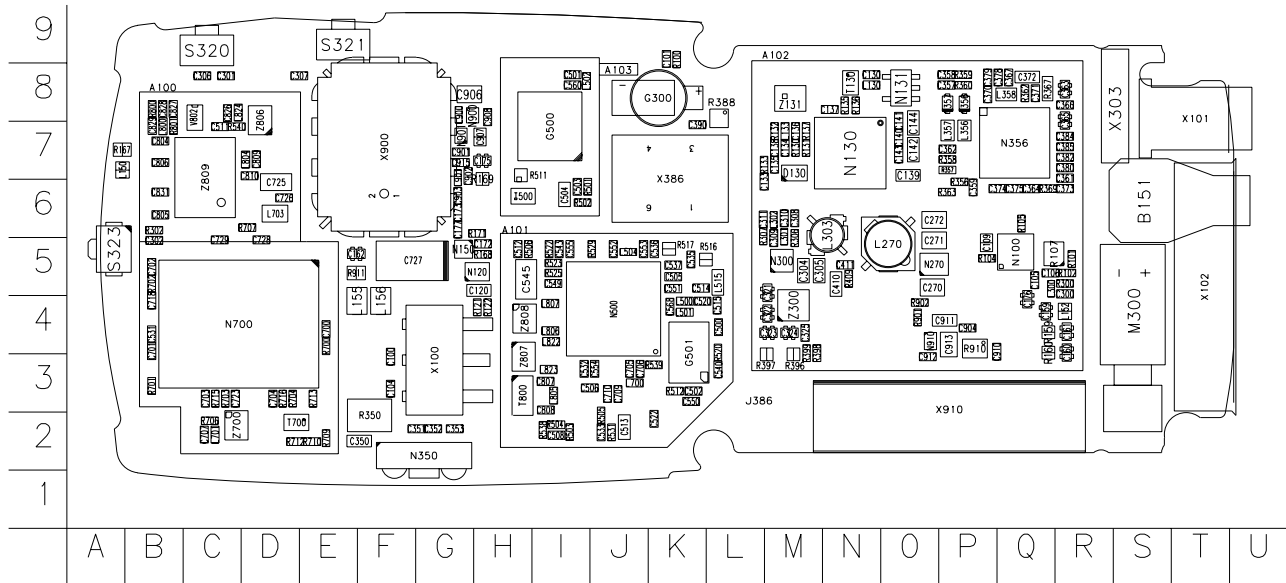


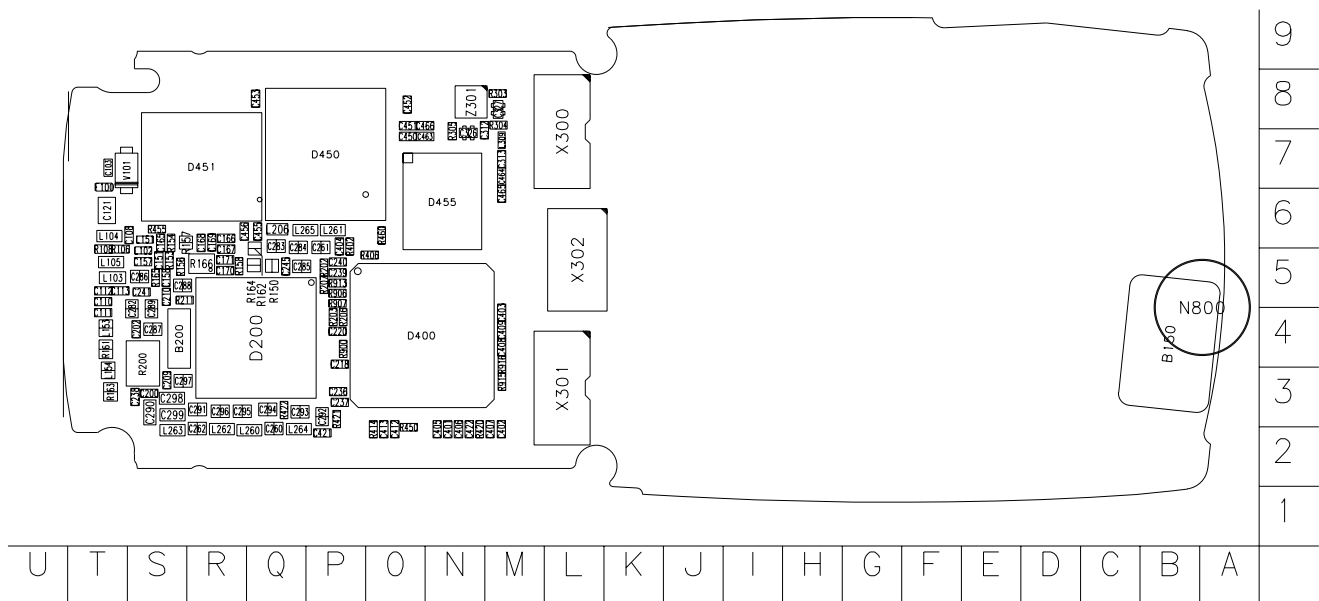
## Component layouts

The component layouts are shown in A3 format in the schematics section.

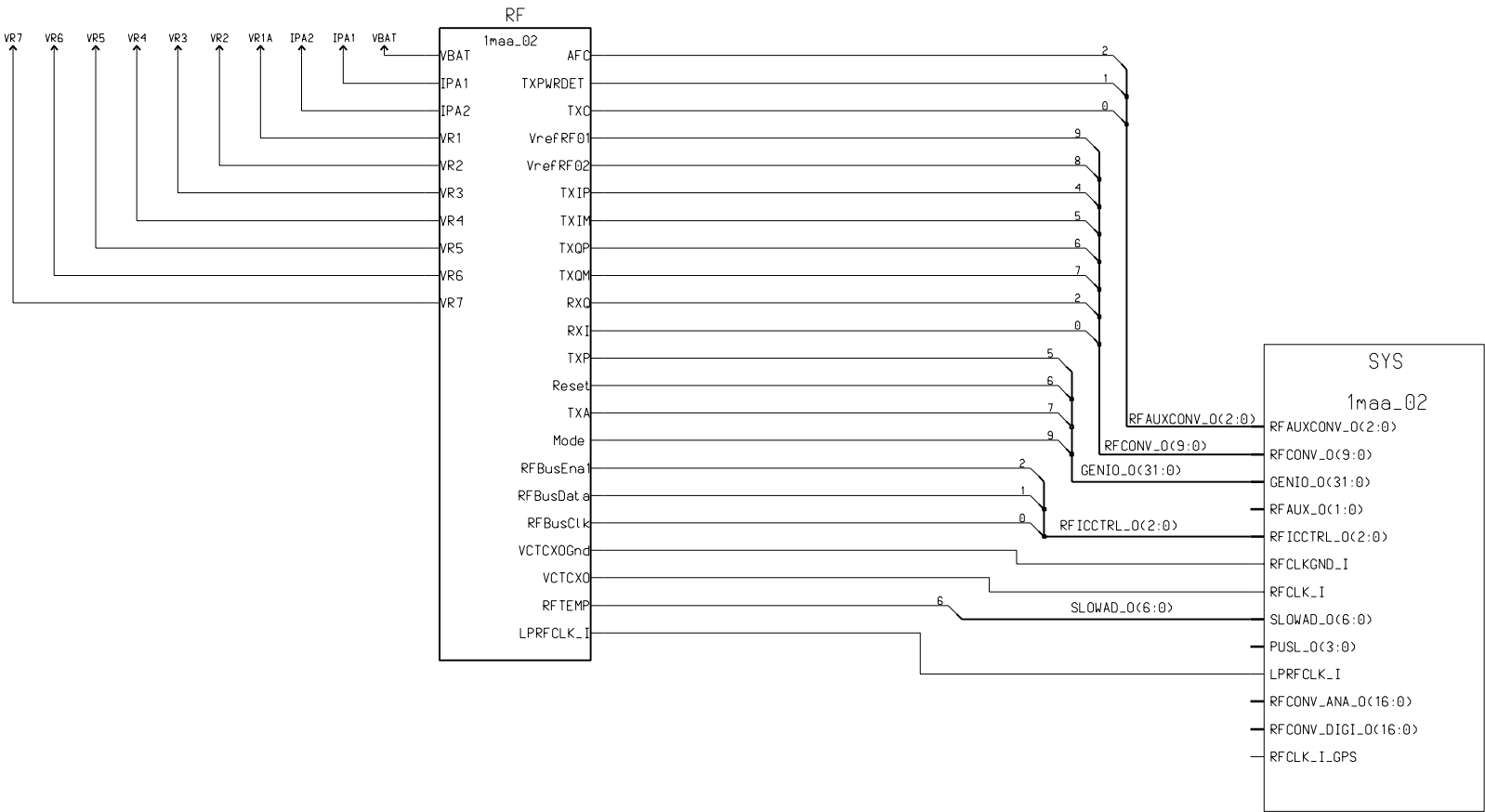
### ■ Component layout (top side), 1maa\_02



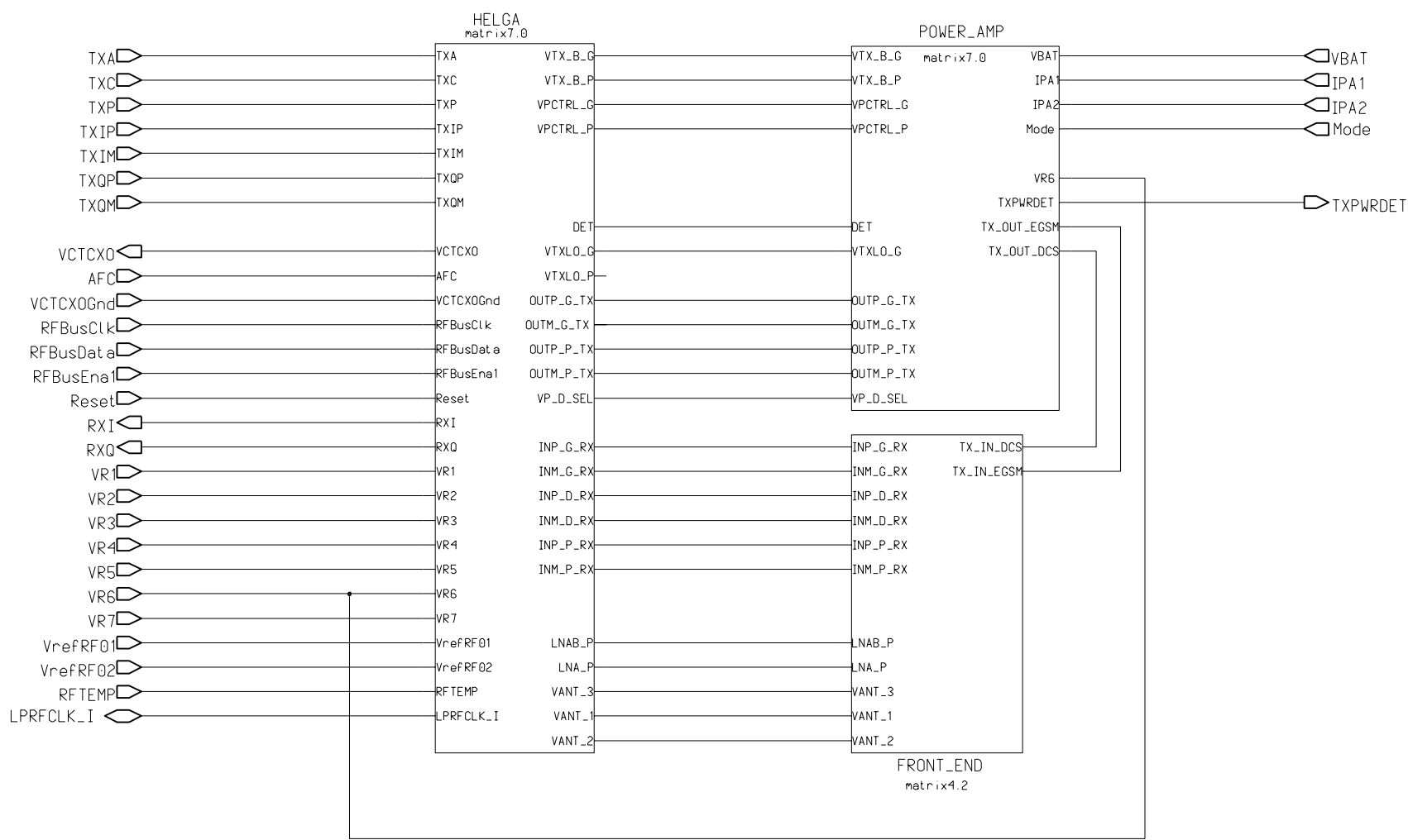
### ■ Component layout (bottom side), 1maa\_02



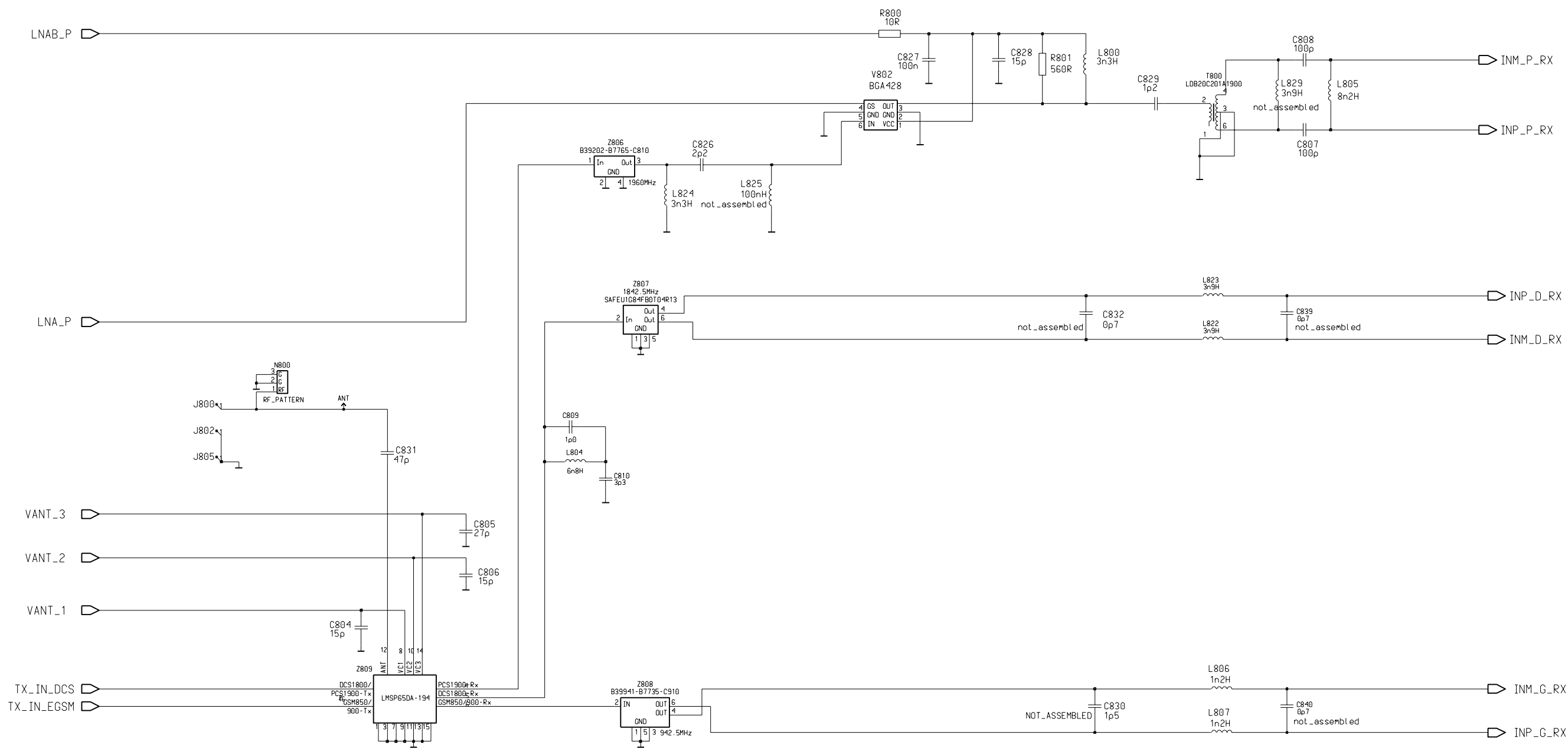
Top Level, 1maa\_02, v.0 ed. 40



RF Top Level,1maa\_02, v. 0.0 ed. 67



RX Front End and Antenna Switch, 1maa\_02, v. 0.0 ed. 79



Last references:

C840

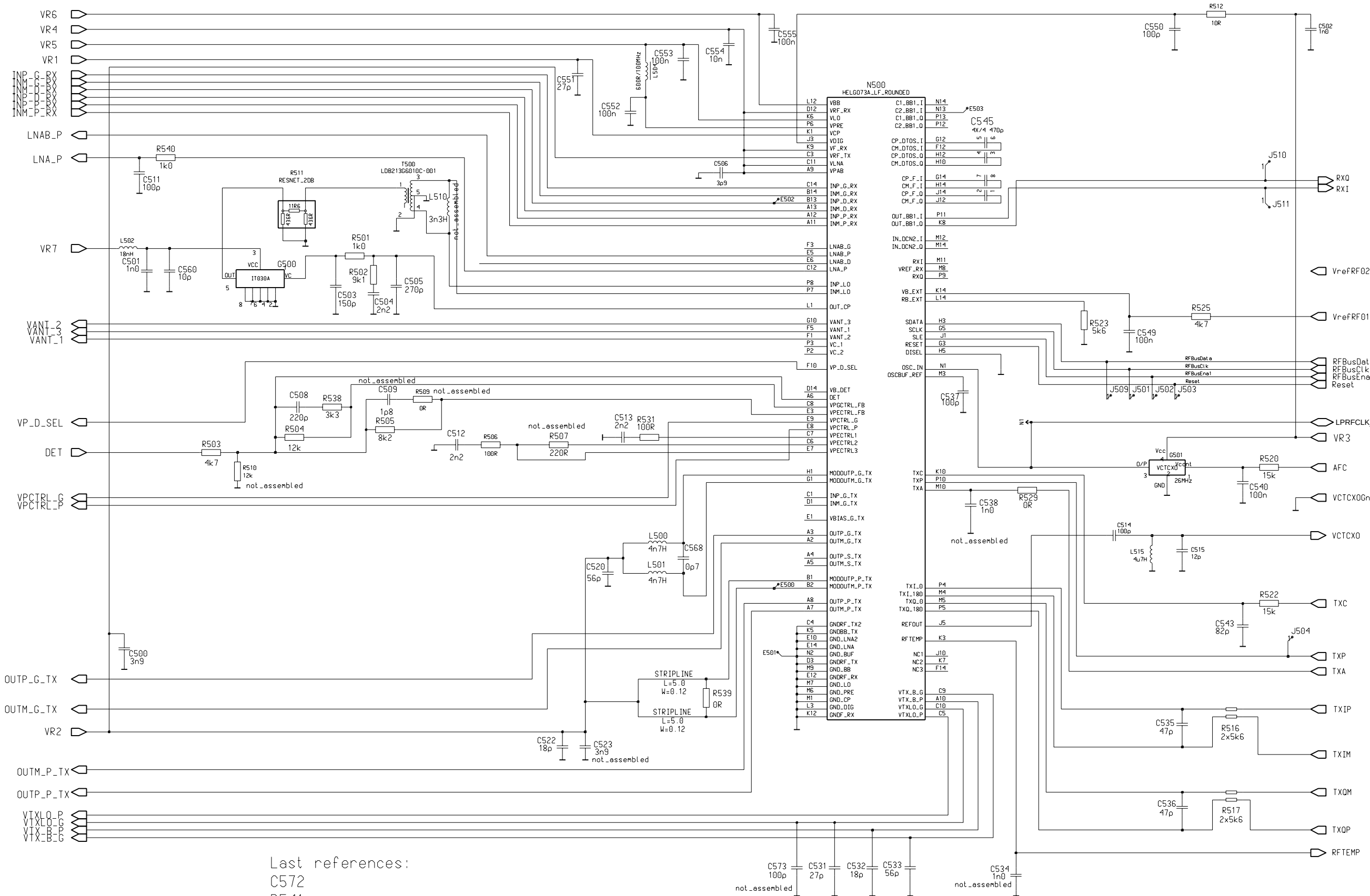
R807

L828

Z809

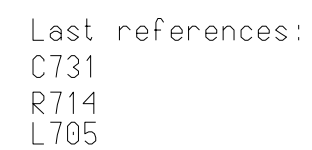
V800

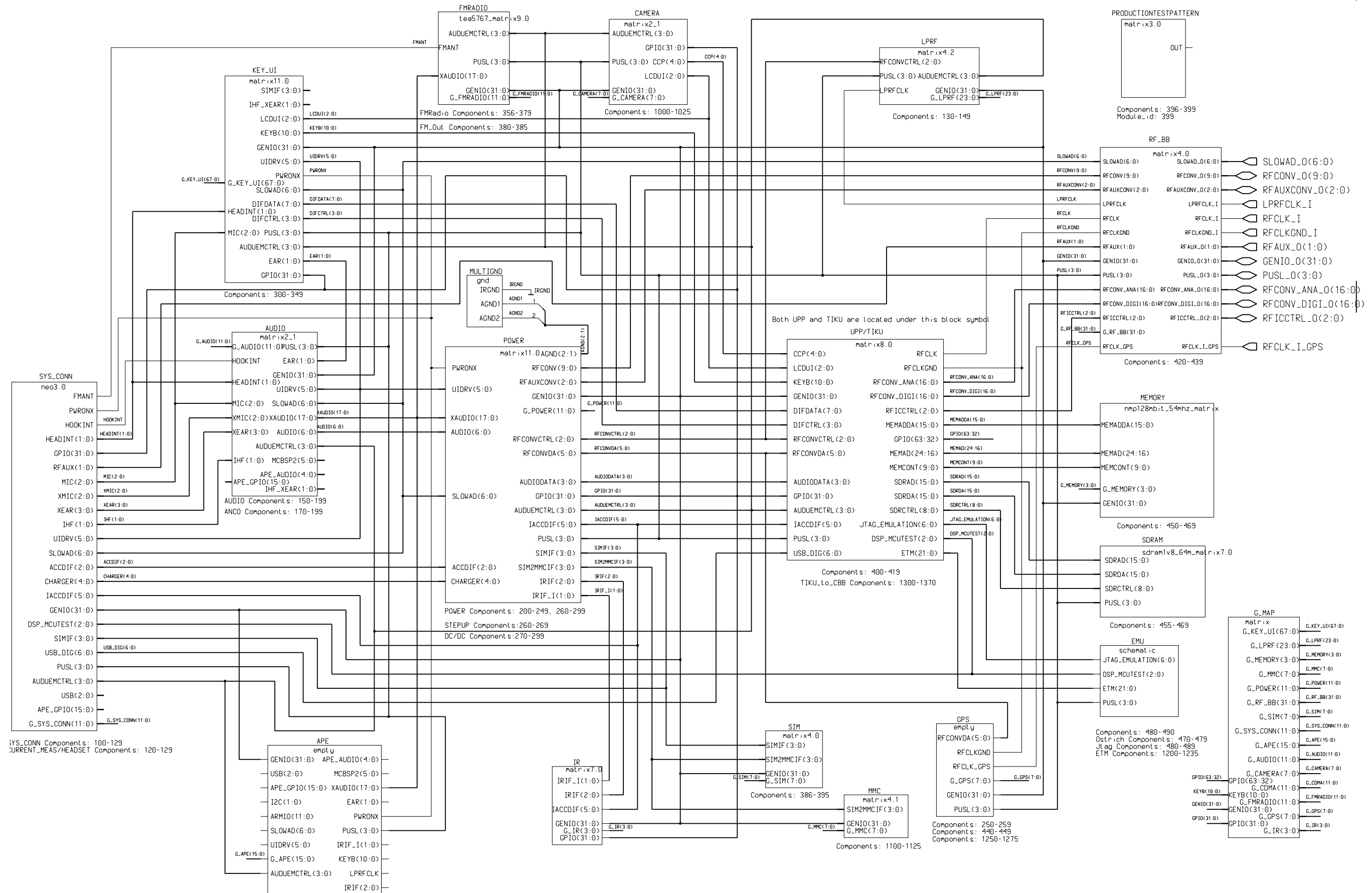
Last references:  
C572  
R541  
L511  
T501



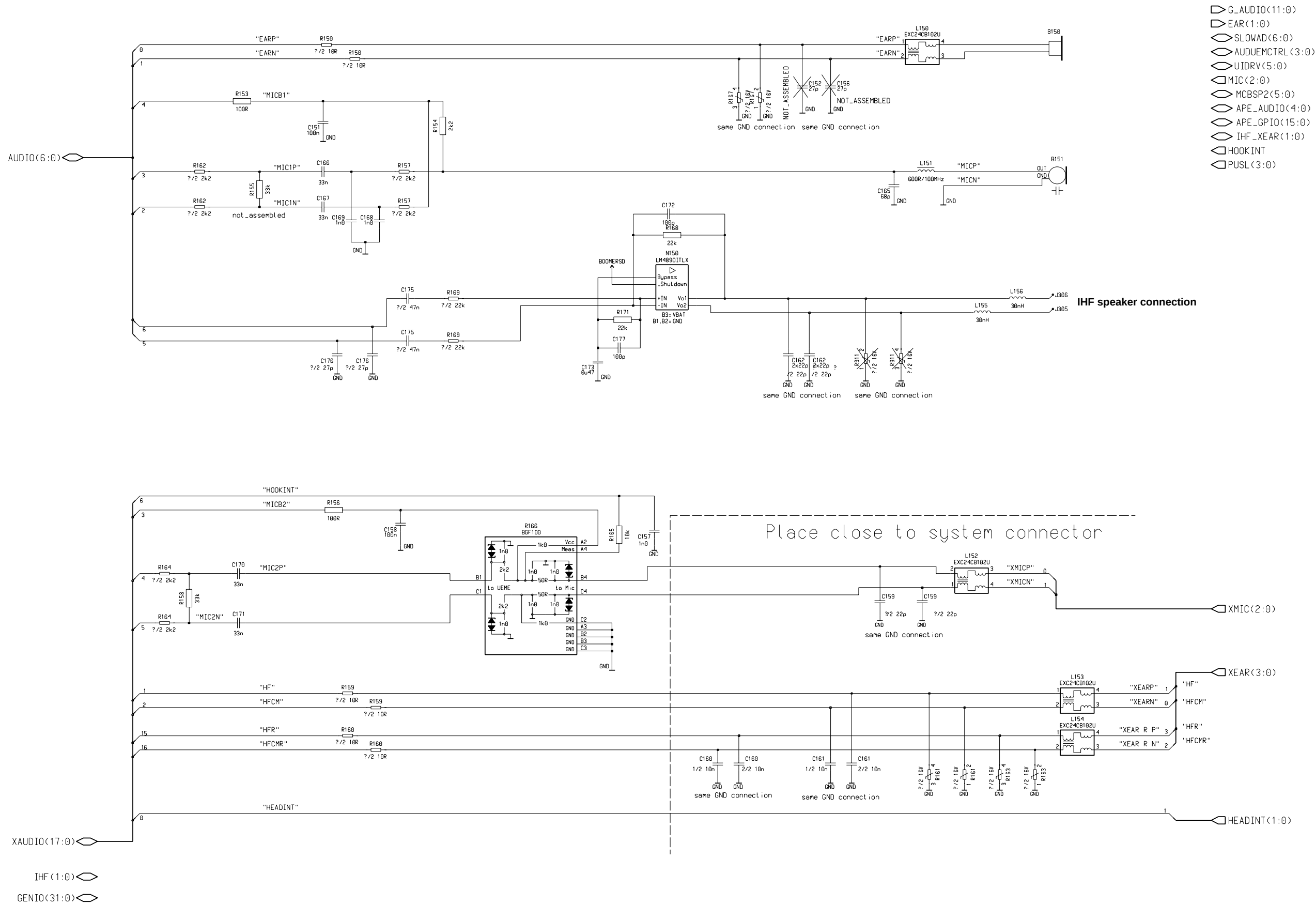
|                                                       |       |           |      |              |
|-------------------------------------------------------|-------|-----------|------|--------------|
| Copyright (C) Nokia Corporation. All rights reserved. | Name  | HELGA     | Appr | dd-mm-yy     |
|                                                       | Assoc | DE module | Des. | K1 21-Sep-06 |

## Schematics

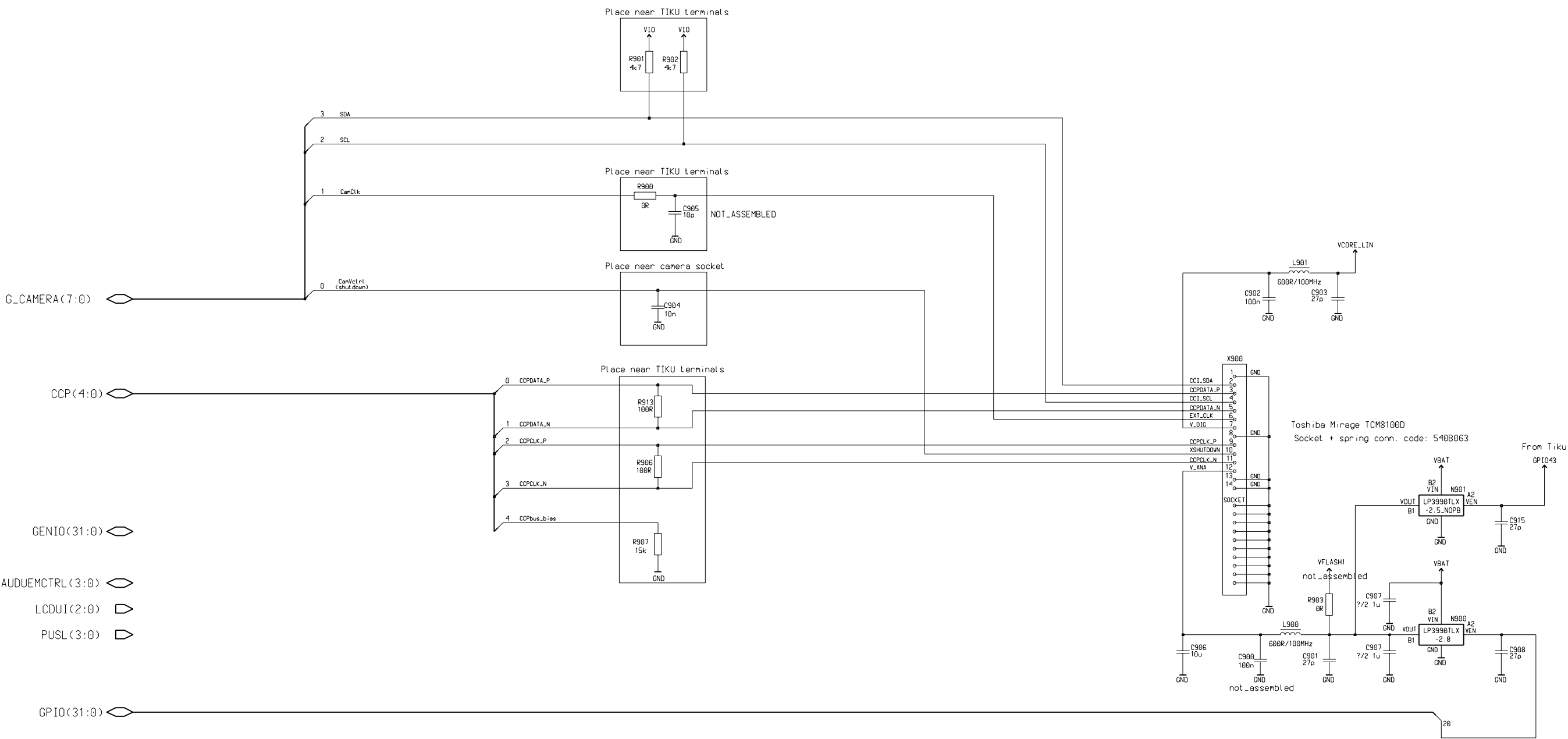




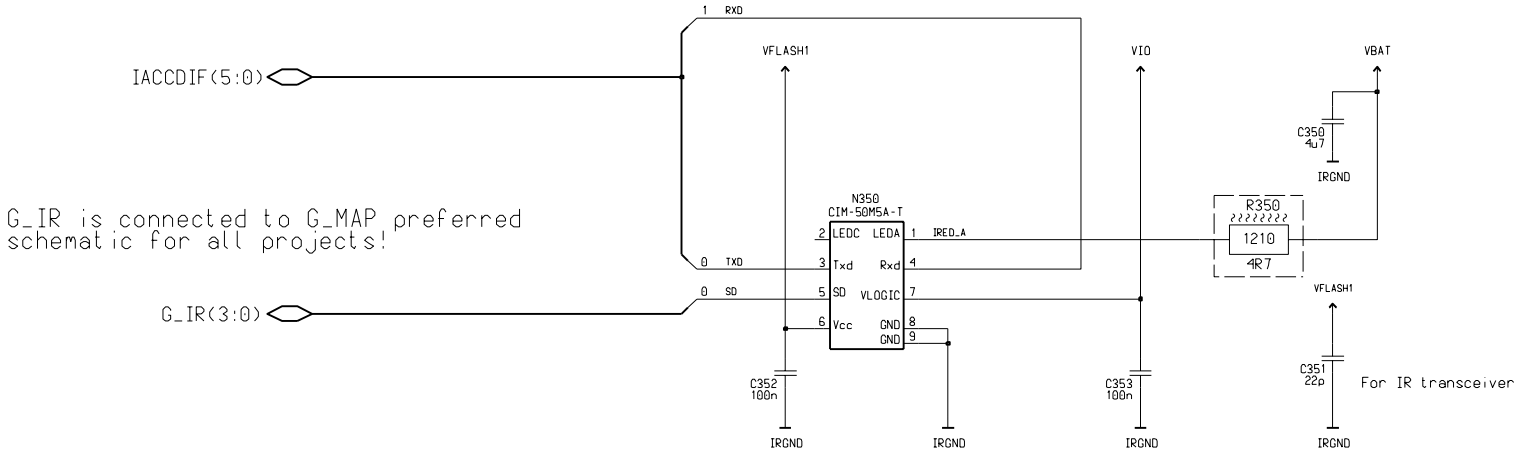
BR45 Audio, 1maa\_02, v. 1.6 ed. 190



Mirage 2 VGA Camera, 1maa\_02, v. 1.1 ed. 206

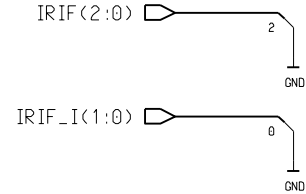


Citizen IR Module 1.8V, 1maa\_02, v. 6.1.8 ed. 56



GENIO(31:0)

GPIO(31:0)

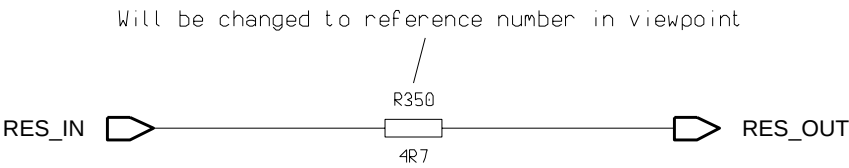


UEM IR level shifters  
are ground, when 1.8V  
IR is used!

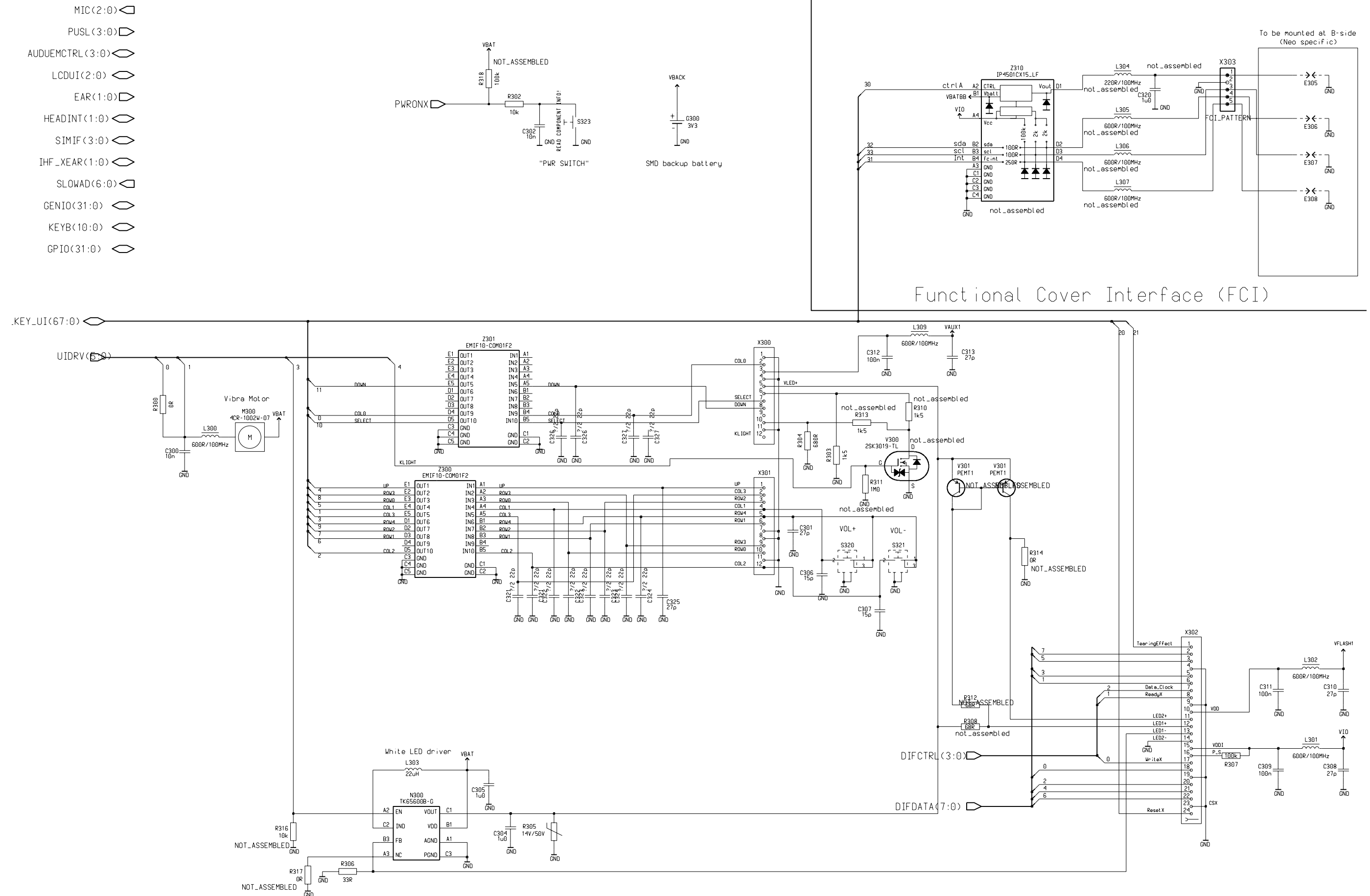
Used referenses

- C 350 - 353
- N 350
- R 350

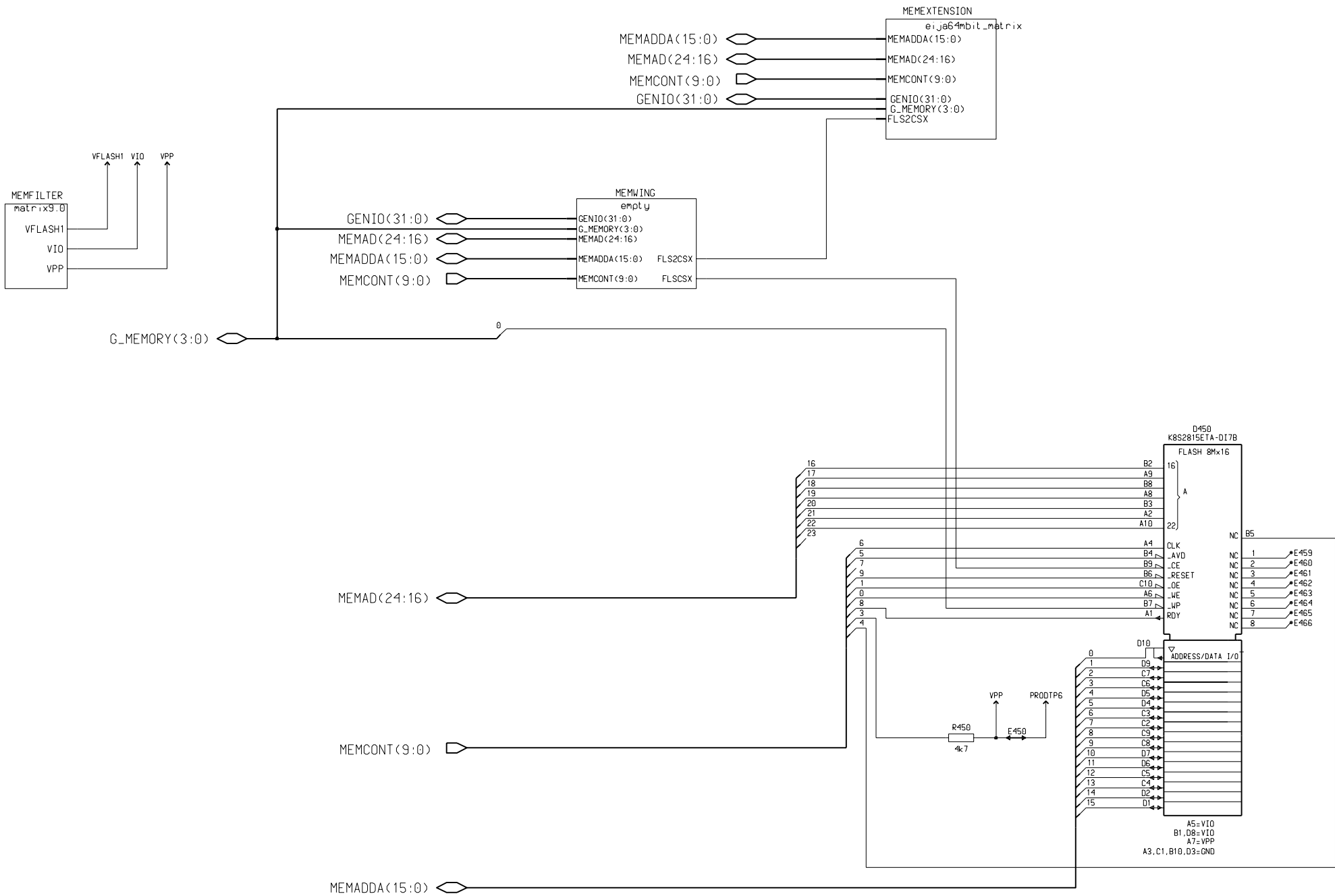
**IR Resistor 1210, 1maa\_02, v. 0 ed. 6**



**Key UI, 1maa\_02, v. 1 ed. 350**



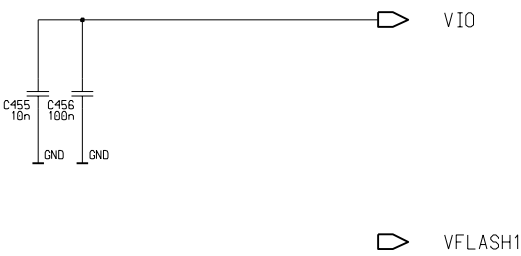
Flash Memory 128 Mbit, 1maa\_02, v. 2.0 ed. 81



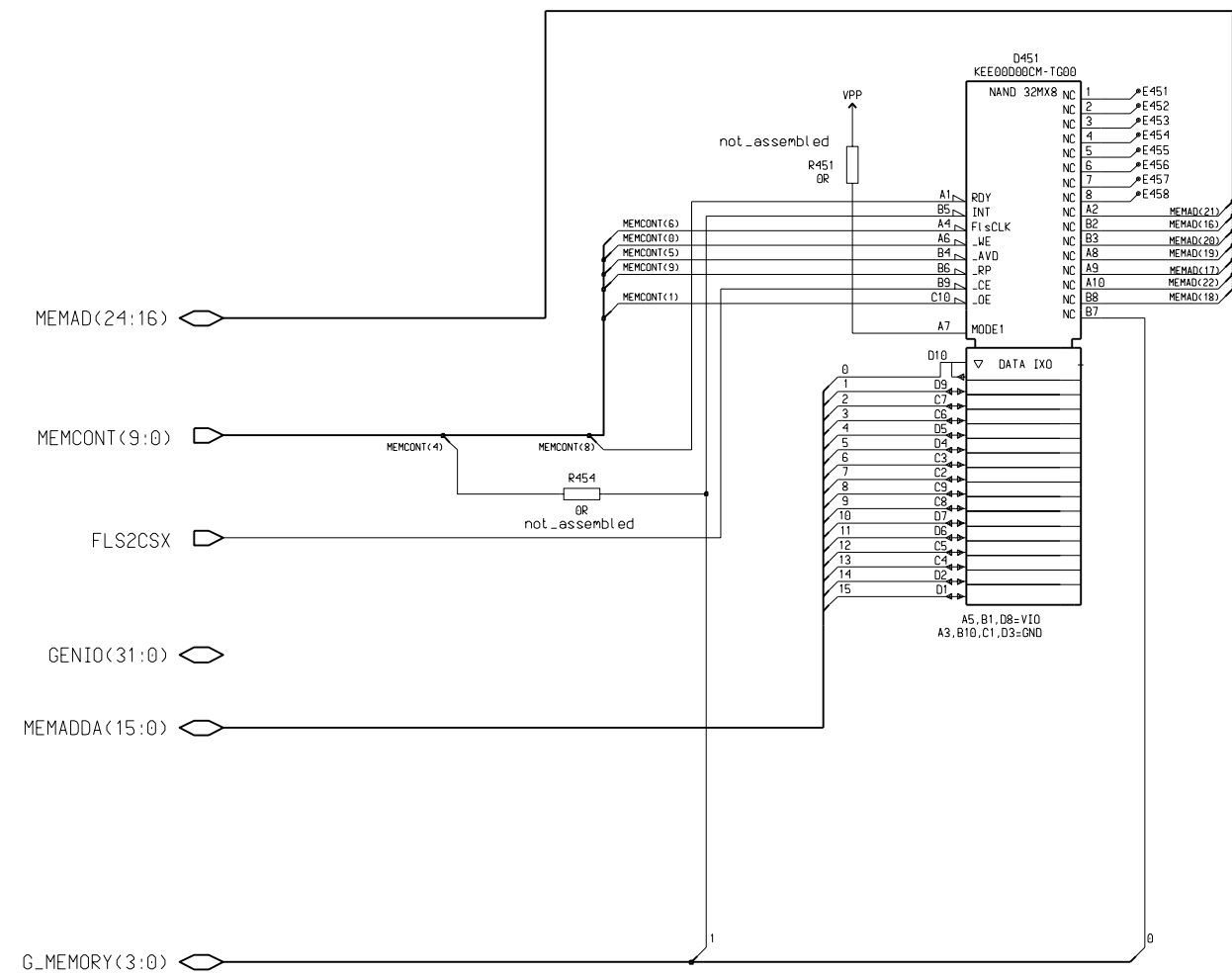
Decoupling capacitors for 1st flash



Decoupling capacitors for 2nd flash



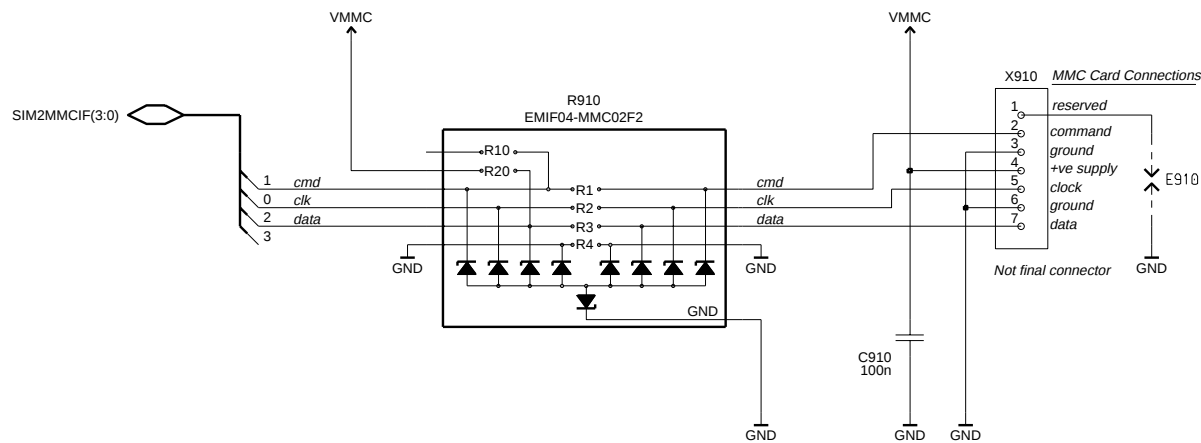
Flash Memory 64 Mbit NAND, 1maa\_02, v. 2.0 ed. 68



Resistors R451 and R454 are added into schematics to make it possible to replace NAND FLASH by NOR FLASH if necessary. Later when NAND FLASH will achieve more mature state, these resistors will be removed.

In case of NAND FLASH, memory pin A7 and B7 need to be n.c. on PWB. B5 need to be connected to GENIO(13) only.

MMC Interface, 1maa\_02, v. 2.1 ed. 80



NOTE: The MMC specification imposes the following impedance limits

Command pullup resistance 4.7k to 100k

Data pullup resistance 50k to 100k

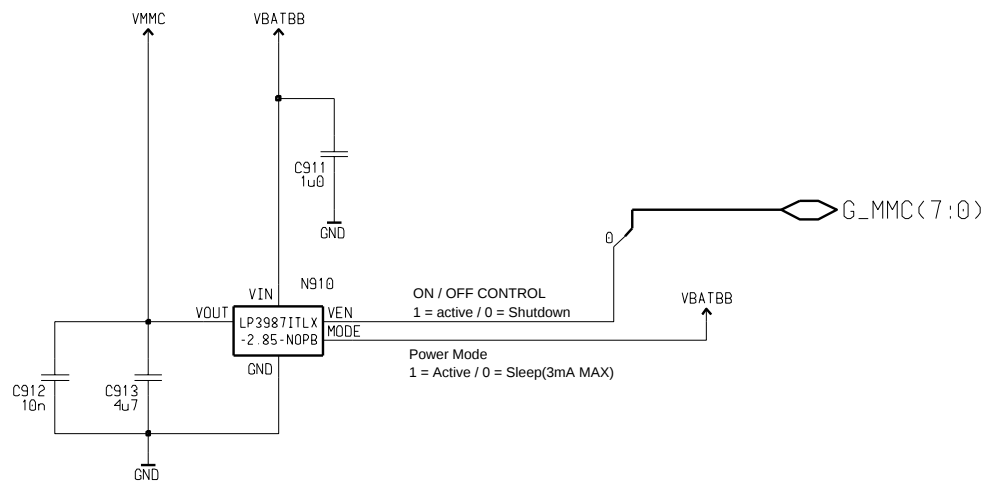
EMIF02-MMC R10=13k (therefore only suitable for command line)

EMIF02-MMC R20=56k (therefore only suitable for data line)

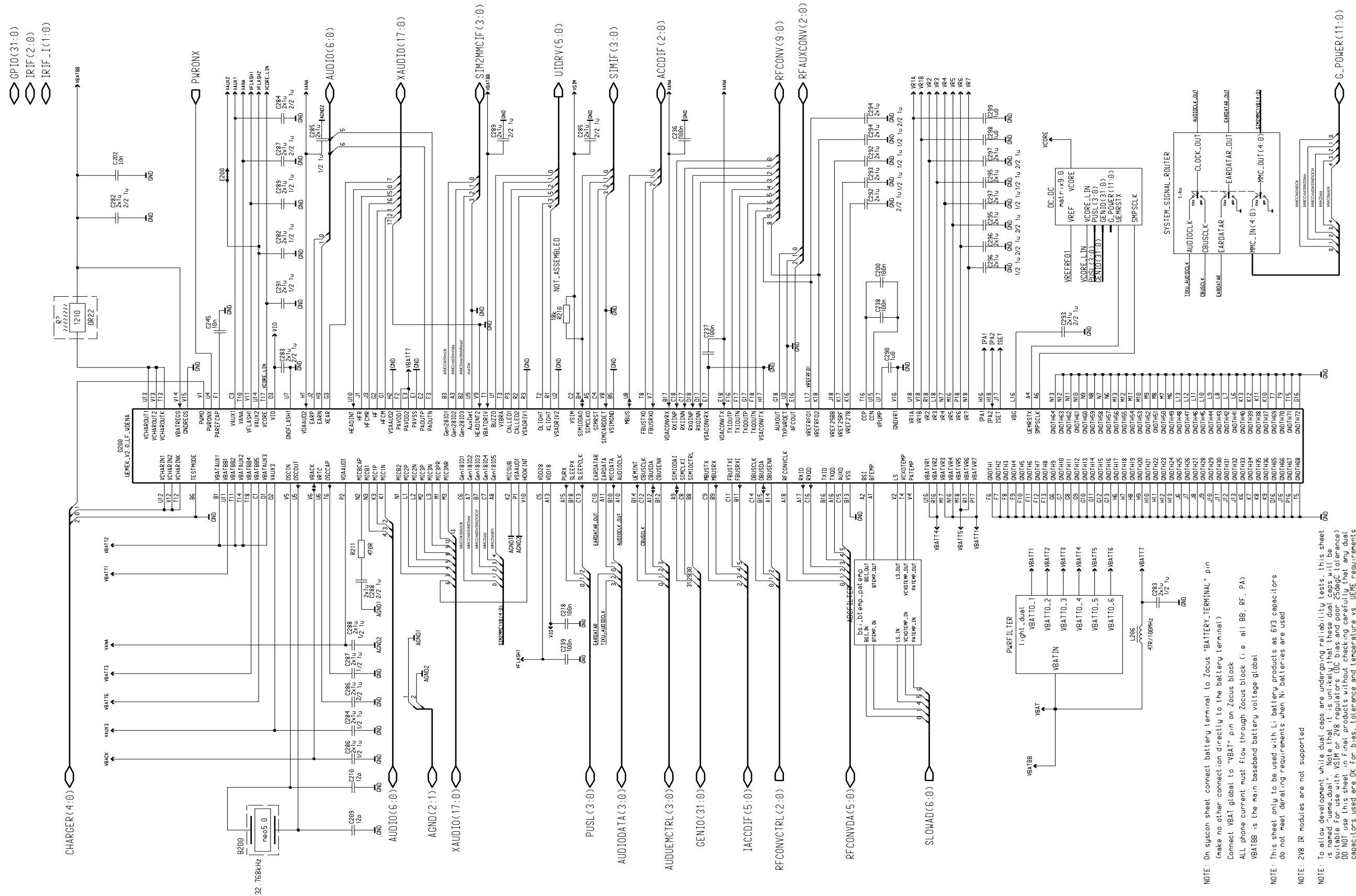
EMIF02-MMC R1/R2/R3/R4=47R

UEME includes a 13k pullup between GEN28IO2 (command) and VAUX1

so EMIF02-MMC R10 is left unconnected. UEME has no pullup on GEN28IO3 (MMC data)



UEME Power Management - Dual 1 uF 6V3 Capacitors, 1maa\_02, v. 1.0 ed. 321



NOTE: On syscon sheet connect battery terminal to Zocus "BATTERY\_TERMINAL" pin (make no other connect on directly to the battery terminal)

Connect VBAT<sub>global</sub> to "VBAT" pin on Zocus block

ALL phone current must flow through Zocus block (i.e. all BB, RF, PA)

VBAT<sub>BB</sub> is the main baseband battery voltage global

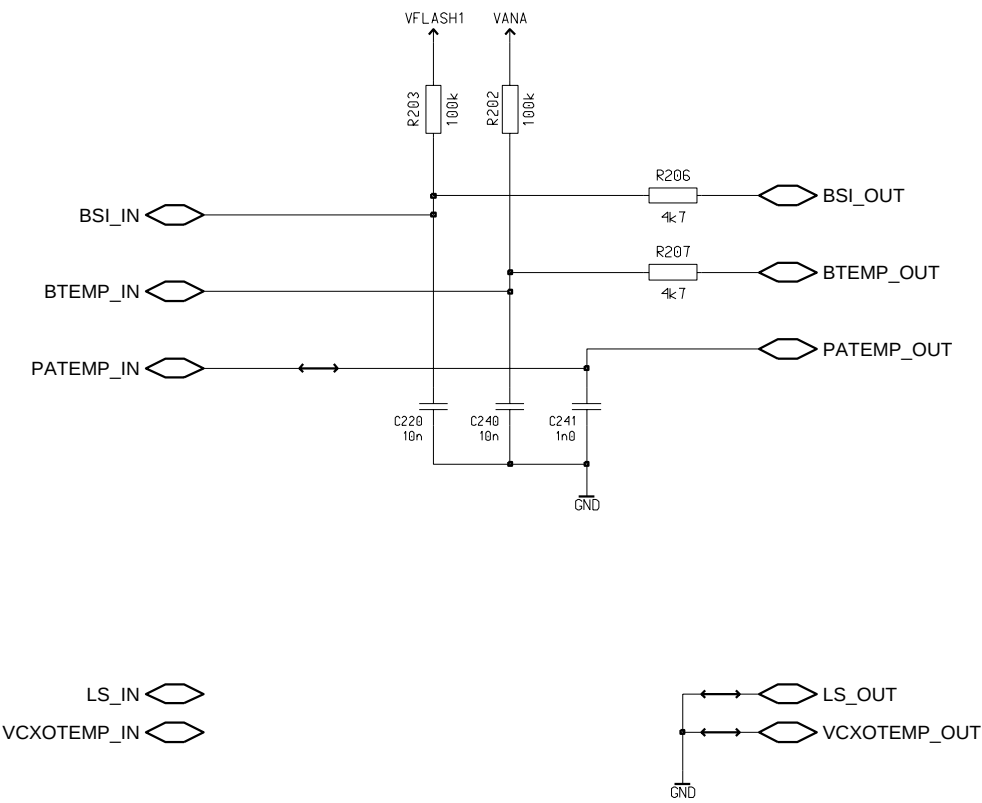
NOTE: This sheet only to be used with Li battery products as 5V3 capacitors do not meet derating requirements when Ni batteries are used

NOTE: 2V8 IR modules are not supported

NOTE: To allow development while dual caps are undergoing reliability tests, this sheet is being implemented with the dual caps. This sheet does not replace the design and test plan. Connect with VSM or 2V8 regulators (DC bias and tolerance)

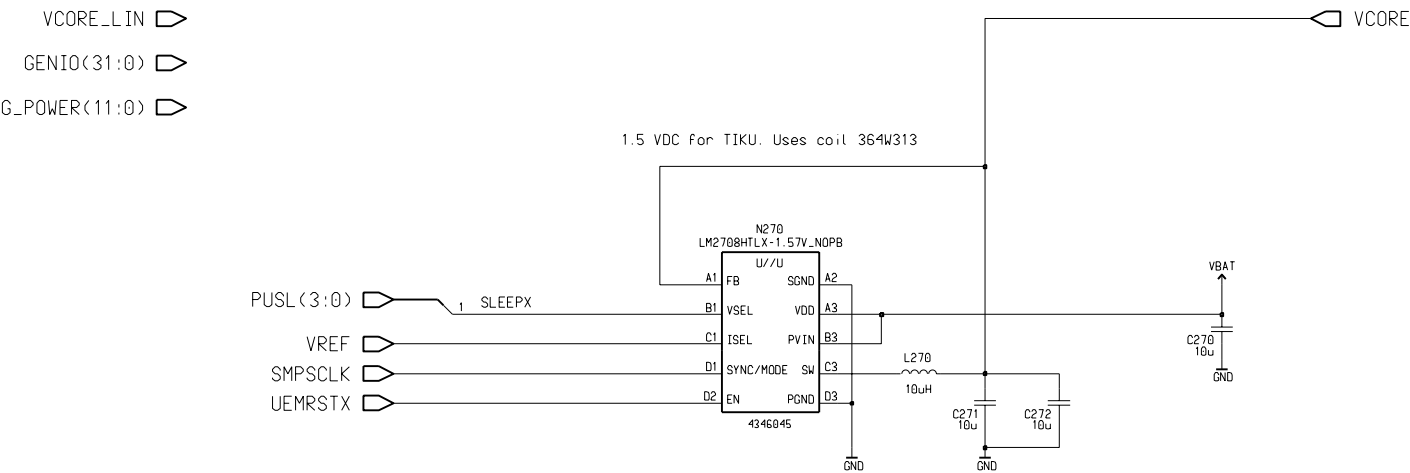
DO NOT use this sheet in final products without checking carefully that any dual capacitors used are OK for bias, tolerance and temperature vs. UEME requirements

UEME ADC Filter Block - BSI, BTEMP and Active PATEMP, 1maa\_02, v. 1.0

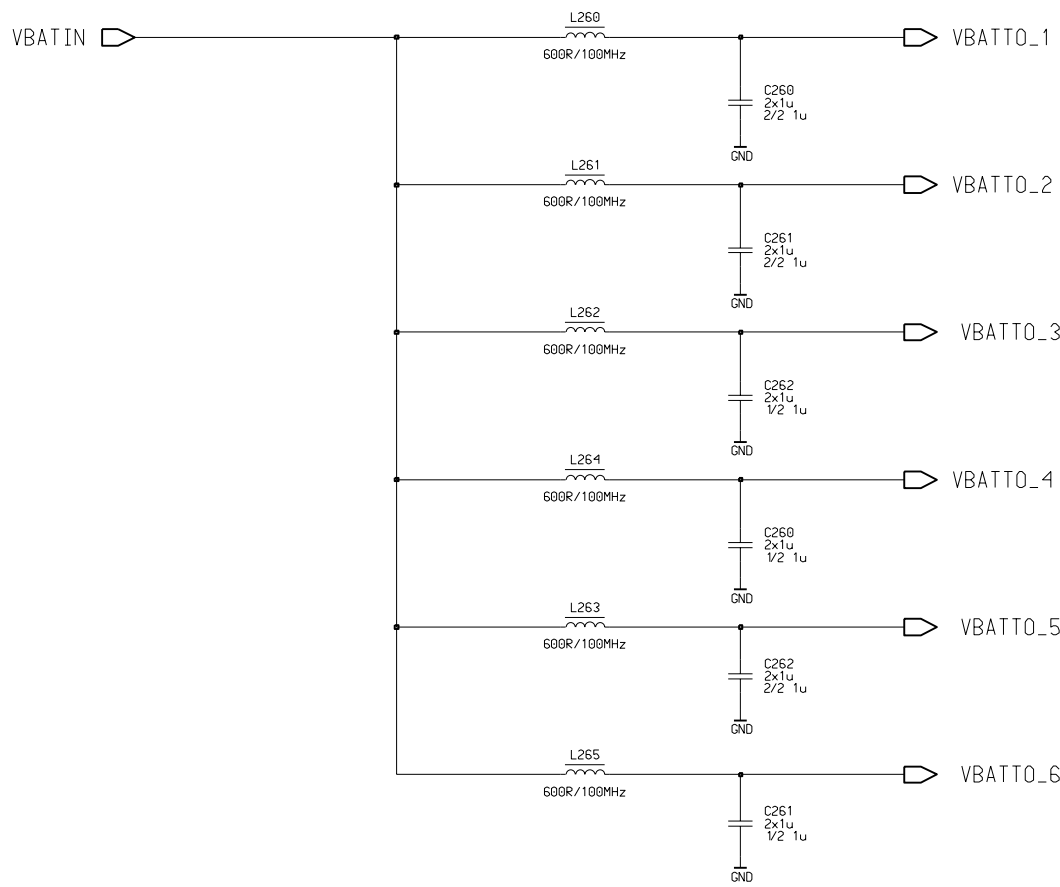


NOTE: Helga RF drives PATEMP directly  
so PATEMP does not need a pullup

DC\_DC for TIKU and VIO, 1maa\_02, v. 1.7 ed. 79

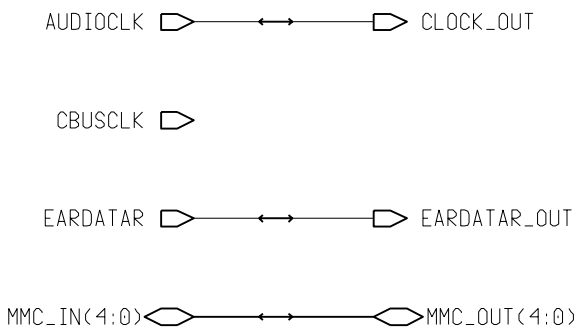


Light Filtering for Projects using 1uF Caps, 1maa\_02, v. 1.0



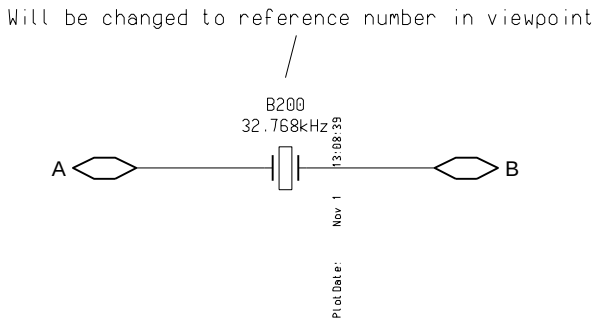
NOTE: This sheet uses dual 1uF capacitors. Check that full approval has been granted for these parts before use, or use this sheet at risk

Tiku Systems, 1maa\_02, v. 1.0

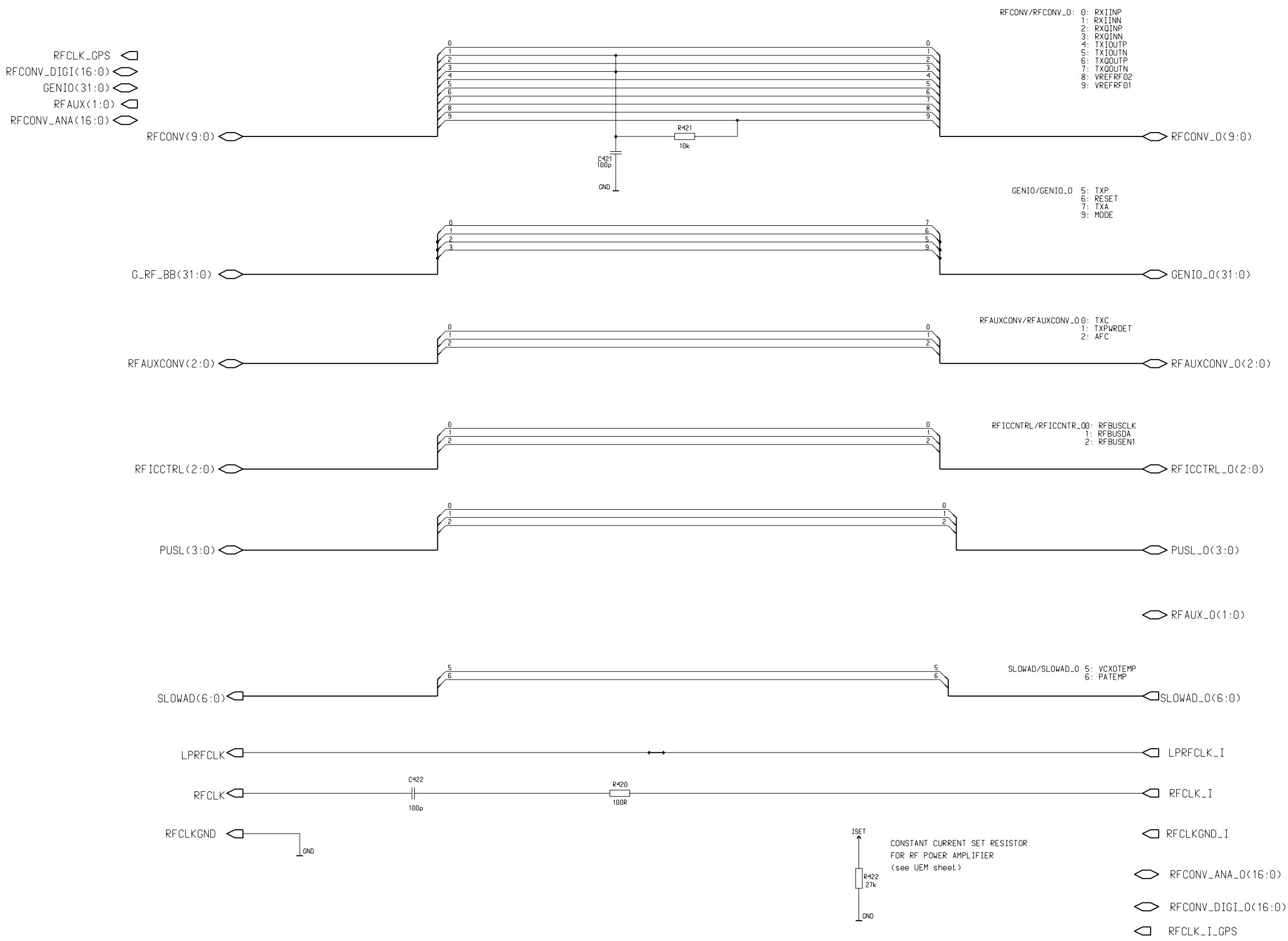


E916

32KHz Crystal- Micro Crystal CC4VT2, 1maa\_02, v. 0 ed. 8

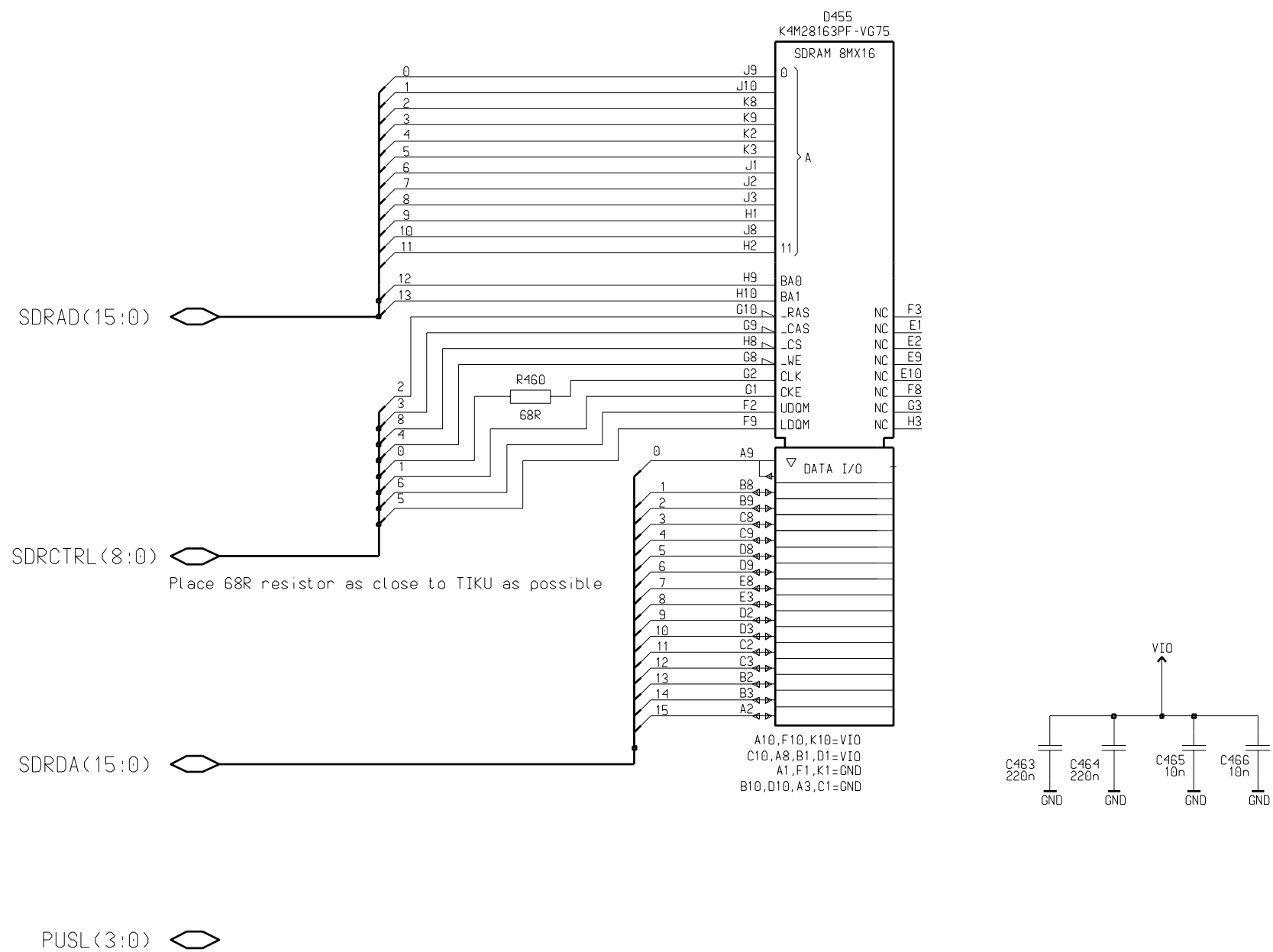


GSM RF - Baseband Interface, 1maa\_02, v. 1.3 ed. 65

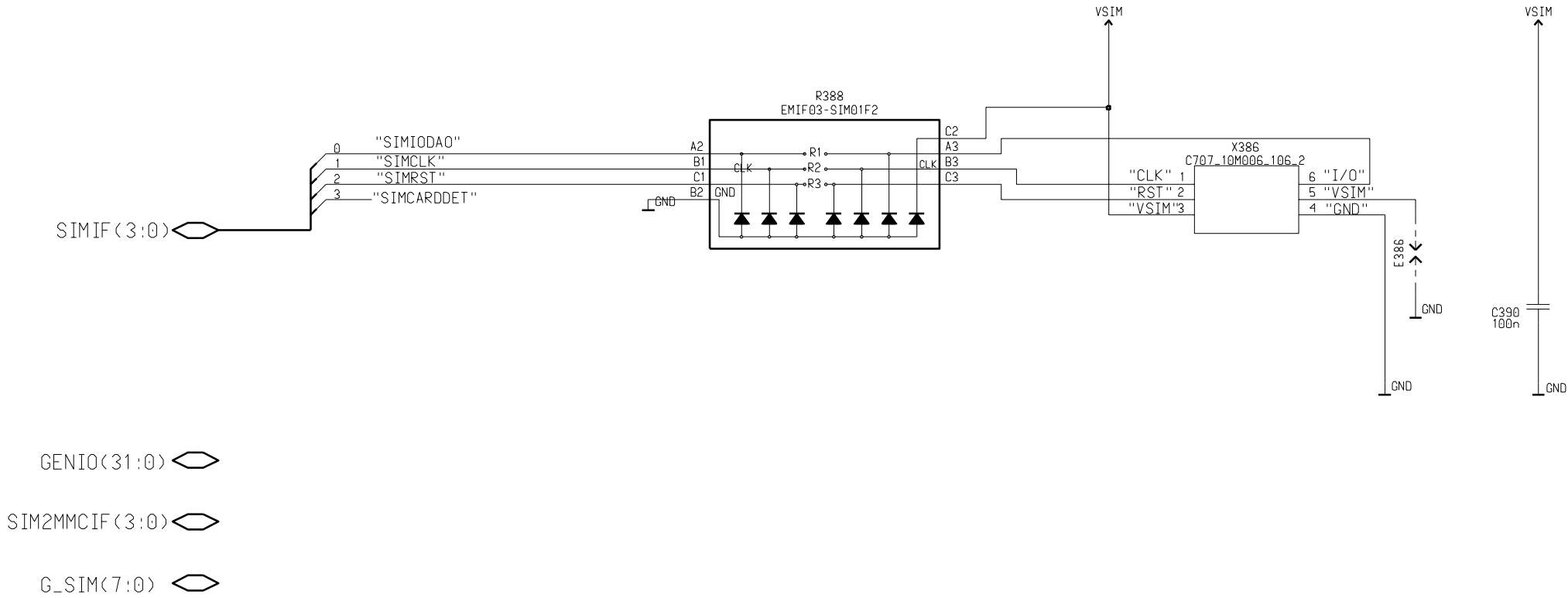


IPA1 AND IPA2 ARE USED IN RF, THE TOLERANCE OF R422 IS 1% (0402, 1430873)

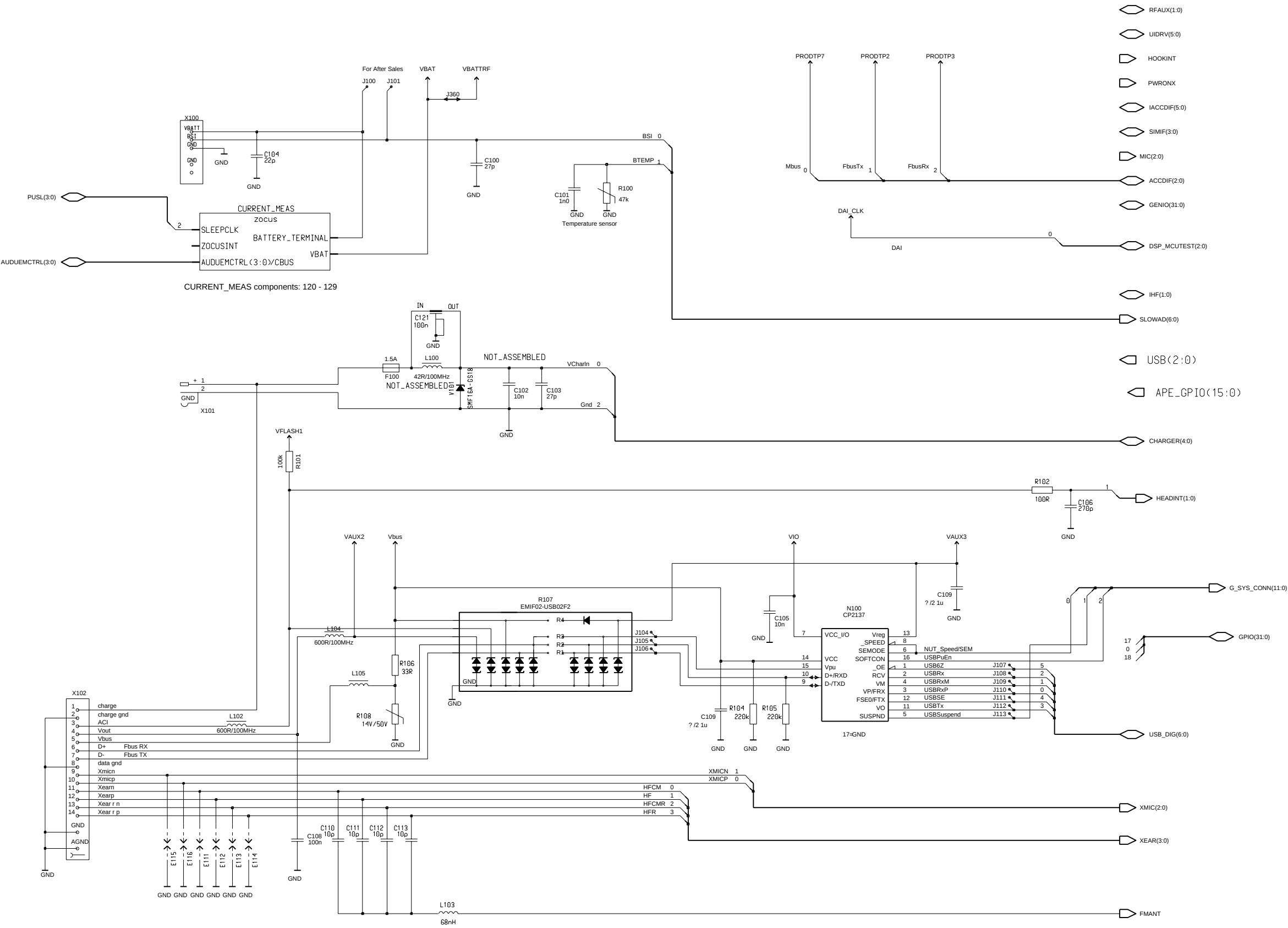
64Mbit 2V8 SDRAM Memory, 1maa\_02, v. 1.0 ed. 68



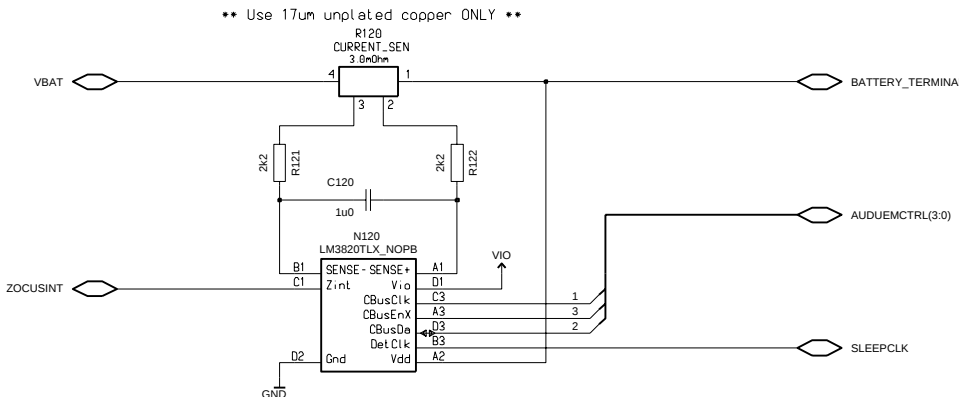
**SIM Reader, 1maa\_02, v. 1.3 ed. 67**



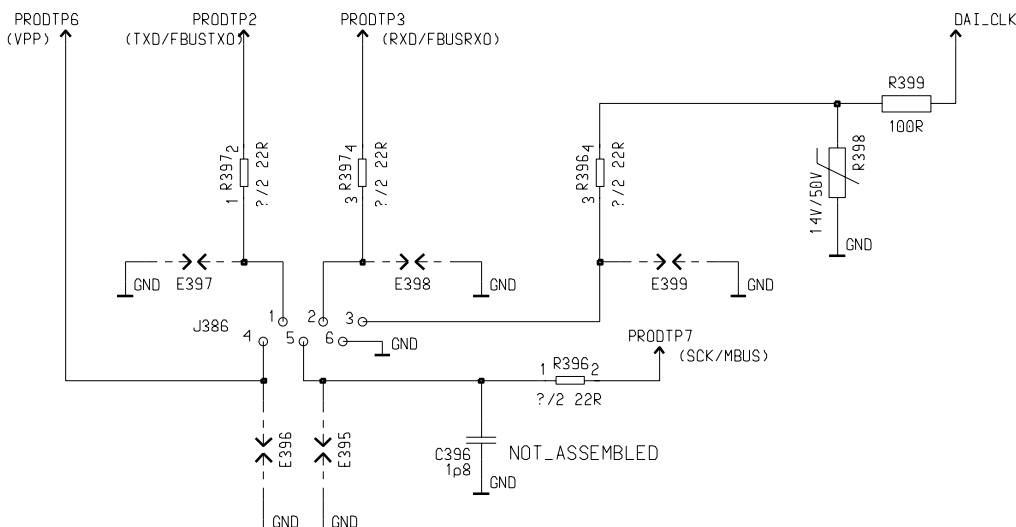
System Connector, 1maa\_02, v. 0.0 ed. 204



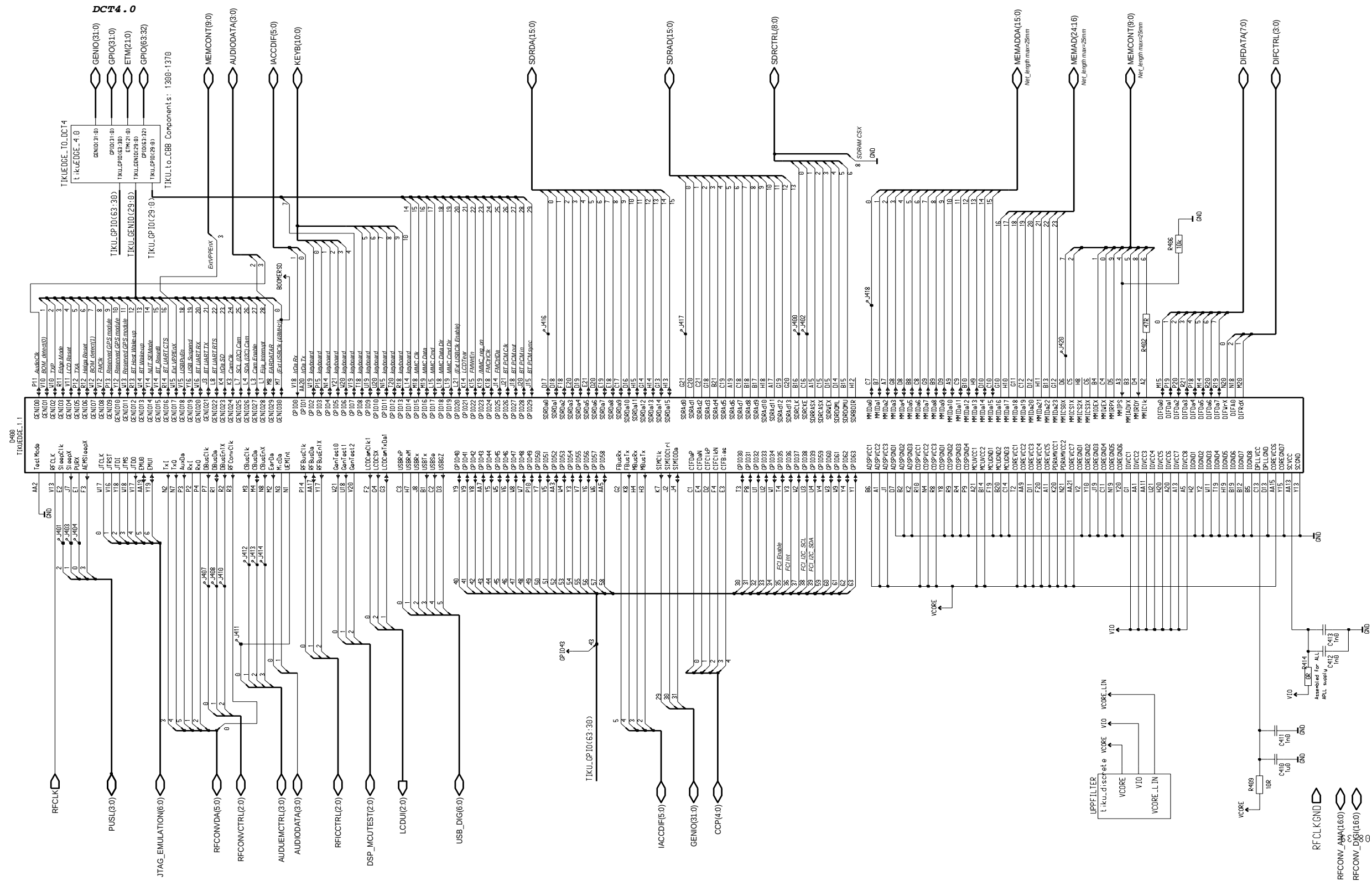
**Current Measure, 1maa\_02, v. 0 ed. 19**



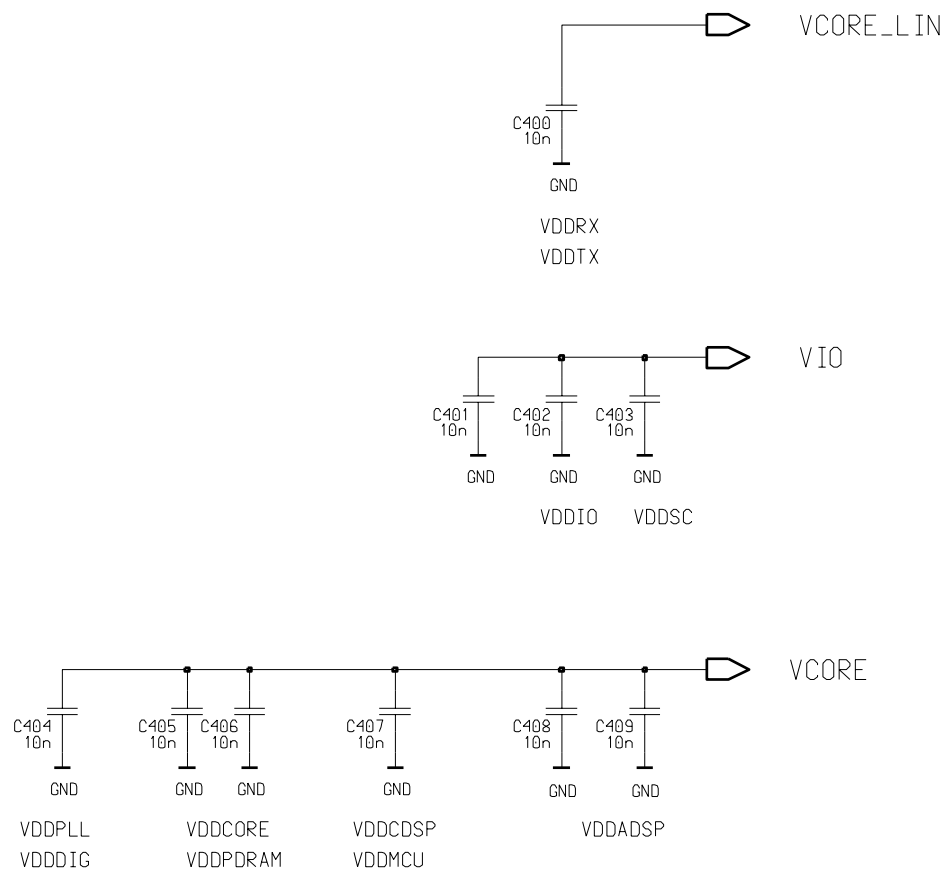
## 5 pin Test Pattern, 1maa\_02, v. 2.0 ed. 53



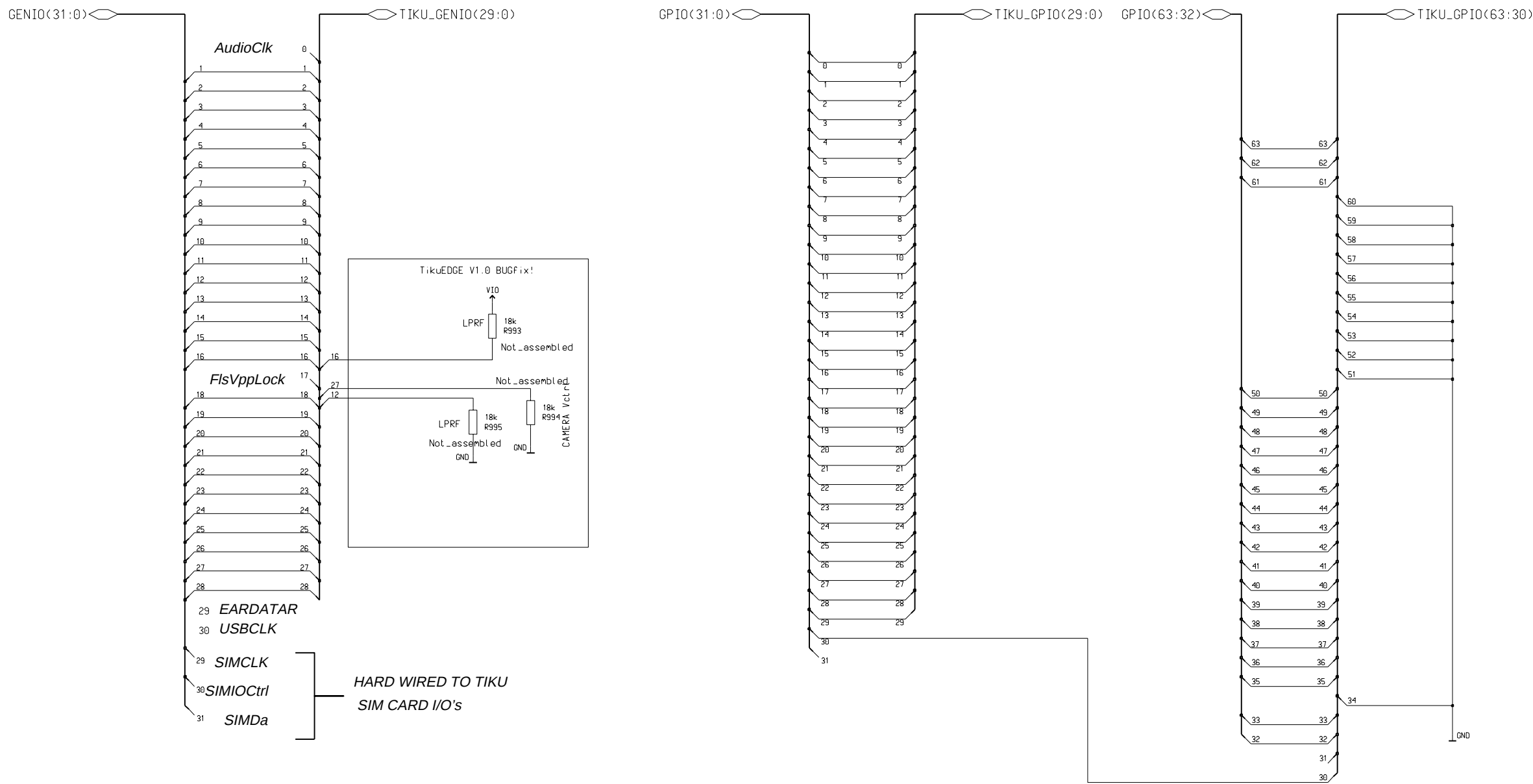
## TIKUedge Implementation (GSM), 1maa\_02, ed. 135



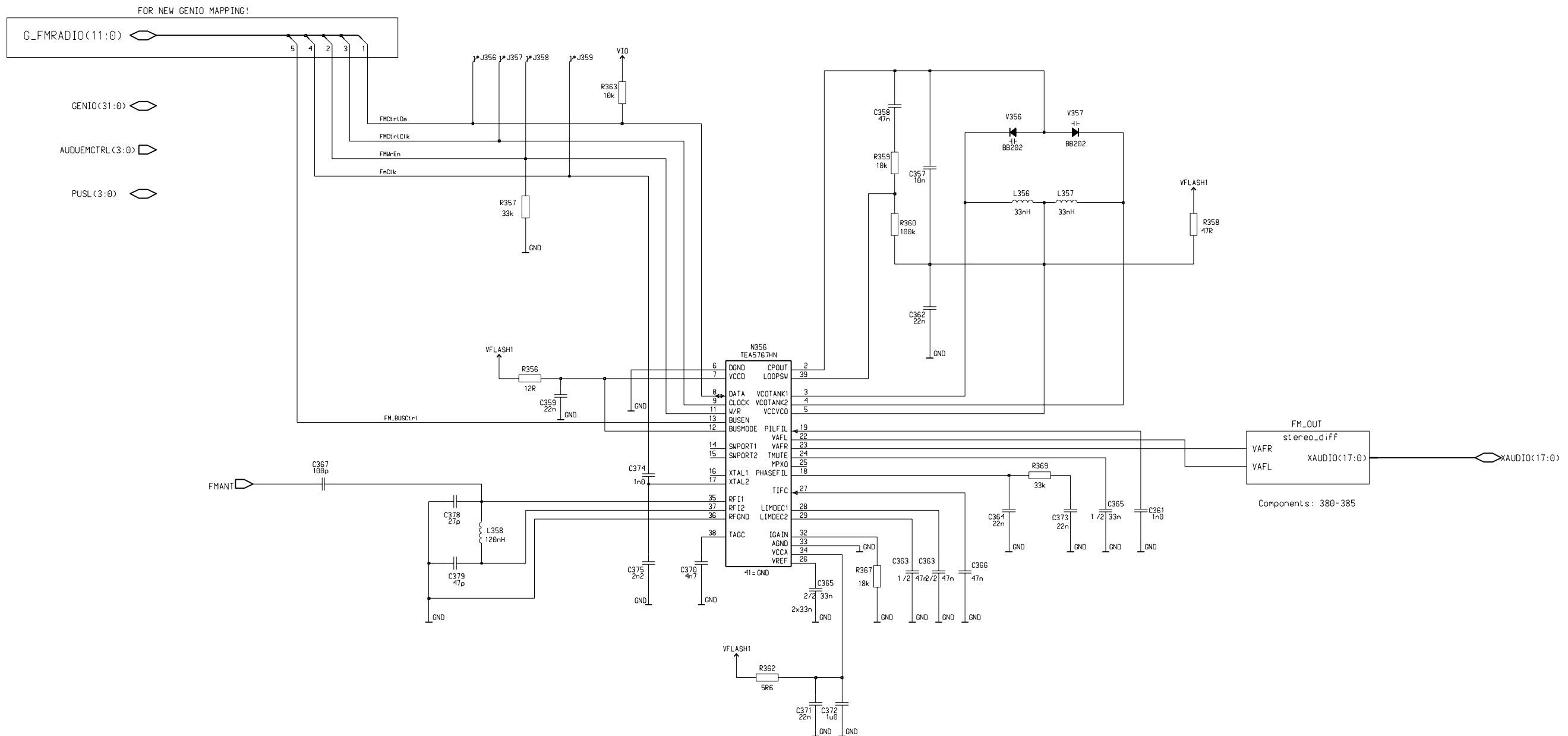
Discrete Decoupling Capacitors for Tiku, 1maa\_02, v. 0 ed. 12



TikuEDGE Bus Conversion Sheet, 1maa\_02, v. 1.2 ed. 104



**FM Radio Unit, 1maa\_02, v. 1.3 ed. 199**

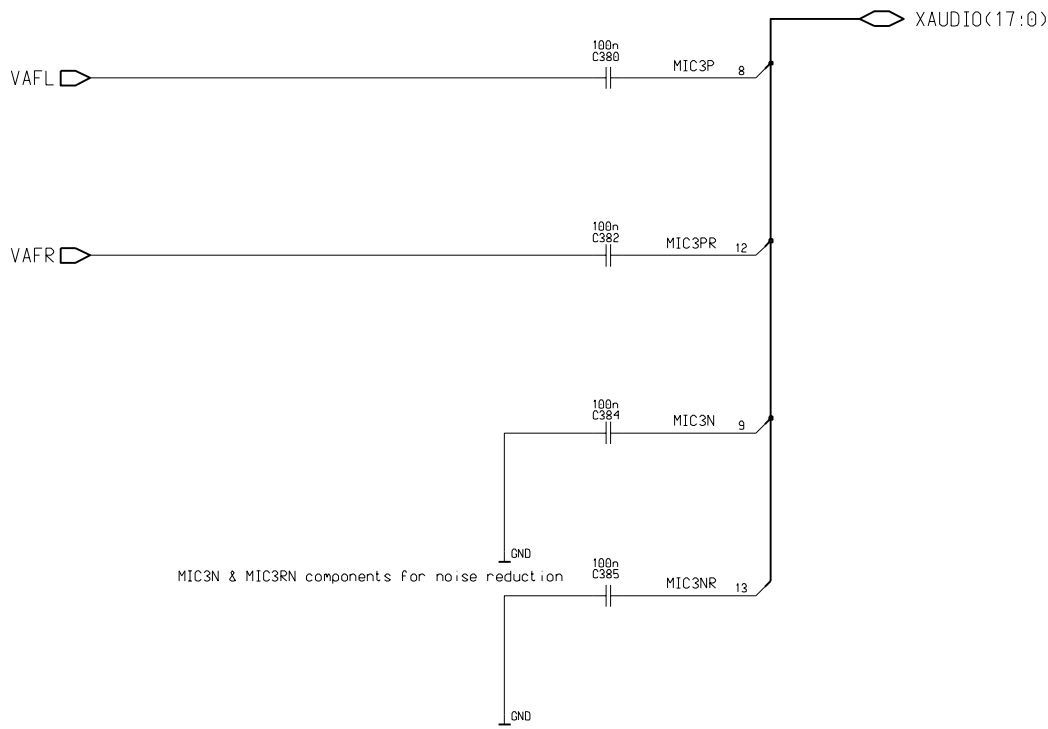


## UPDATE symbol to support RDS

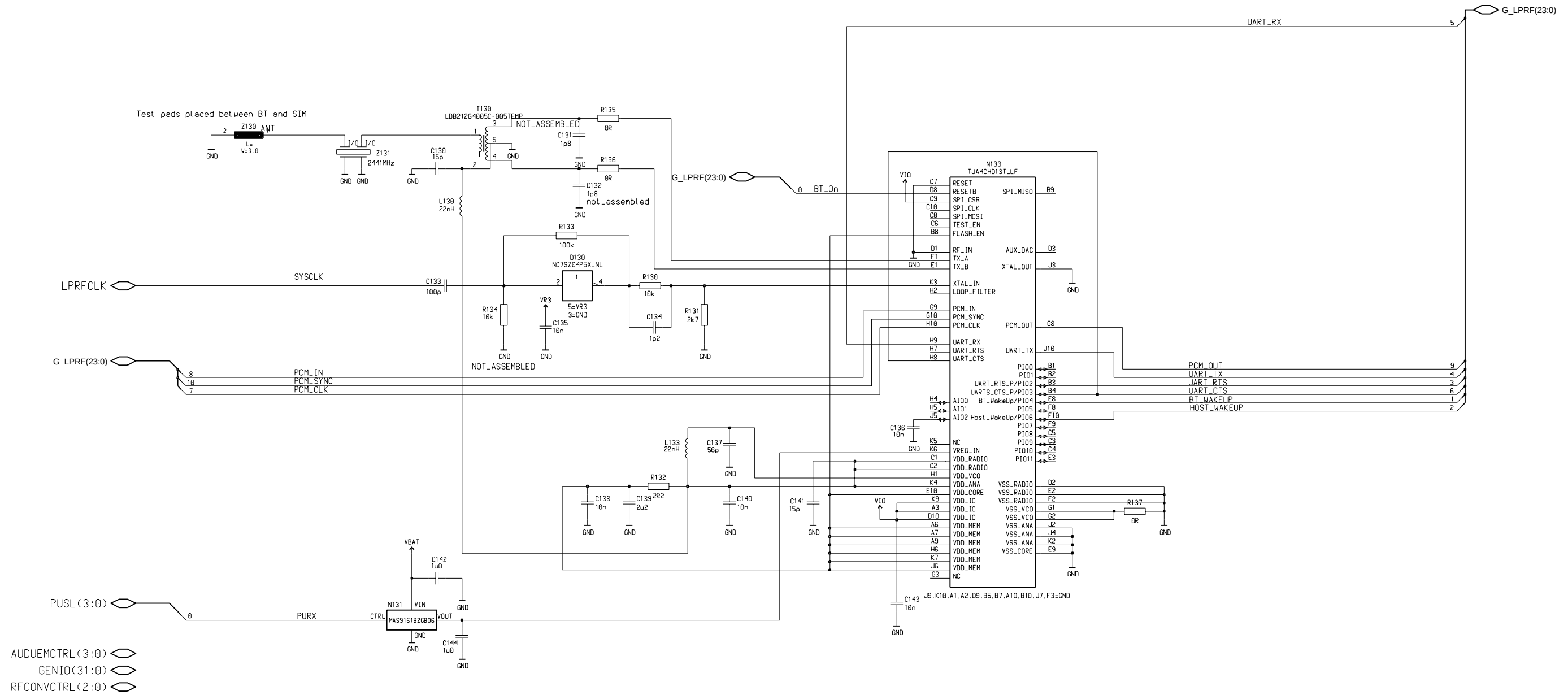
Not ice:

C374 (1n0) and C375 (2n2) are configured for 32kHz reference clock  
If reference clock is 6.5MHz, use C374 (3p9) and C375 (10p)

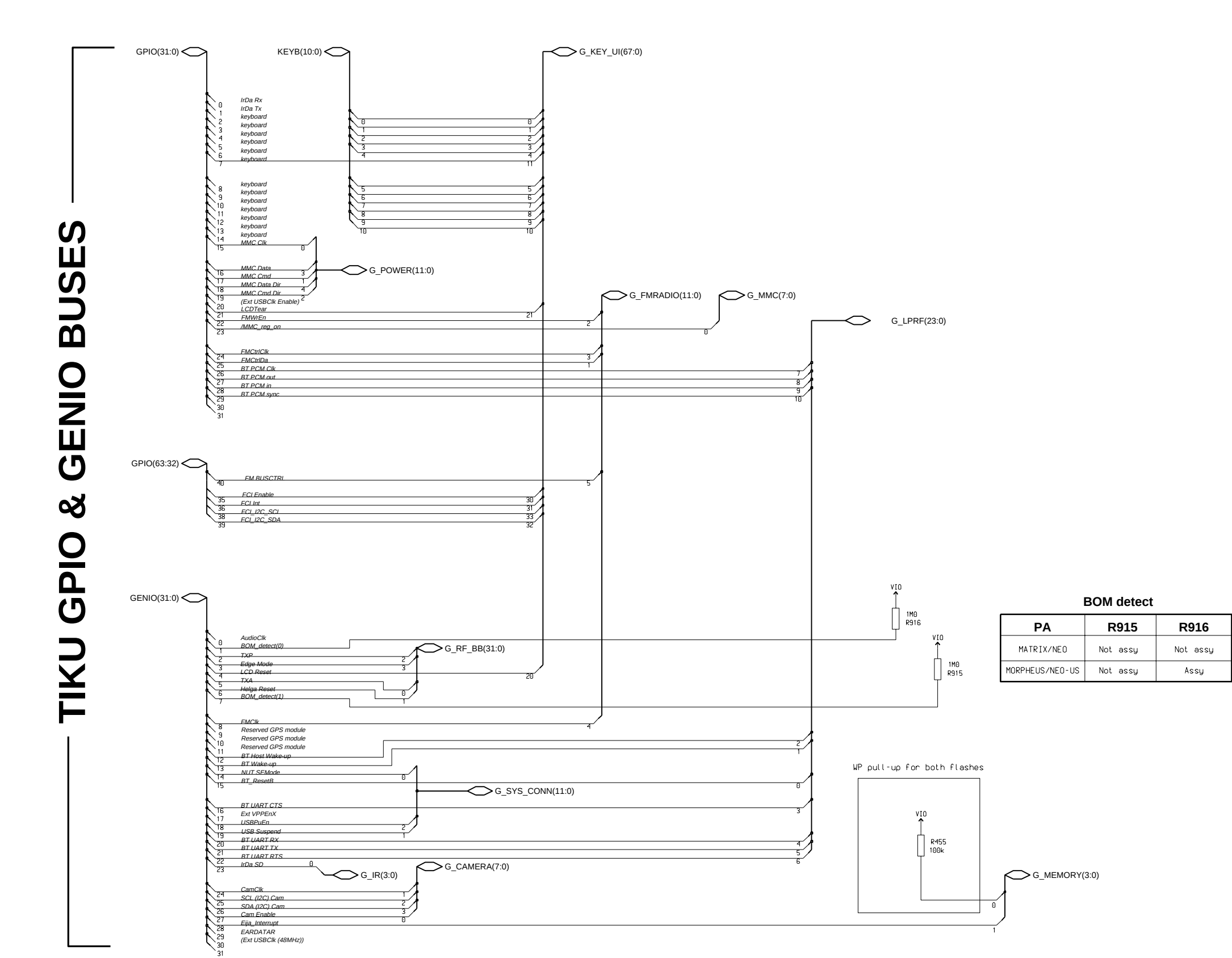
Differential Stereo, 1maa\_02, v. 0.0 ed. 7



**Low Power RF Module, 1maa\_02, ed. 148**



GENIO and GPIO Connection Block, 1maa\_02, v. 0.0 ed. 42



- G\_AUDIO(11:0)
- G\_APE(15:0)
- G\_CDMA(11:0)
- G\_GPS(7:0)
- G\_SIM(7:0)