

Project: myCar

11/01/2023

Module: On-Board Central Processor - Sniffer

V1.0

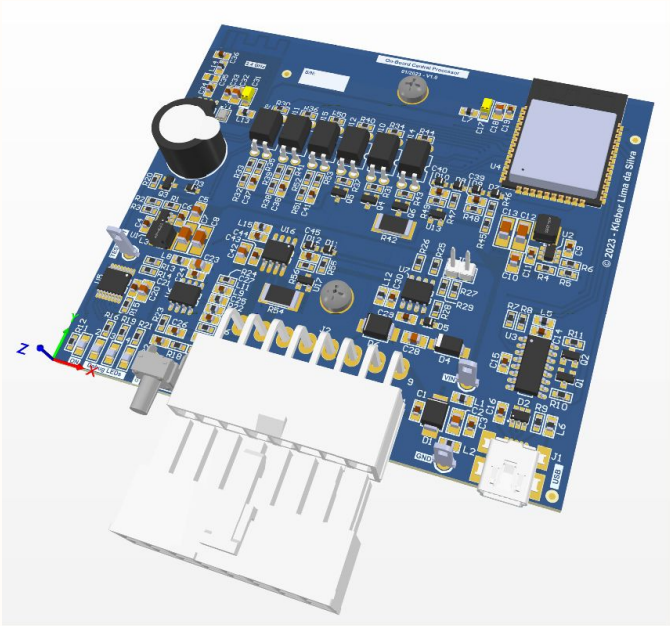
Summary

| Title | Page |
|--------------------------------|------|
| Cover Page | 1 |
| Hardware Archetecture | 2 |
| Power Supply | 3 |
| Wi-Fi and Bluetooth MCU Module | 4 |
| User Peripherals | 5 |
| Communication Interfaces | 6 |
| Start-Stop (SS) | 7 |
| Parking Brake (PB) | 8 |
| External Connector | 9 |
| Mechanicals | 10 |

Revision History

11 January 2023
0. Initial Release

3D view



Notes:

1.

2.

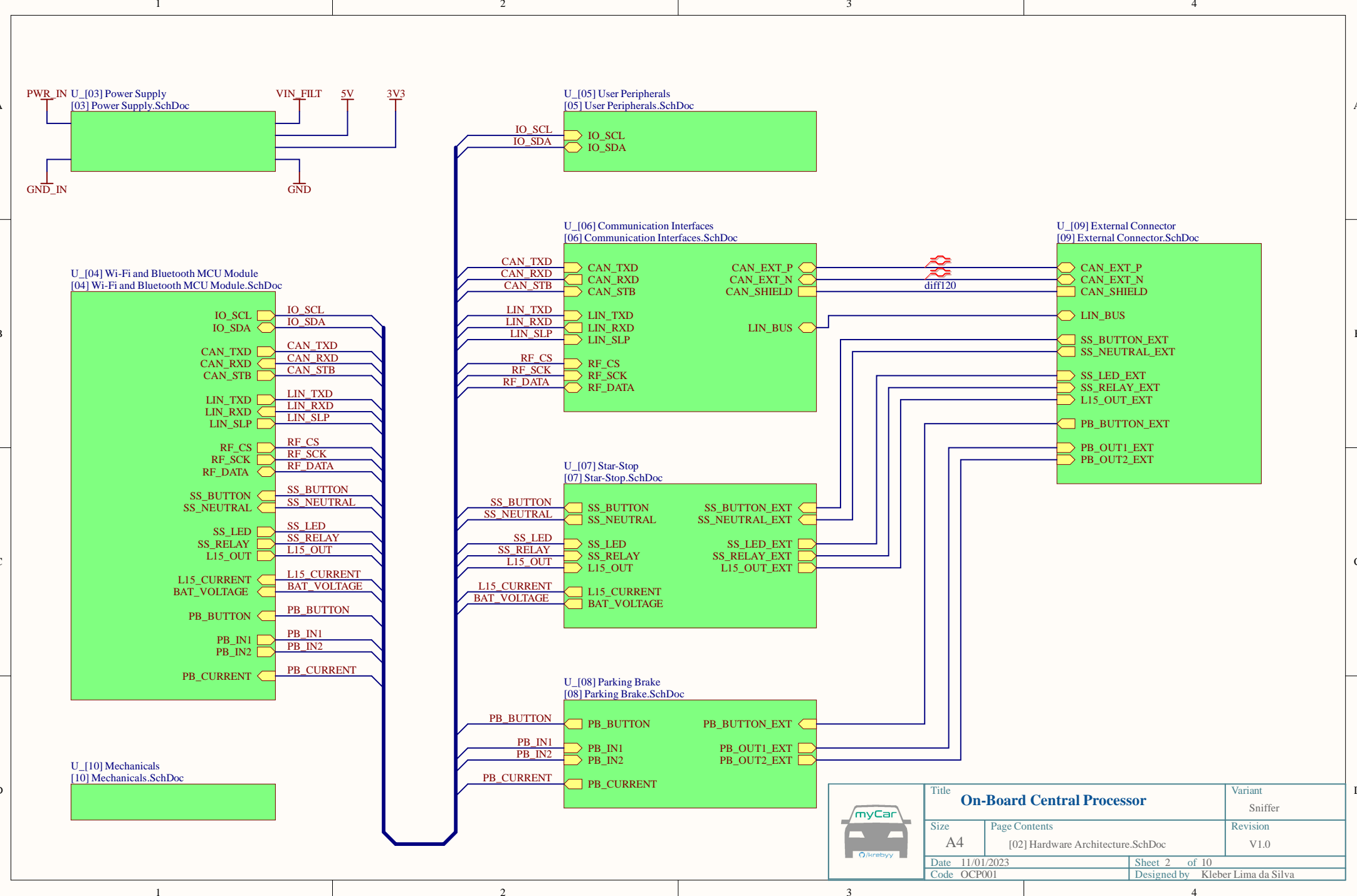
3.

4.

U_[02] Hardware Architecture

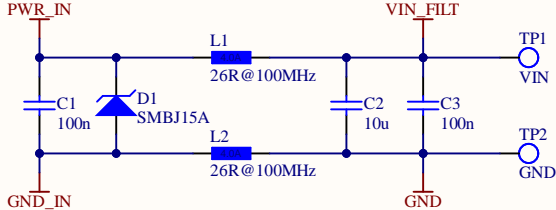
[02] Hardware Architecture.SchDoc

| | | |
|----------------------------|------------------------|----------------------------------|
| Title | | Variant |
| On-Board Central Processor | | Sniffer |
| Size | Page Contents | Revision |
| A4 | [01] Cover Page.SchDoc | V1.0 |
| Date | 11/01/2023 | Sheet 1 of 10 |
| Code | OCF001 | Designed by Kleber Lima da Silva |

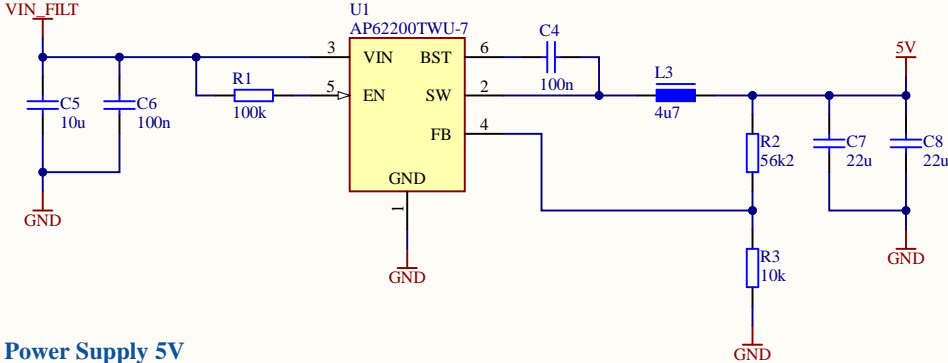


| | | |
|----------------------------|-----------------------------------|----------------------------------|
| Title | | Variant |
| On-Board Central Processor | | Sniffer |
| Size | Page Contents | Revision |
| A4 | [02] Hardware Architecture.SchDoc | V1.0 |
| Date | 11/01/2023 | Sheet 2 of 10 |
| Code | OCF001 | Designed by Kleber Lima da Silva |

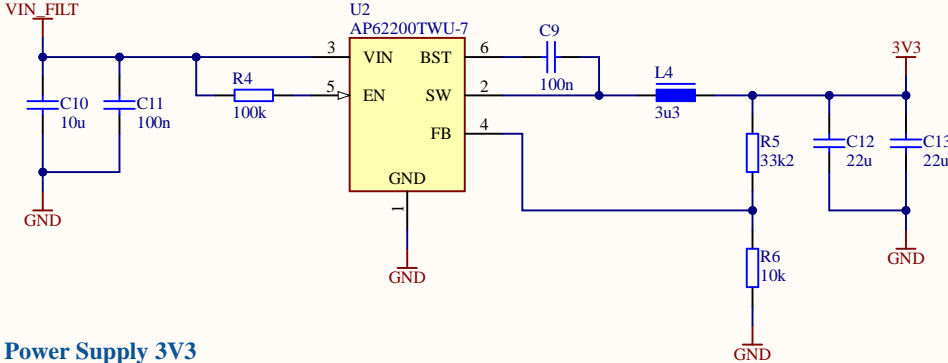
EMI Input Filter



Power Supply 5V

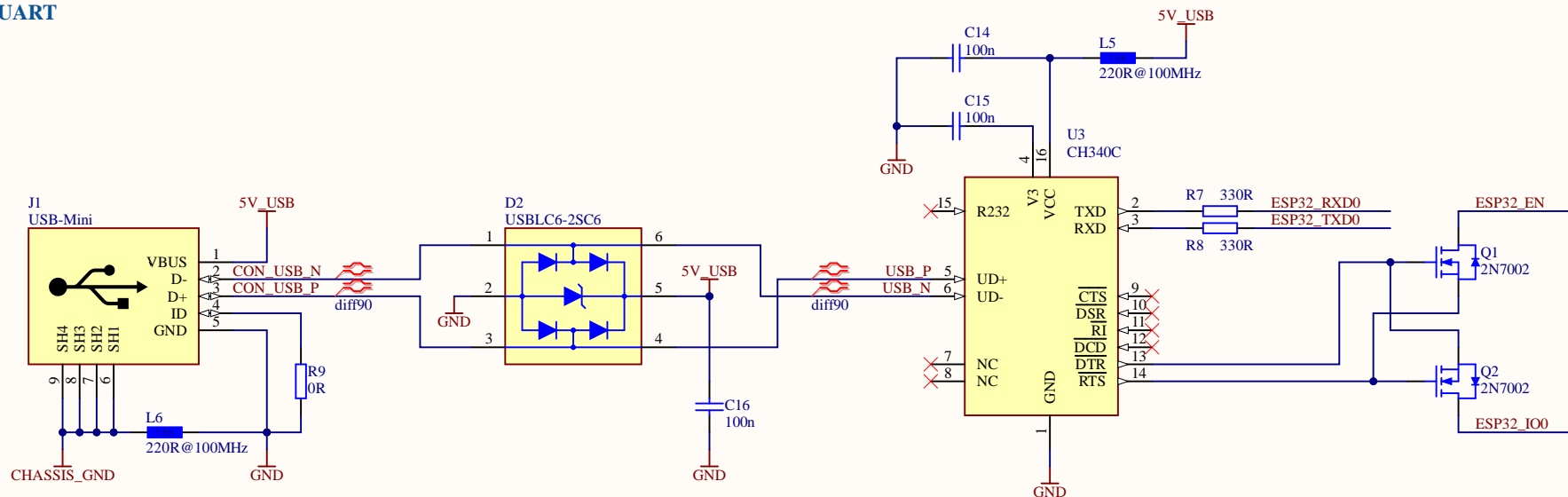


Power Supply 3V3

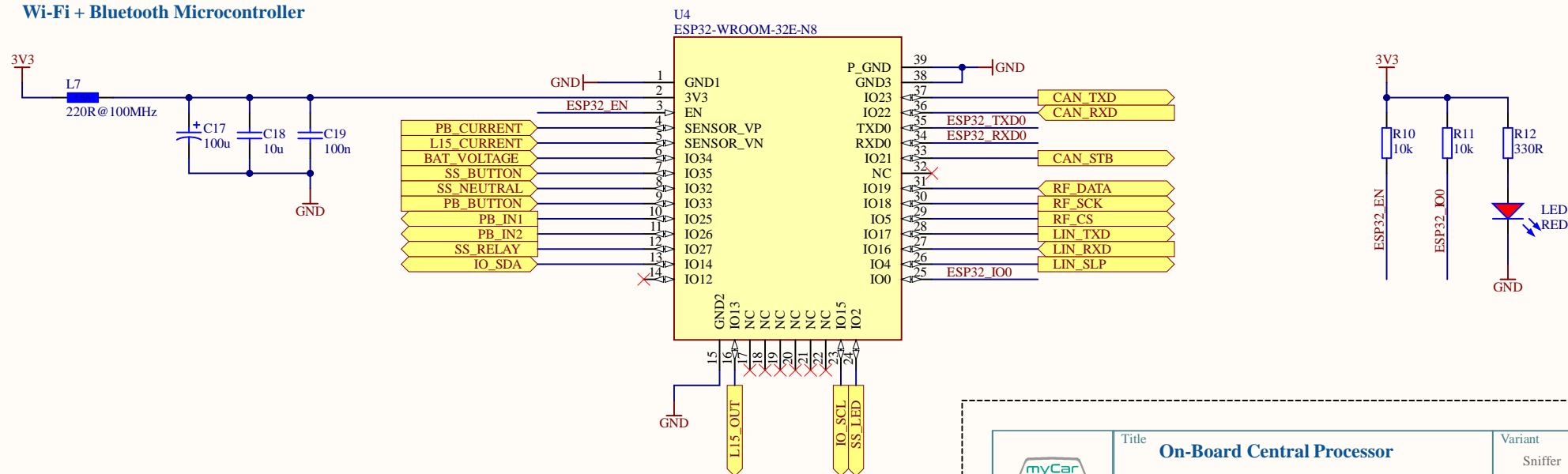



| | | |
|----------------------------|--------------------------|----------------------------------|
| Title | | Variant |
| On-Board Central Processor | | Sniffer |
| Size | Page Contents | Revision |
| A4 | [03] Power Supply.SchDoc | V1.0 |
| Date | 11/01/2023 | Sheet 3 of 10 |
| Code | OCP001 | Designed by Kleber Lima da Silva |

USB to UART

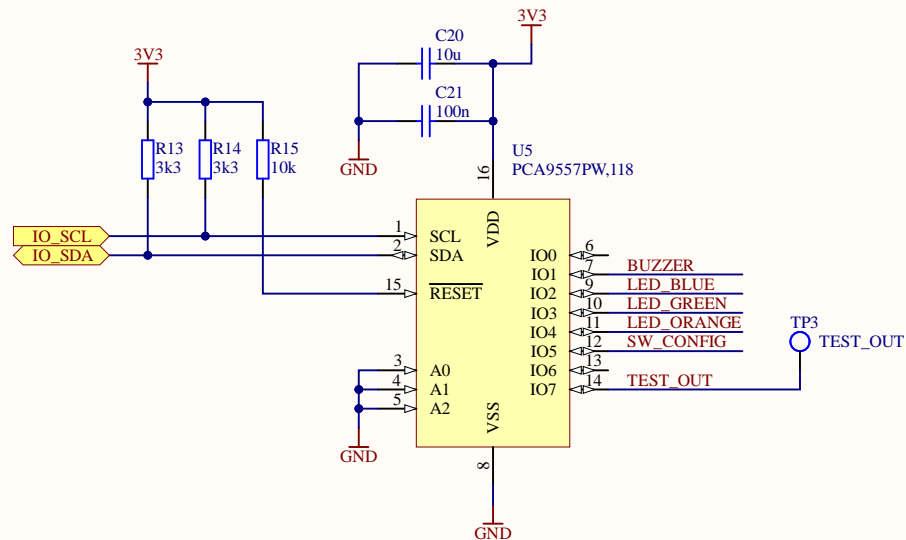


Wi-Fi + Bluetooth Microcontroller

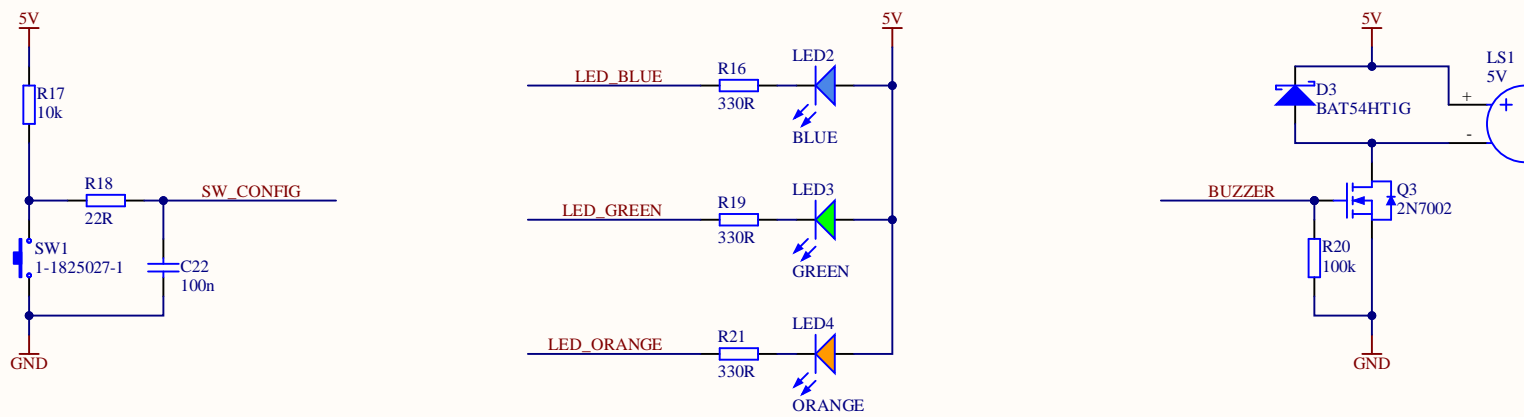



| | | | |
|---|--|---|-------------------------------------|
|  | Title On-Board Central Processor | | Variant Sniffer |
| | Size A4 | Page Contents [04] Wi-Fi and Bluetooth MCU Module.SchDoc | Revision V1.0 |
| Date 11/01/2023 | Sheet 4 of 10 | | Designed by Kleber Lima da Silva |
| Code OCP001 | | | |

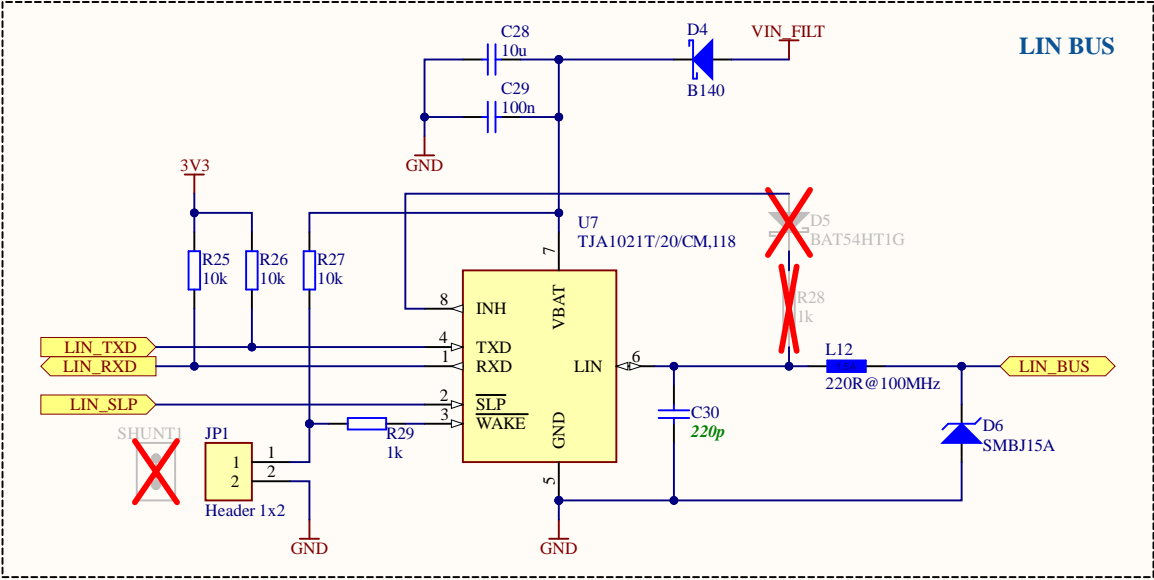
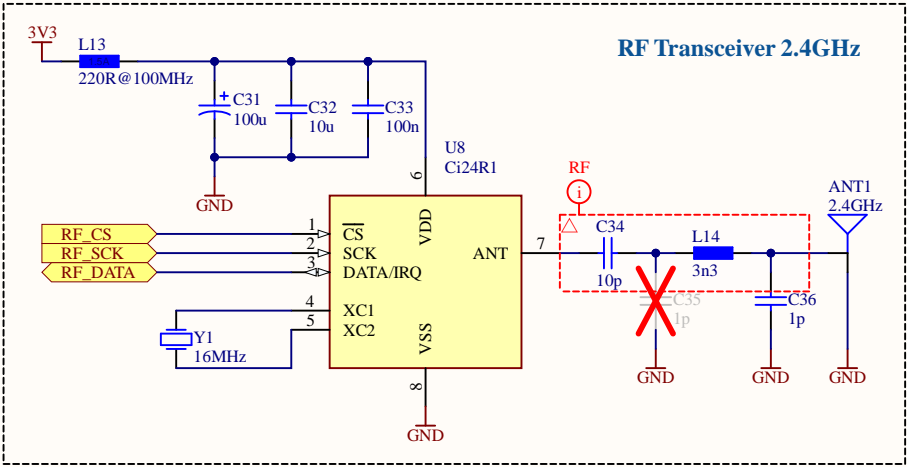
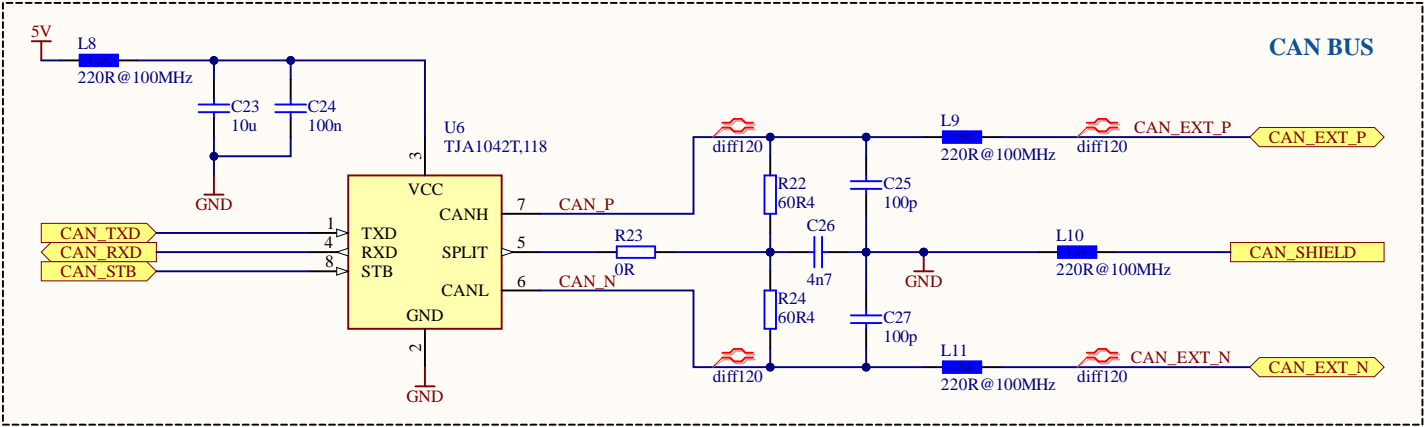
IO Expander




Peripherals

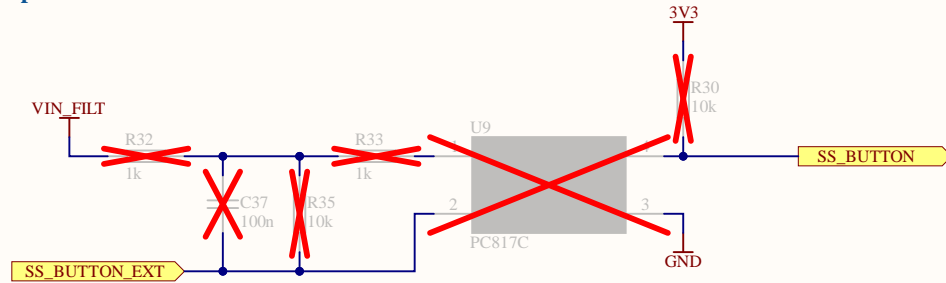


| | | | |
|---|--|---|--------------------|
|  | Title On-Board Central Processor | | Variant Sniffer |
| | Size A4 | Page Contents [05] User Peripherals.SchDoc | Revision V1.0 |
| | Date 11/01/2023 | Sheet 5 of 10 | |
| | Code OCP001 | Designed by Kleber Lima da Silva | |

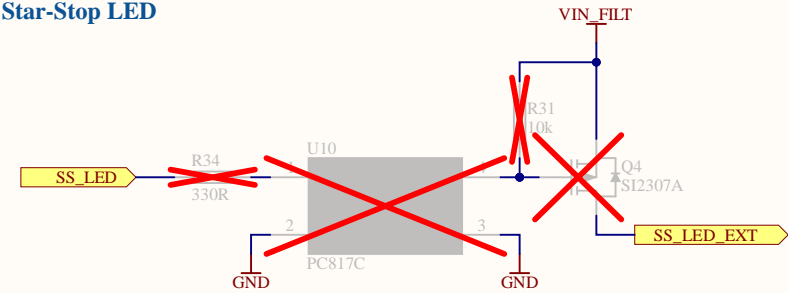


| | | | | |
|---|--|--|---|--------------------|
|  | | Title On-Board Central Processor | | Variant Sniffer |
| | | Size A4 | Page Contents [06] Communication Interfaces.SchDoc | Revision V1.0 |
| Date 11/01/2023 | | Sheet 6 of 10 | | |
| Code OCP001 | | Designed by Kleber Lima da Silva | | |

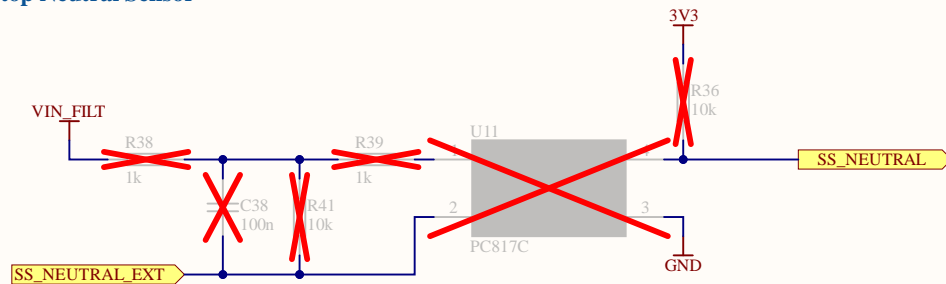
Star-Stop Button and LED



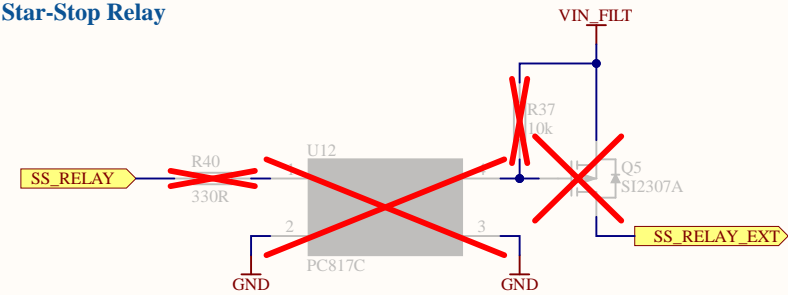
Star-Stop LED



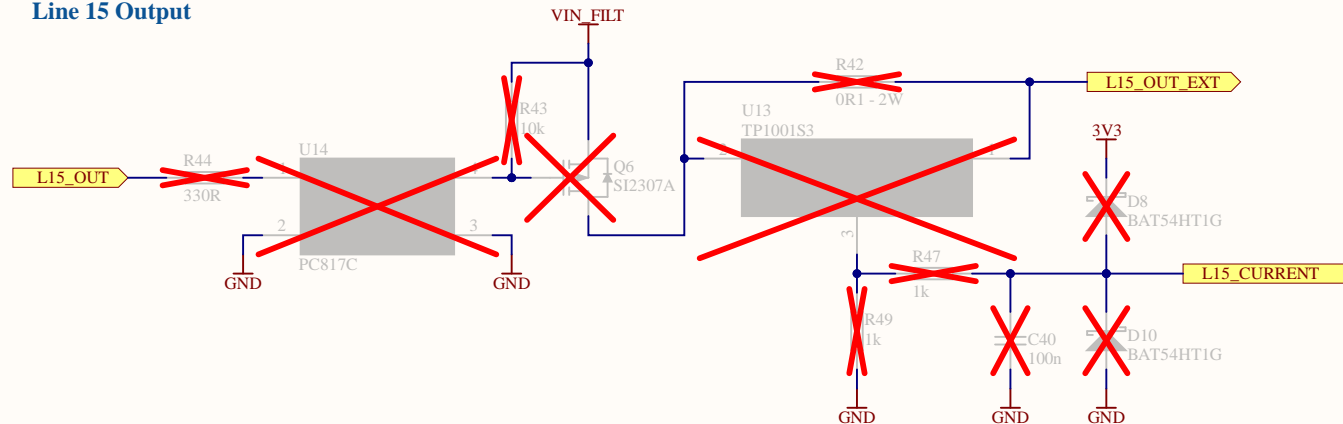
Star-Stop Neutral Sensor



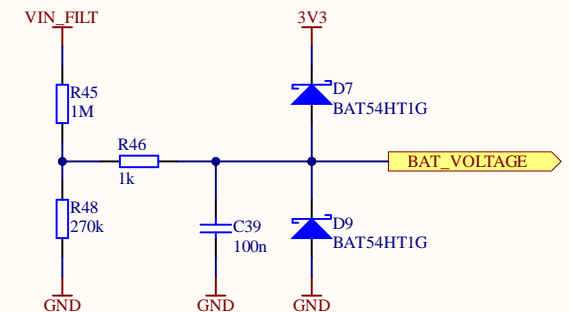
Star-Stop Relay



Line 15 Output

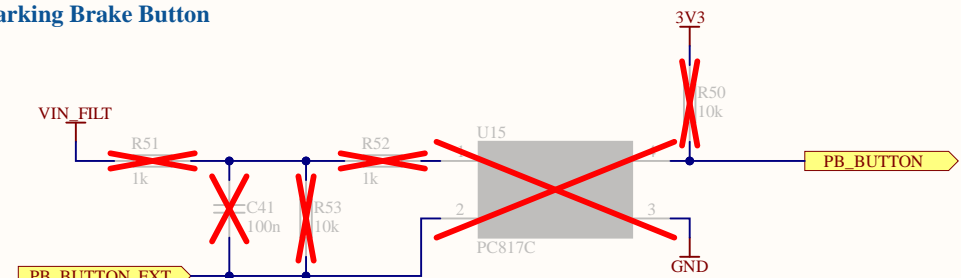


Battery Voltage

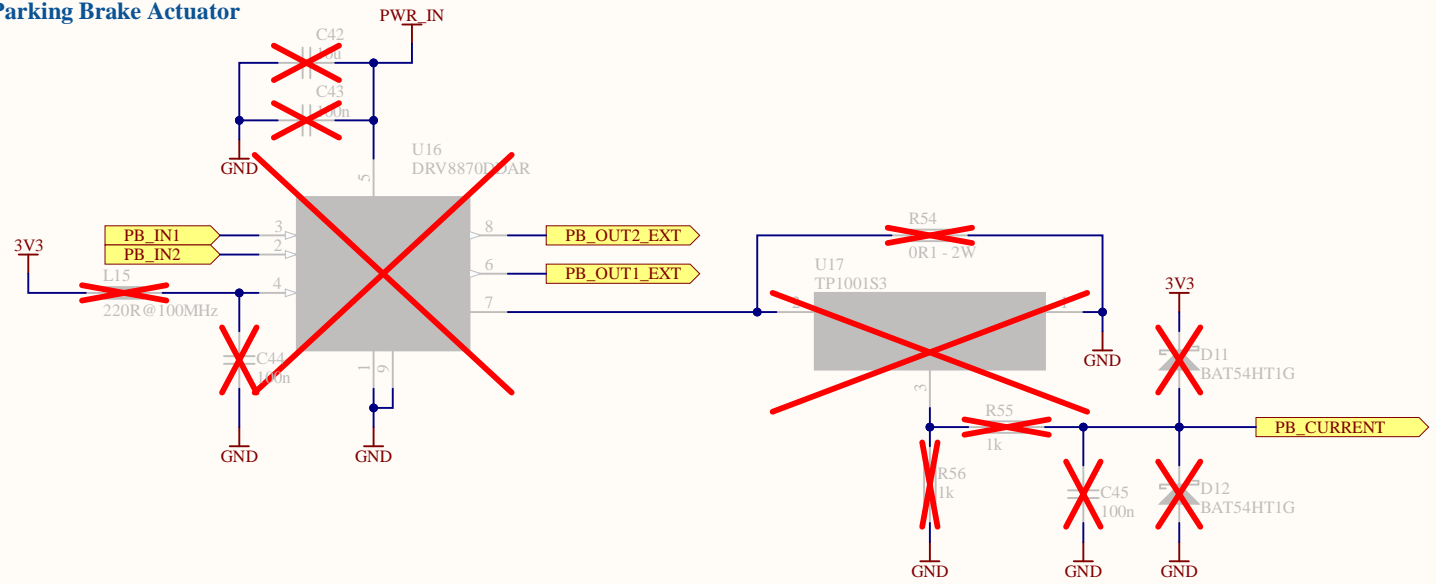



| | | | |
|---|---|--|---------------------------------------|
| <div> <div>Title</div> <div>On-Board Central Processor</div> </div> | | | <div>Variant</div> <div>Sniffer</div> |
| <div>Size</div> <div>A4</div> | <div>Page Contents</div> <div>[07] Star-Stop.SchDoc</div> | <div>Revision</div> <div>V1.0</div> | |
| <div>Date</div> <div>11/01/2023</div> | | <div>Sheet 7 of 10</div> | |
| <div>Code</div> <div>OCPO01</div> | | <div>Designed by</div> <div>Kleber Lima da Silva</div> | |

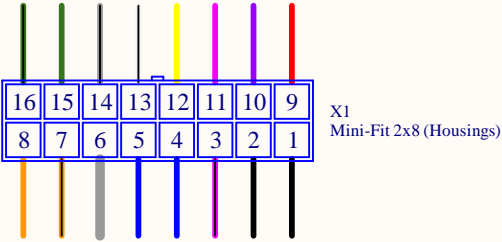
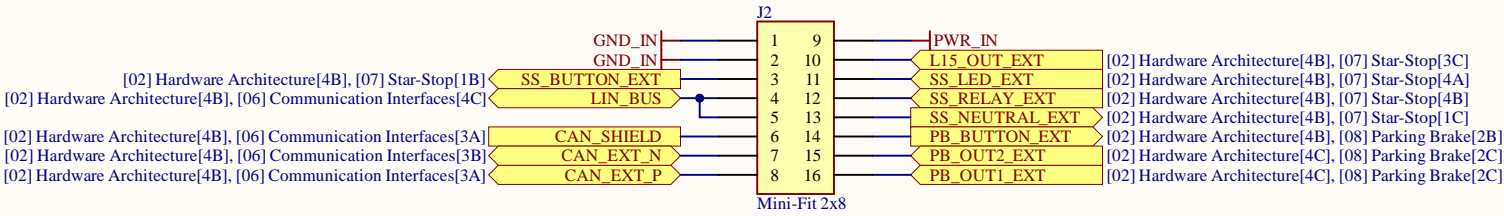
Parking Brake Button




Parking Brake Actuator

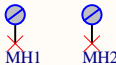


| | | | |
|---|----------------------------|----------------------------------|----------|
|  | Title | | Variant |
| | On-Board Central Processor | | Sniffer |
| | Size | Page Contents | Revision |
| | A4 | [08] Parking Brake.SchDoc | V1.0 |
| Date 11/01/2023 | | Sheet 8 of 10 | |
| Code OCP001 | | Designed by Kleber Lima da Silva | |



| | | | |
|---|--|---|----------------------------------|
|  | Title On-Board Central Processor | | Variant Sniffer |
| | Size A4 | Page Contents [09] External Connector.SchDoc | Revision V1.0 |
| | Date 11/01/2023 | | Sheet 9 of 10 |
| | Code OCP001 | | Designed by Kleber Lima da Silva |

Mounting Holes



Fiducials



PCB1
On-Board Central Processor PCB V1.0.PcbDoc

PCB
90 x 80 mm

CASE1
Multitoc Baby Slim

Case
145 x 105 x 55 mm



| | | |
|----------------------------|-------------------------|----------------------------------|
| Title | | Variant |
| On-Board Central Processor | | Sniffer |
| Size | Page Contents | Revision |
| A4 | [10] Mechanicals.SchDoc | V1.0 |
| Date | 11/01/2023 | Sheet 10 of 10 |
| Code | OCP001 | Designed by Kleber Lima da Silva |