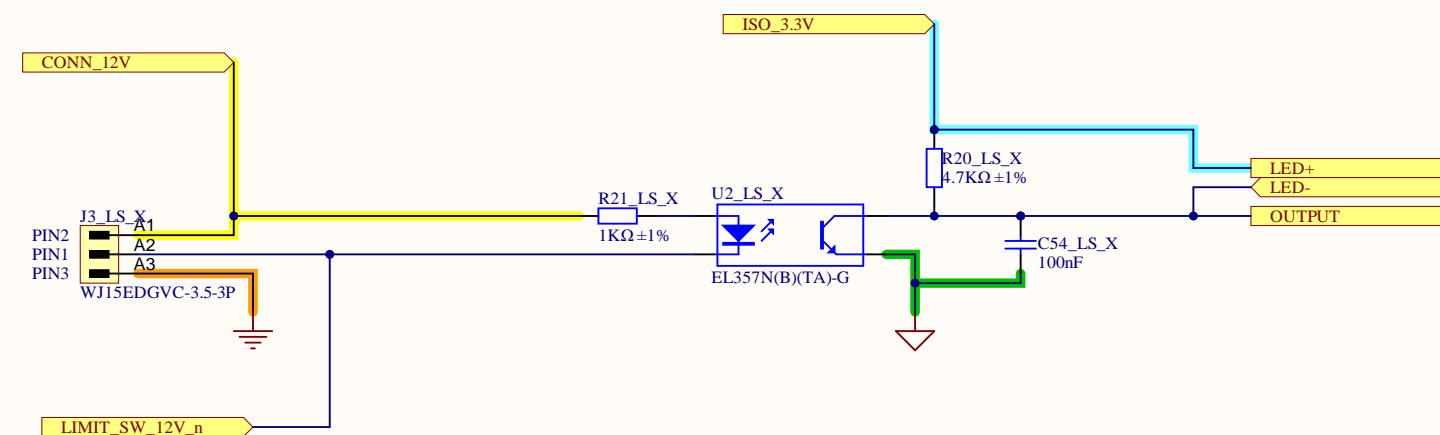
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| SHEET Coupler 12V input | | |
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| PROJECT | REV | |
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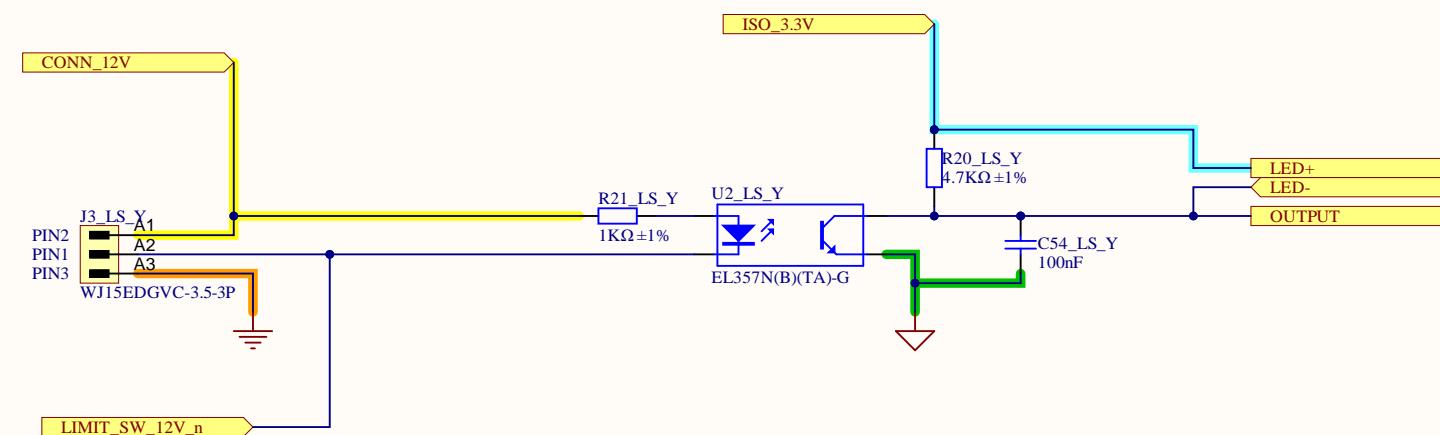
B

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| SHEET Coupler 12V input | | |
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| PROJECT | REV | |
| FLEXI_HAL_2000.PrjPCB | A4 | |
| ENGR | DOCUMENT | |
| AM | Photocoupler12Vinput.SchDoc | |
| SIZE | MODIFIED | SHEET |
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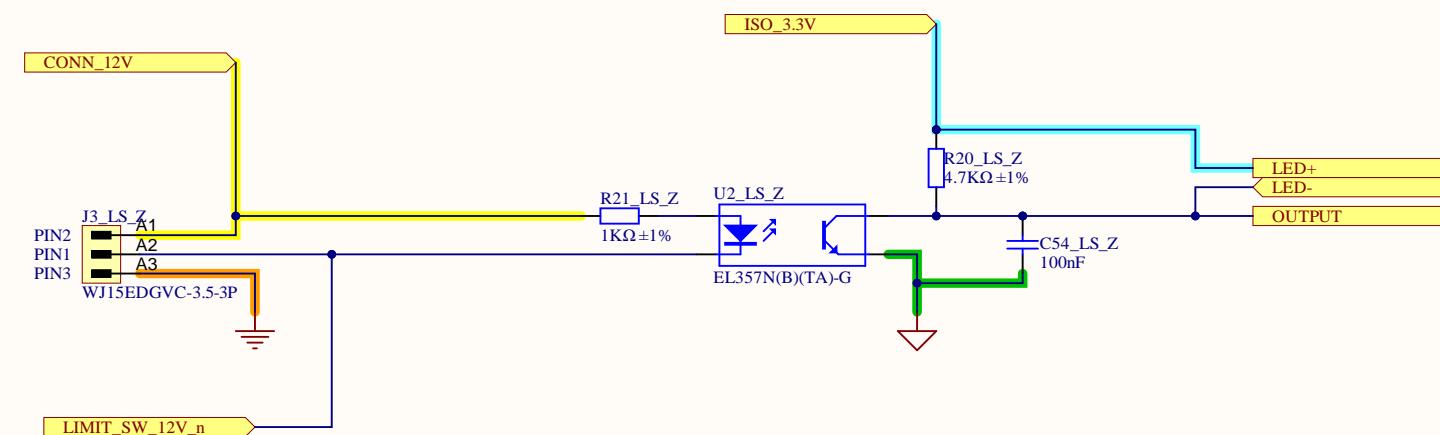
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| SHEET Coupler 12V input | | |
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| PROJECT | REV | |
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| ENGR | DOCUMENT | |
| AM | Photocoupler12Vinput.SchDoc | |
| SIZE | MODIFIED | SHEET |
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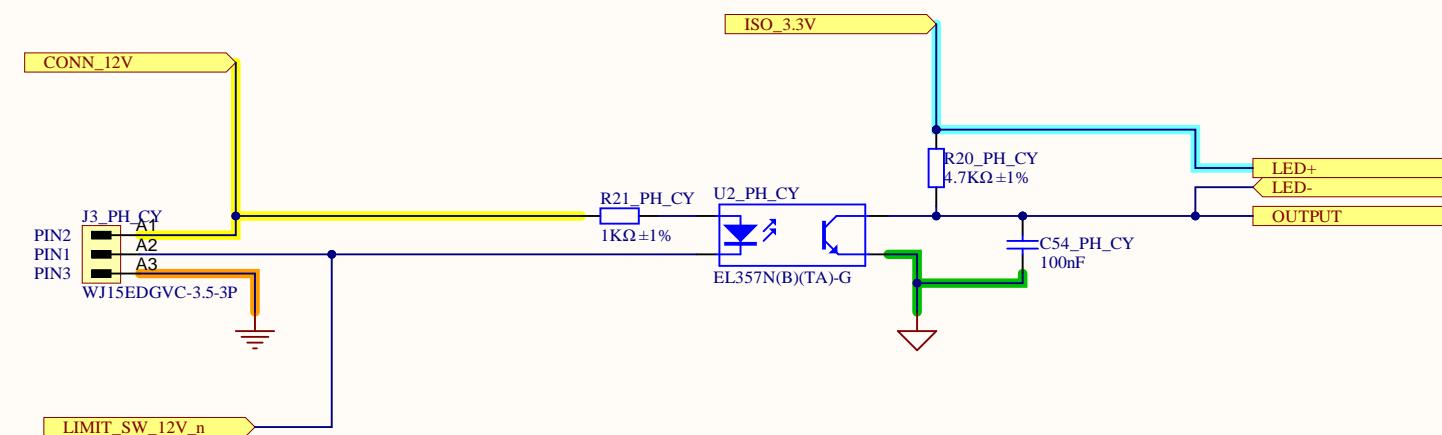
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D

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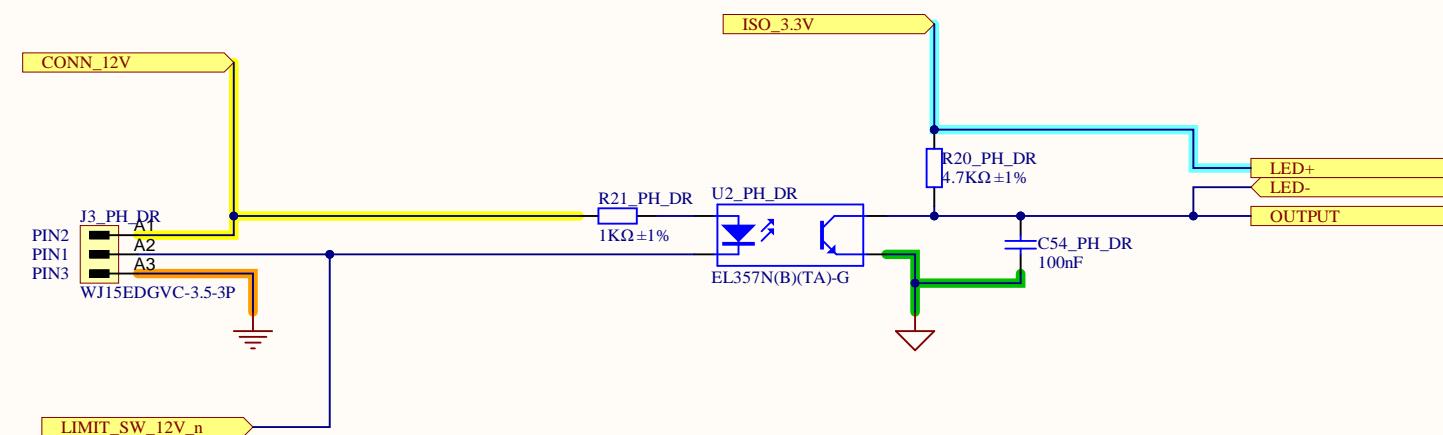
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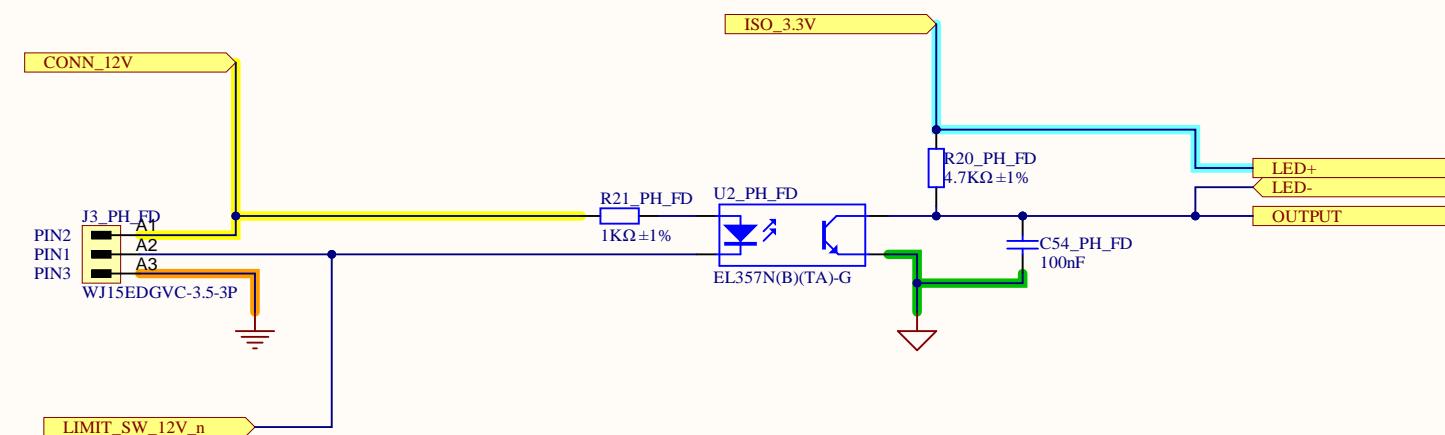
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PROJECT FLEXI_HAL_2000.PrjPCB
DOCUMENT Photocoupler12Vinput.SchDoc
EMAIL: INFO@EXPATRIA.CA

| SHEET Coupler 12V input | | |
|-------------------------|---------------------------------|--------------|
| ENGR | DOCUMENT | REV |
| AM | FLEXI_HAL_2000.PrjPCB | A4 |
| SIZE B | MODIFIED 2022-10-18 11:13:31 AM | SHEET 14/ 14 |

A

A

B

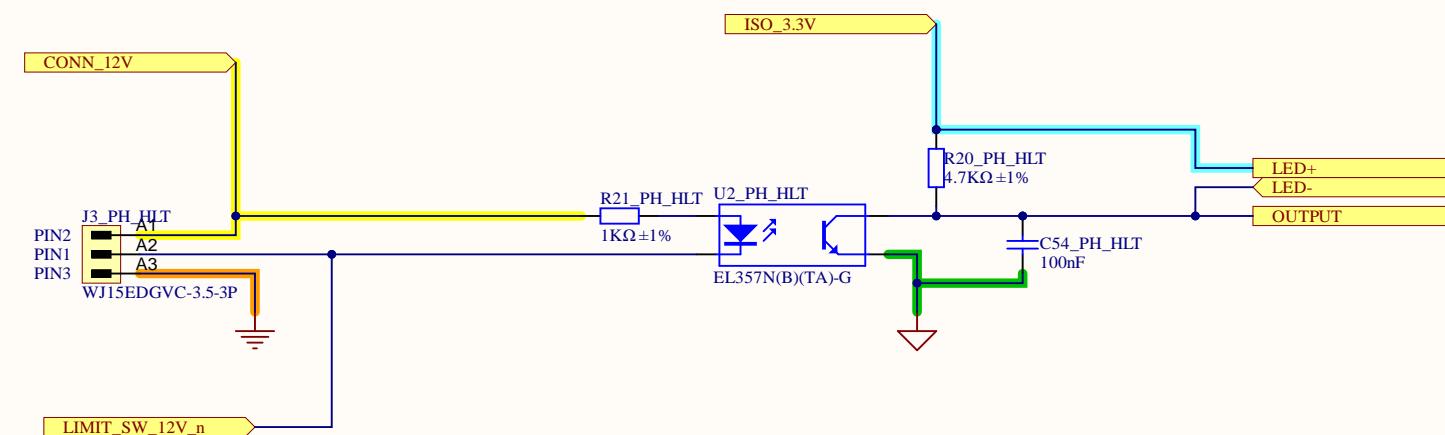
B

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| SHEET Coupler 12V input | | |
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| FLEXI_HAL_2000.PrjPCB | A4 | |
| ENGR | DOCUMENT | |
| AM | Photocoupler12Vinput.SchDoc | |
| SIZE | MODIFIED | SHEET |
| B | 2022-10-18 11:13:31 AM | 14' 14 |

A

B

C

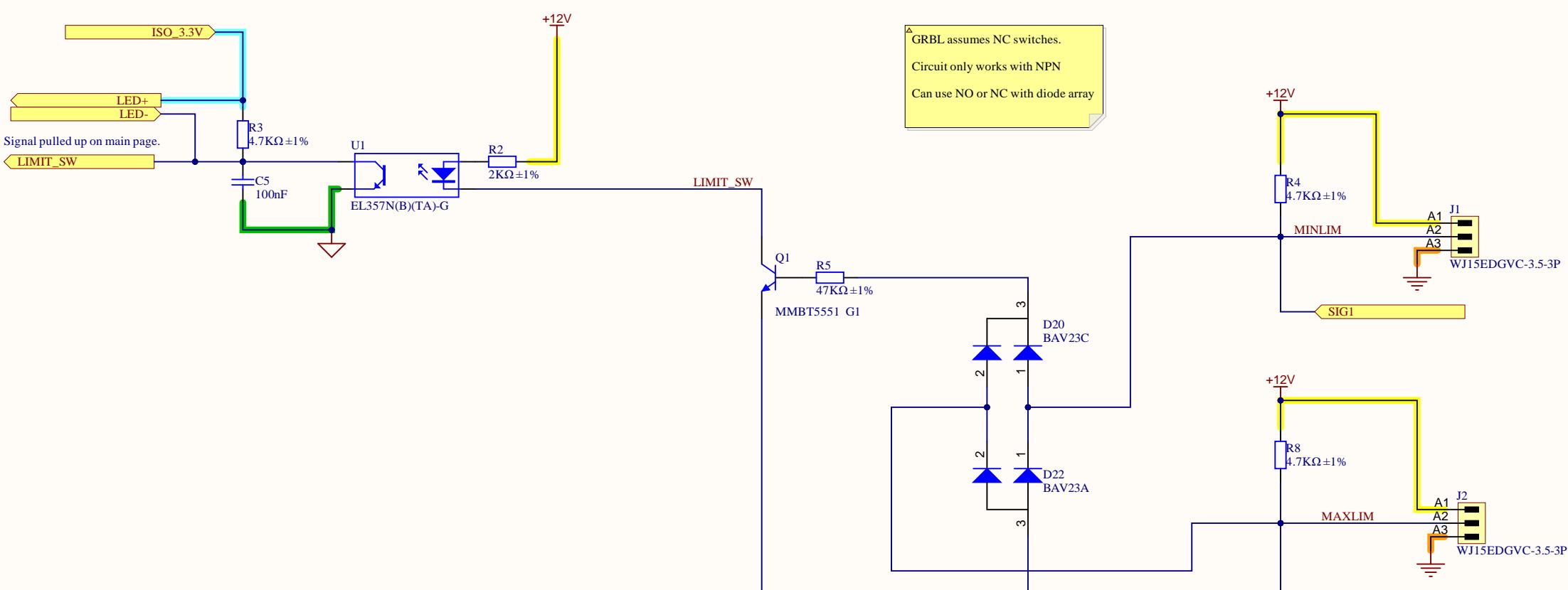
D

A

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C

D



```
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w 128 176 128 224 1
w 128 144 128 96 1
g 80 288 80 304 0 0
t 80 160 128 160 0 1 -4.99999971946758
2.4687242029037016e-8 100 default
r 128 48 128 96 0 330
R 128 48 128 0 0 40 5 0 0 0.5
R -288 64 -288 16 0 0 40 12 0 0 0.5
```

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| SHEET | | |
|-----------------------|------------------------|--------|
| PROJECT | DOCUMENT | REV |
| FLEXI_HAL_2000.PrjPCB | xparallelswitch.SchDoc | A4 |
| ENGR | AM | |
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