

Karthik Raj

Sheet: /
File: sniffRF.kicad_sch

Title: sniffRF_900MHz

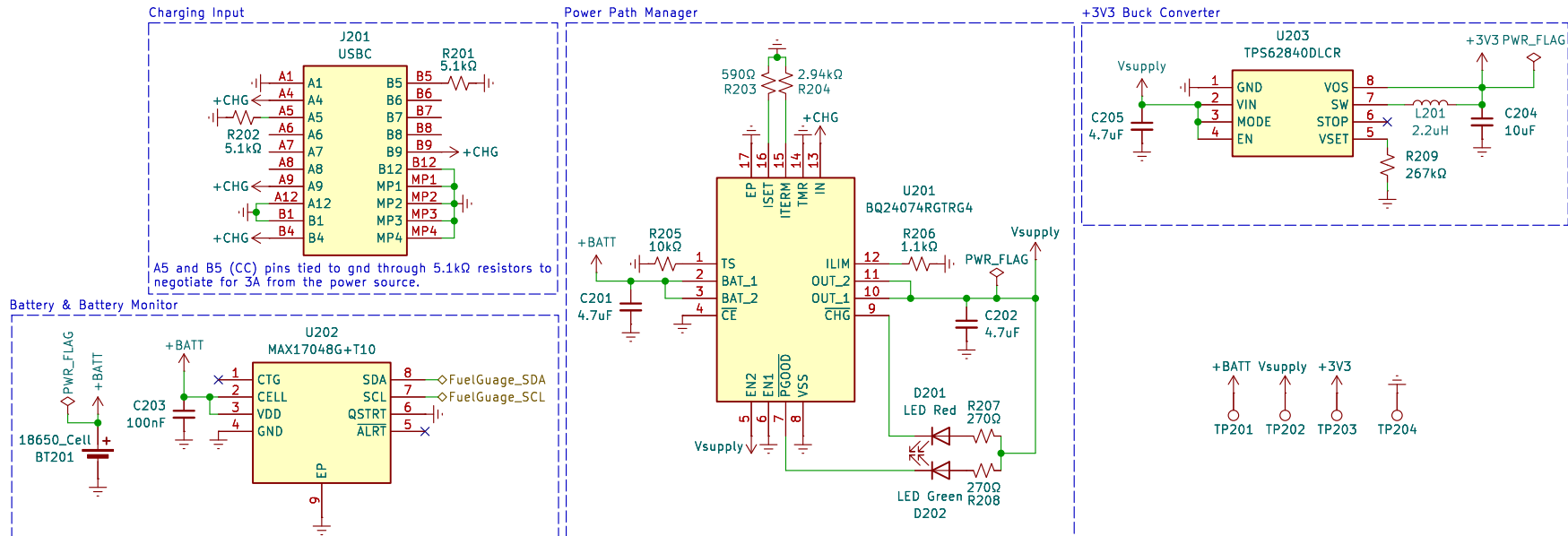
Size: A4

Date: 2025-11-02

Rev: 0

KiCad E.D.A. 9.0.2

Id: 1/5



Karthik Raj

Sheet: /Power/

File: power.kicad_sch

Title: sniffRF_900MHz

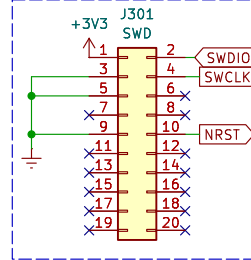
Size: A4

Date: 2025-11-02

Rev: 0

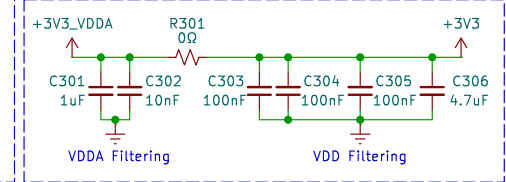
KiCad E.D.A. 9.0.2

Id: 2/5



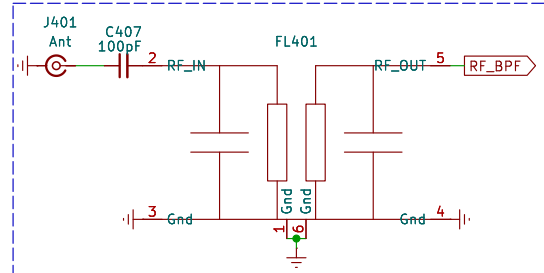
The diagram illustrates the STM32L053R8T6 microcontroller board with the following components and connections:

- Microcontroller:** STM32L053R8T6 (yellow chip).
- Power Supply:**
 - +3V3 and +3V3_VDDA connections.
 - VDD_USB and VSS_3 connections.
 - TP301 (Temperature Sensor) connected to VDDA.
- Crystal Oscillator:** Y301 (Crystal) connected to PC14 and PC15, with 20pF capacitors (C307, C308).
- Reset:** SW301 (Reset button) connected to NRST, with a 100nF capacitor (C309).
- Buzzer:** BZ301 (Buzzer) connected to PC8 through a 0Ω resistor (R306).
- Other Components:**
 - R302 (390Ω) connected to VDDA.
 - R304 and R305 (4.7kΩ) connected to I2C1_SDA and I2C1_SCL.
 - PA14 connected to OLED_Rst.

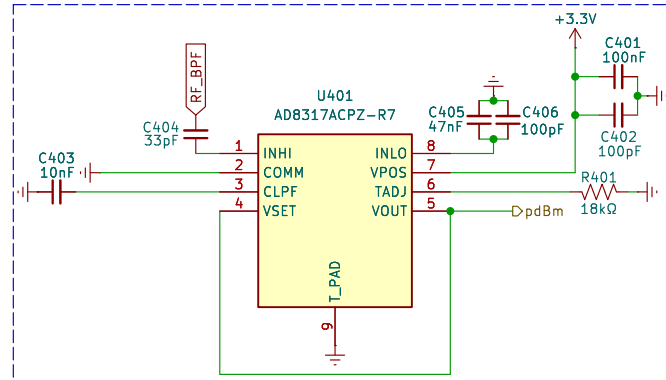


Id: 3/5

RF Signal Input and Filtering

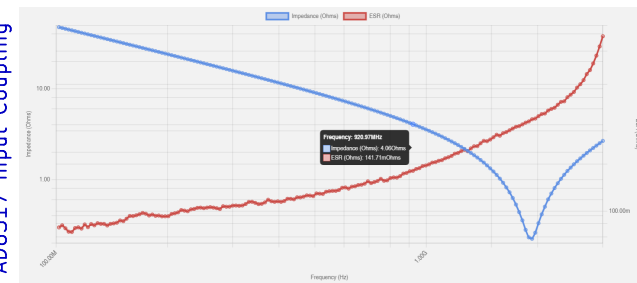


RSSI Detector



33pF Yageo CC0402JRNPO9BN330 Specs

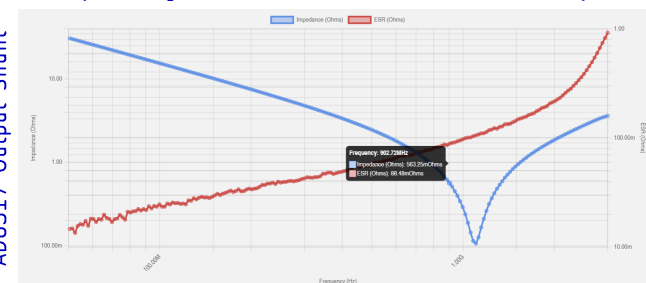
AD8317 Input Coupling



~4Ω Impedance at ~920Mhz, SRF at 1.93GHz

100pF Yageo CC0402JRNPO9BN101 Specs

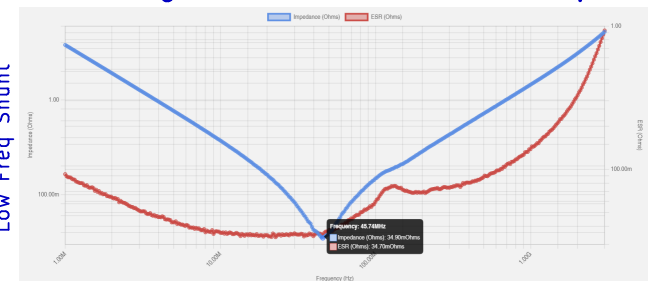
AD8317 Output Shunt



~0.563Ω Impedance at ~900Mhz, SRF at 1.08GHz

47nF Yageo CC0603KRX7R9BB473 Specs

AD8317 Output Low Freq Shunt



SRF at 48MHz

Karthik Raj

Sheet: /RF/

File: rf.kicad_sch

Title: sniffRF_900MHz

Size: A4

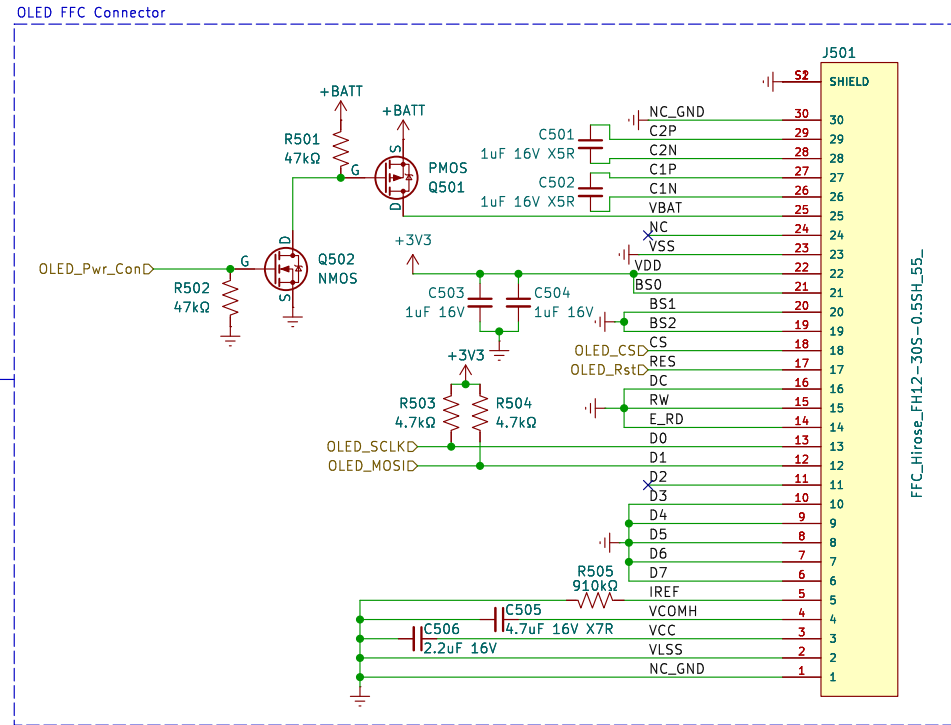
Date: 2025-11-02

Rev: 0

KiCad E.D.A. 9.0.2

Id: 4/5

OLED Module
Wisevision
N096-2864KSWEG01-H30
C2890596



Karthik Raj

Sheet: /UI/

File: ui.kicad_sch

Title: sniffRF_900MHz

Size: A4 Date: 2025-11-02

KiCad E.D.A. 9.0.2

Rev: 0

Id: 5/5