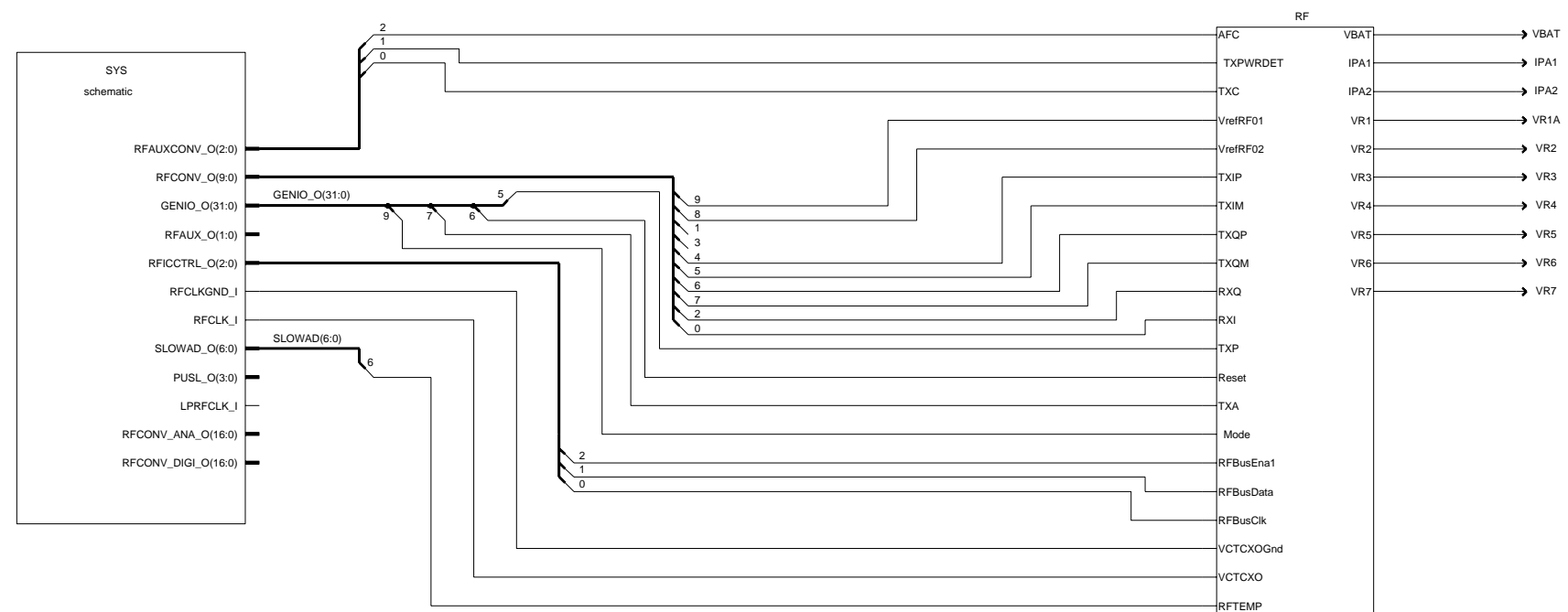
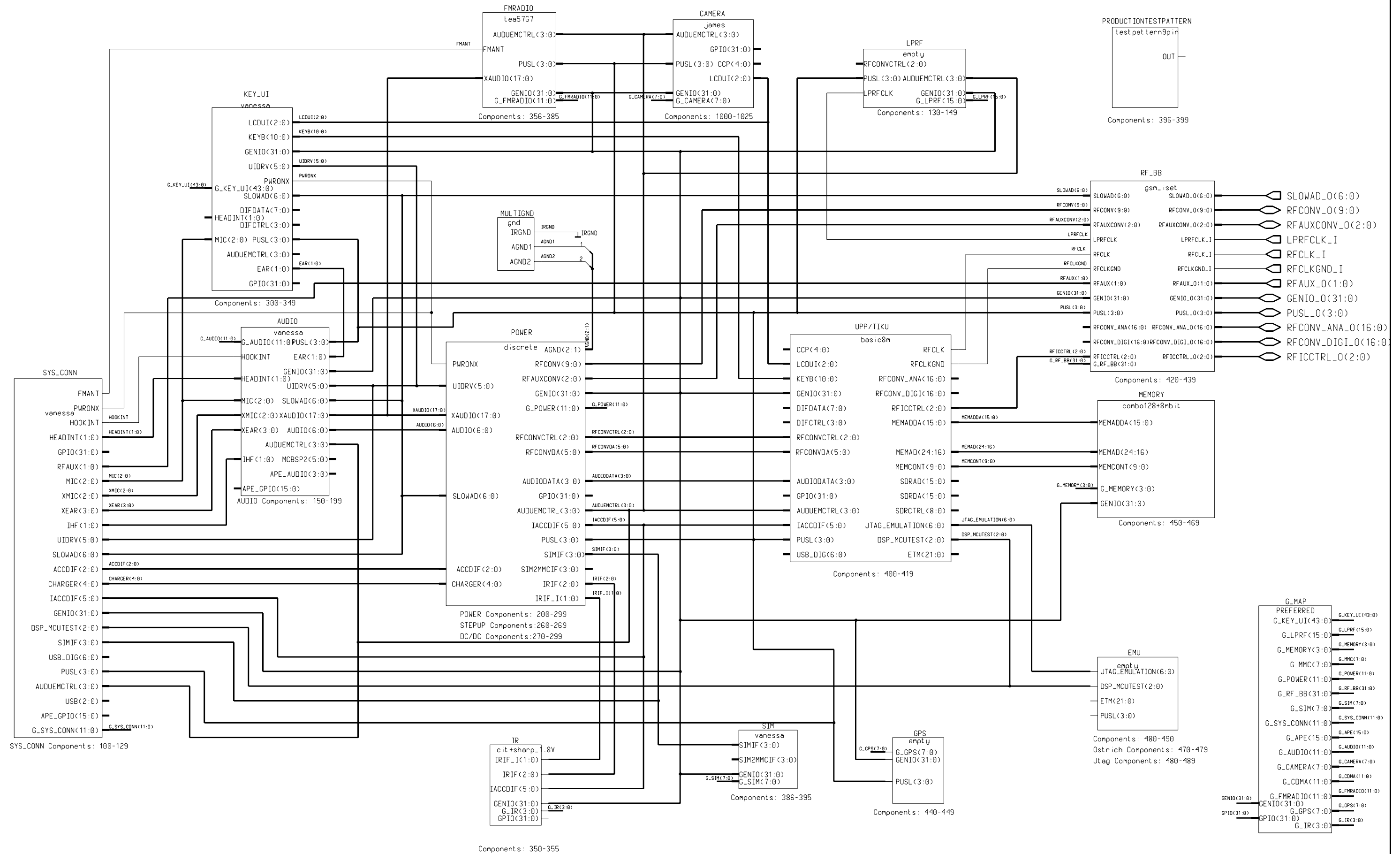



# NHL-4J Top Level




DCT4 Common BB



# GENIO and GPIO Connection Block


GENIO(31:0) 


GPIO(31:0) 


 G\_APE(15:0)


 G\_AUDIO(11:0)

 G\_CAMERA(7:0)

 G\_CDMA(11:0)


 G\_FMRADIO(11:0)


 G\_GPS(7:0)

 G\_IR(3:0)


 G\_KEY\_UI(43:0)

 G\_LPRF(15:0)


 G\_MEMORY(3:0)

 G\_MMC(7:0)

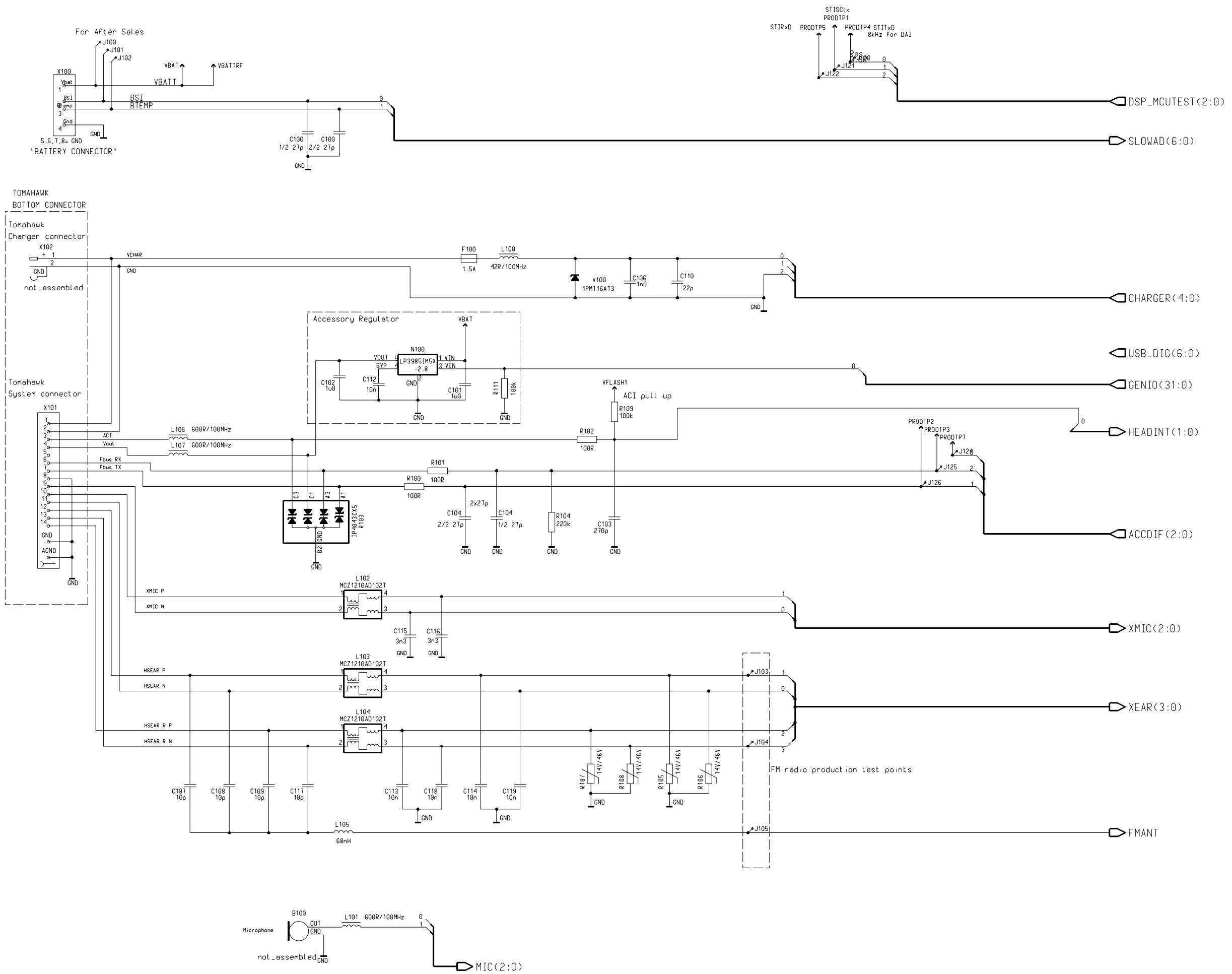
 G\_POWER(11:0)

 G\_RF\_BB(31:0)

 G\_SIM(7:0)

 G\_SYS\_CONN(11:0)



# System Connector

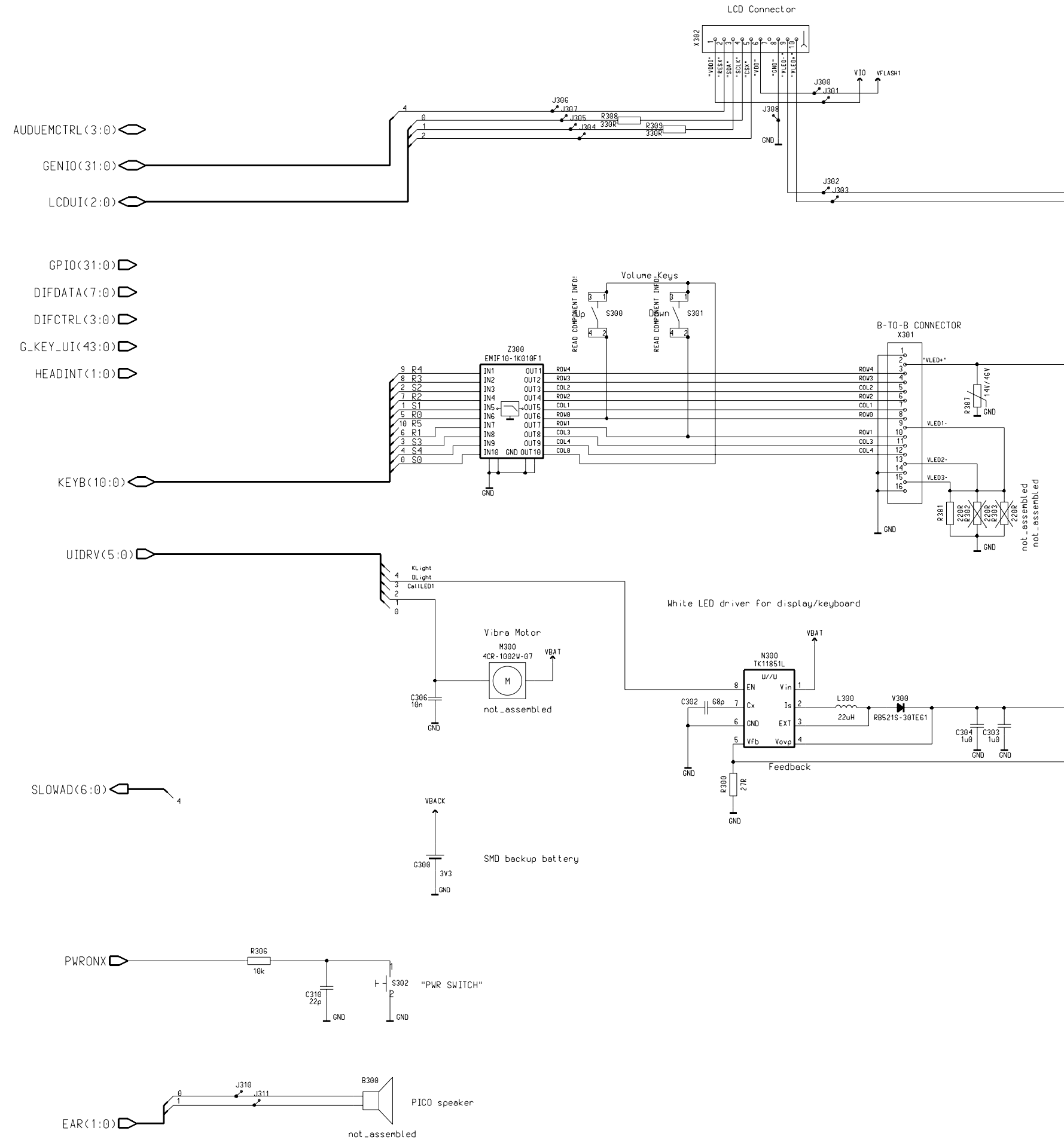


- ▷ PWRONX
- ▷ HOOKINT
- ▷ RFAUX(1:0)
- ▷ UIDRV(5:0)
- ▷ IACCDIF(5:0)
- ▷ SIMIF(3:0)
- ▷ AUDUEMCTRL(3:0)
- ▷ PUSL(3:0)
- ▷ GPIO(31:0)
- ▷ IHF(1:0)
- ▷ USB(2:0)
- ▷ APE\_GPIO(15:0)
- ▷ G\_SYS\_CONN(11:0)

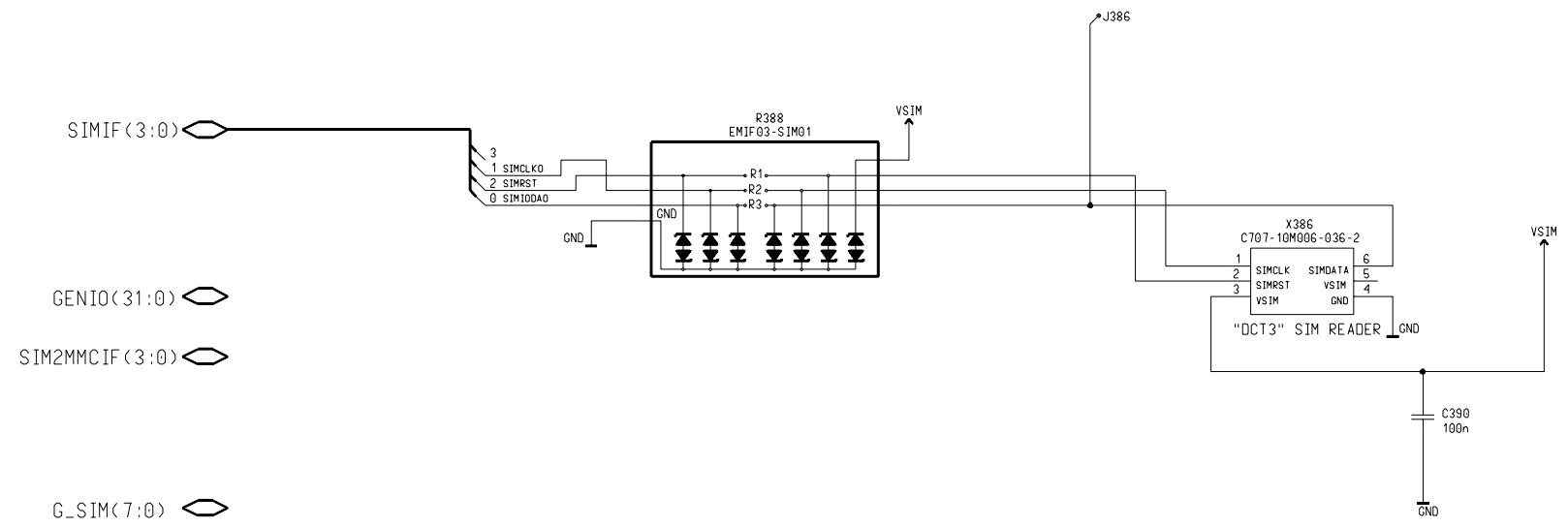
J128

UI

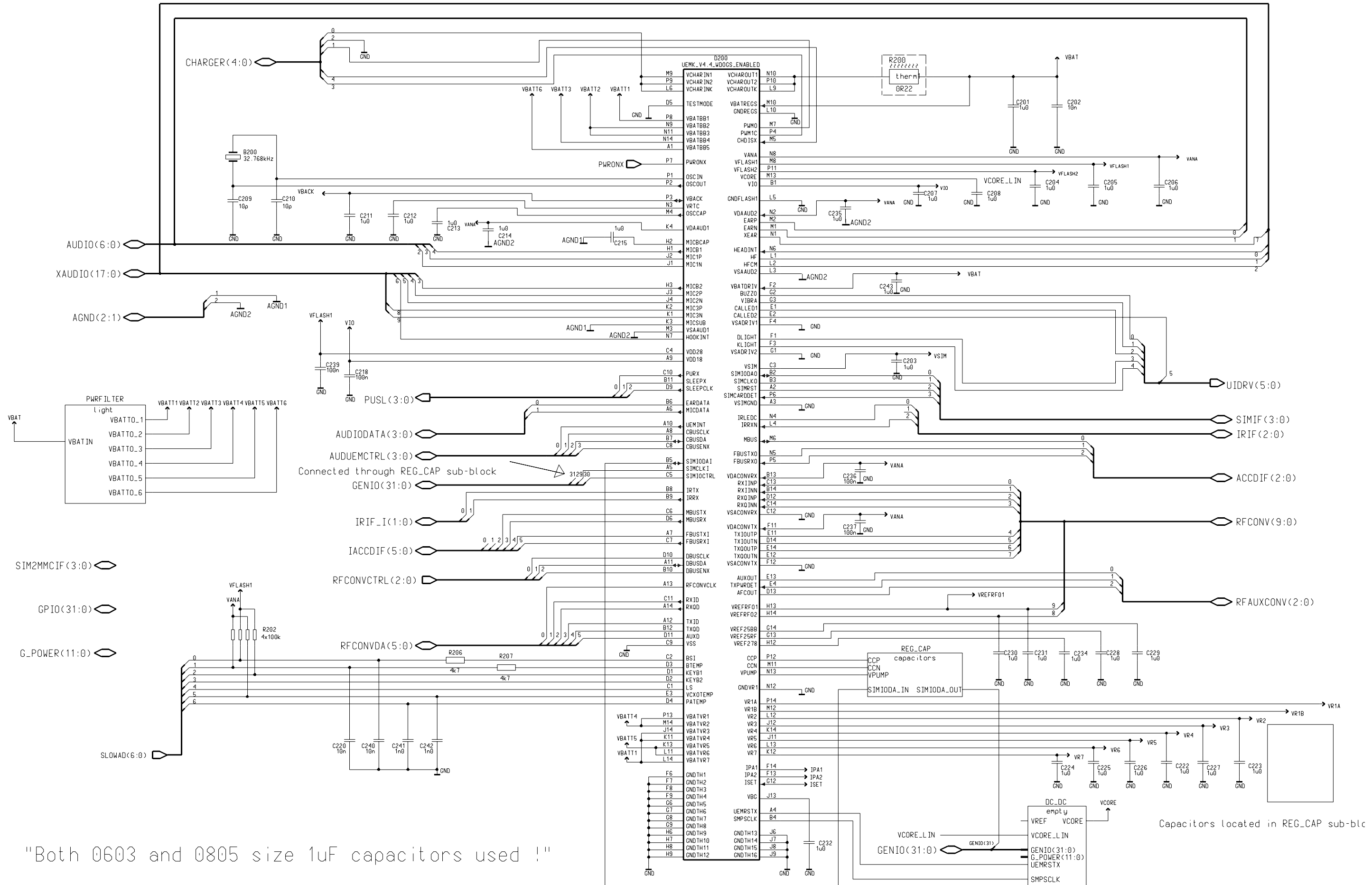
MIC(2:0)   
 PUSL(3:0) 



# SIM Reader



# Discrete Power Management

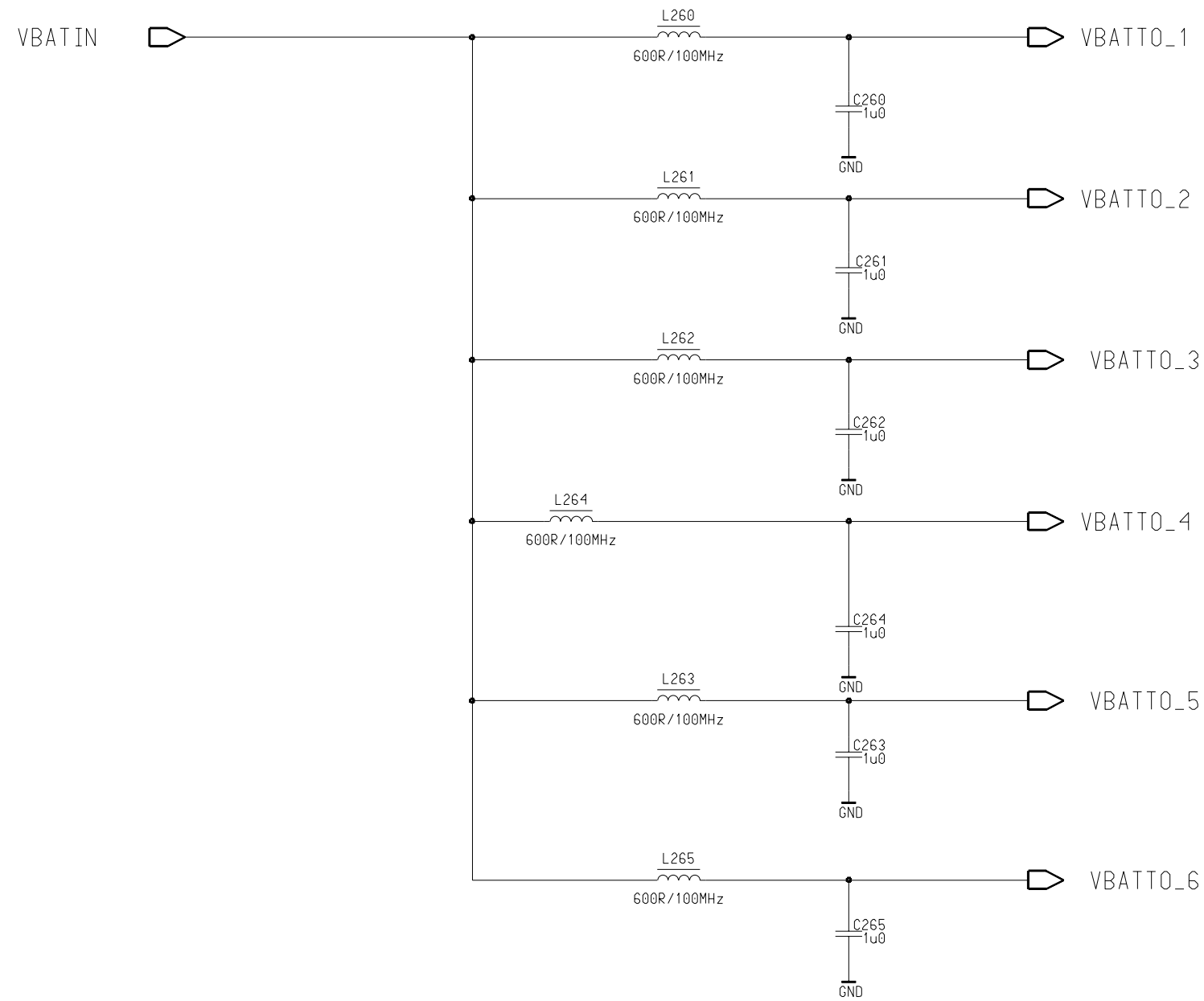


"Both 0603 and 0805 size 1uF capacitors used !"

Used refs in REG\_CAP: C238, C200, C219, C233, C221 and R205

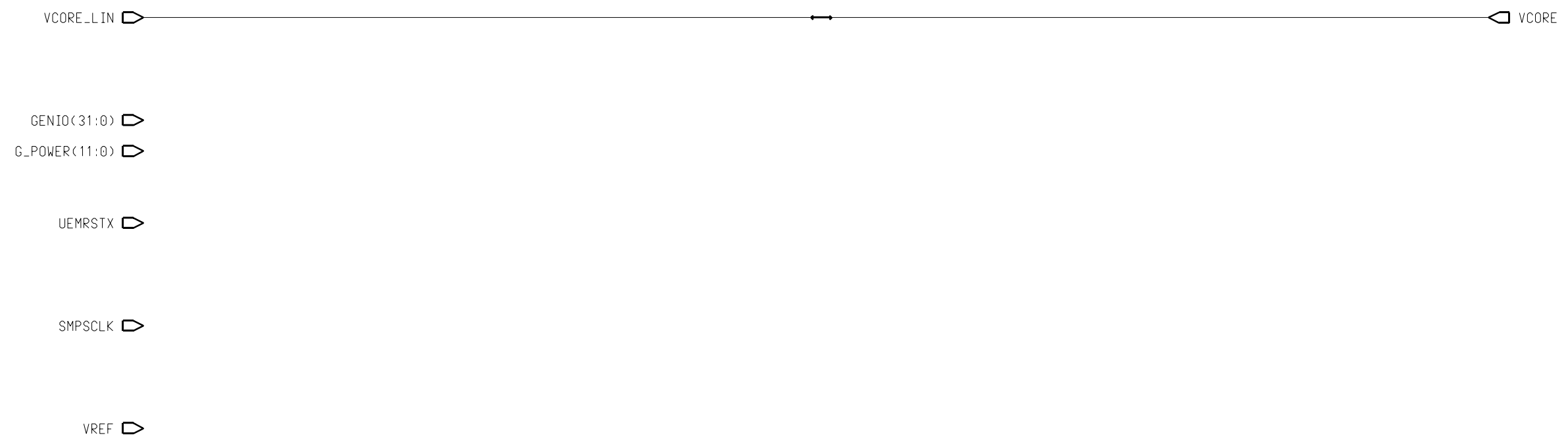
Capacitors located in REG\_CAP sub-bloc

# Light Filtering

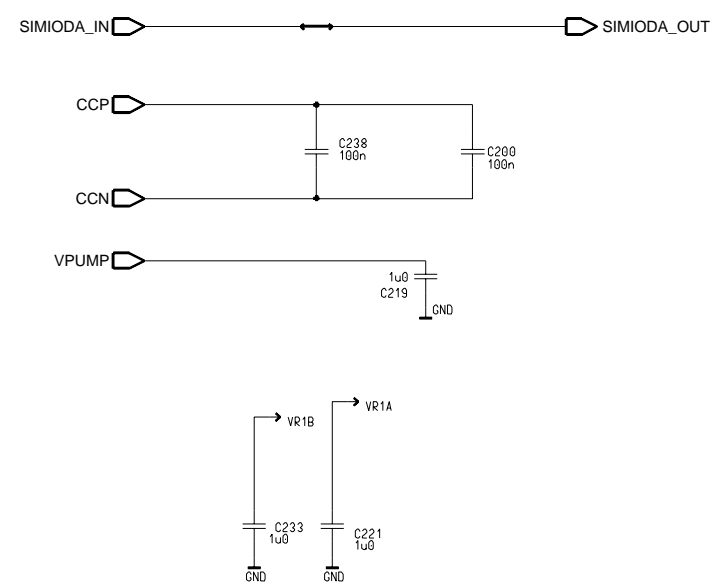








# DC/DC Converter



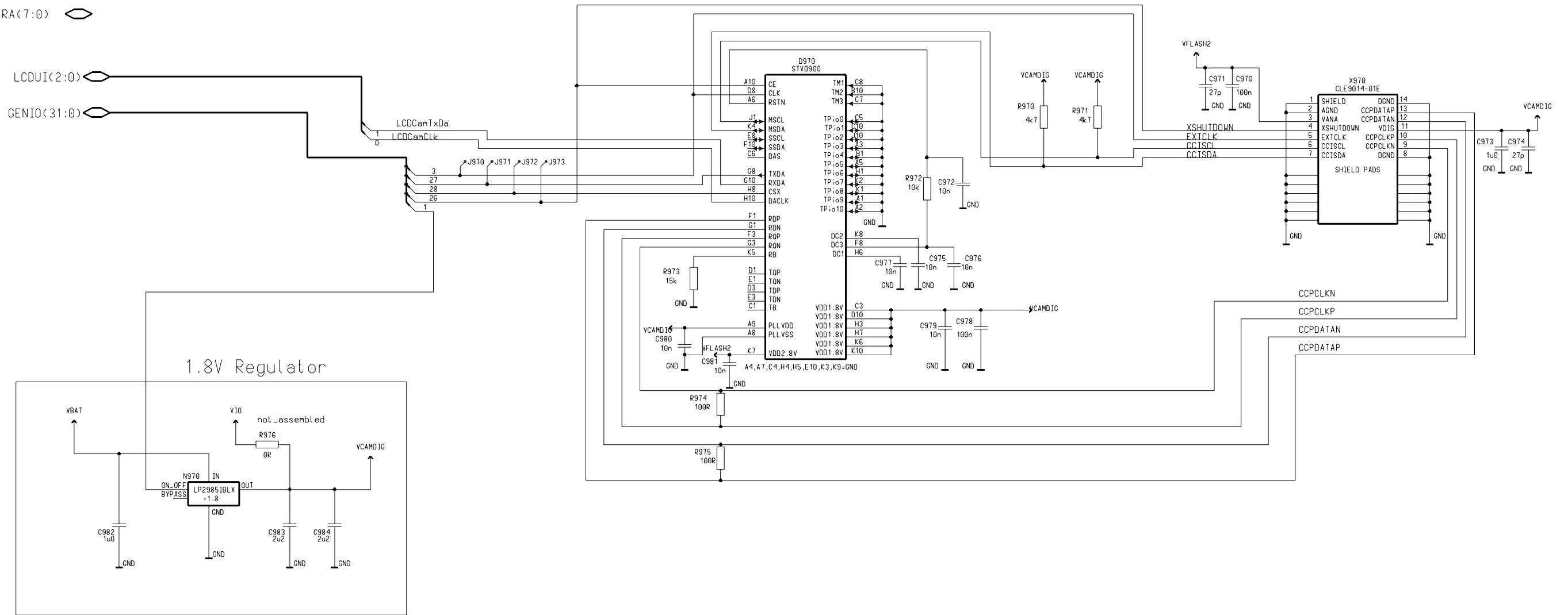
# Old Power Discrete



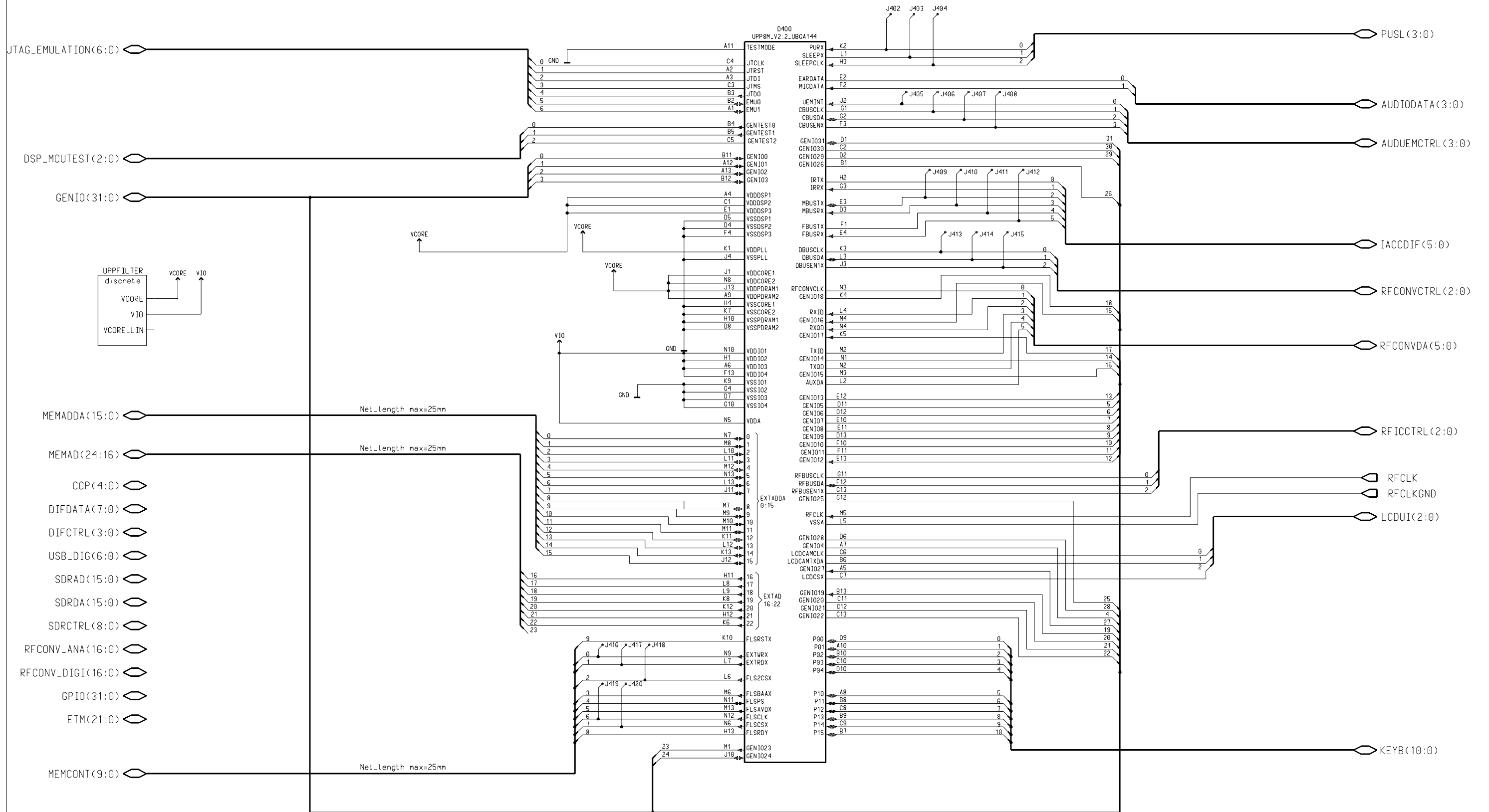
Camera

- GPI0(31:0) 
- AUDUEMCTRL(3:0) 
- CCP(4:0) 
- PUSL(3:0) 

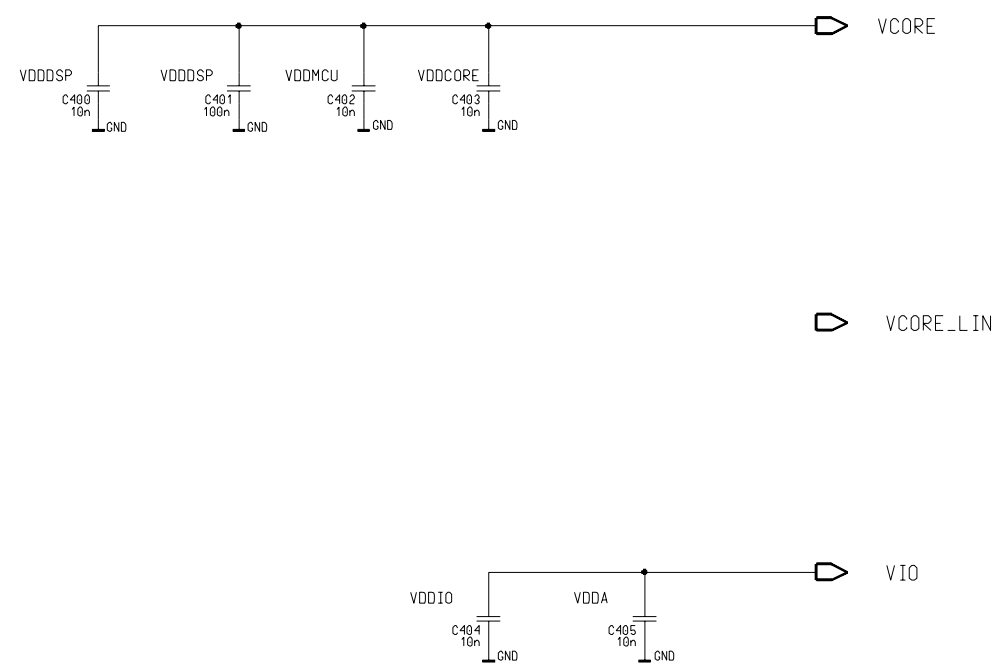
G\_CAMERA(7:0) 



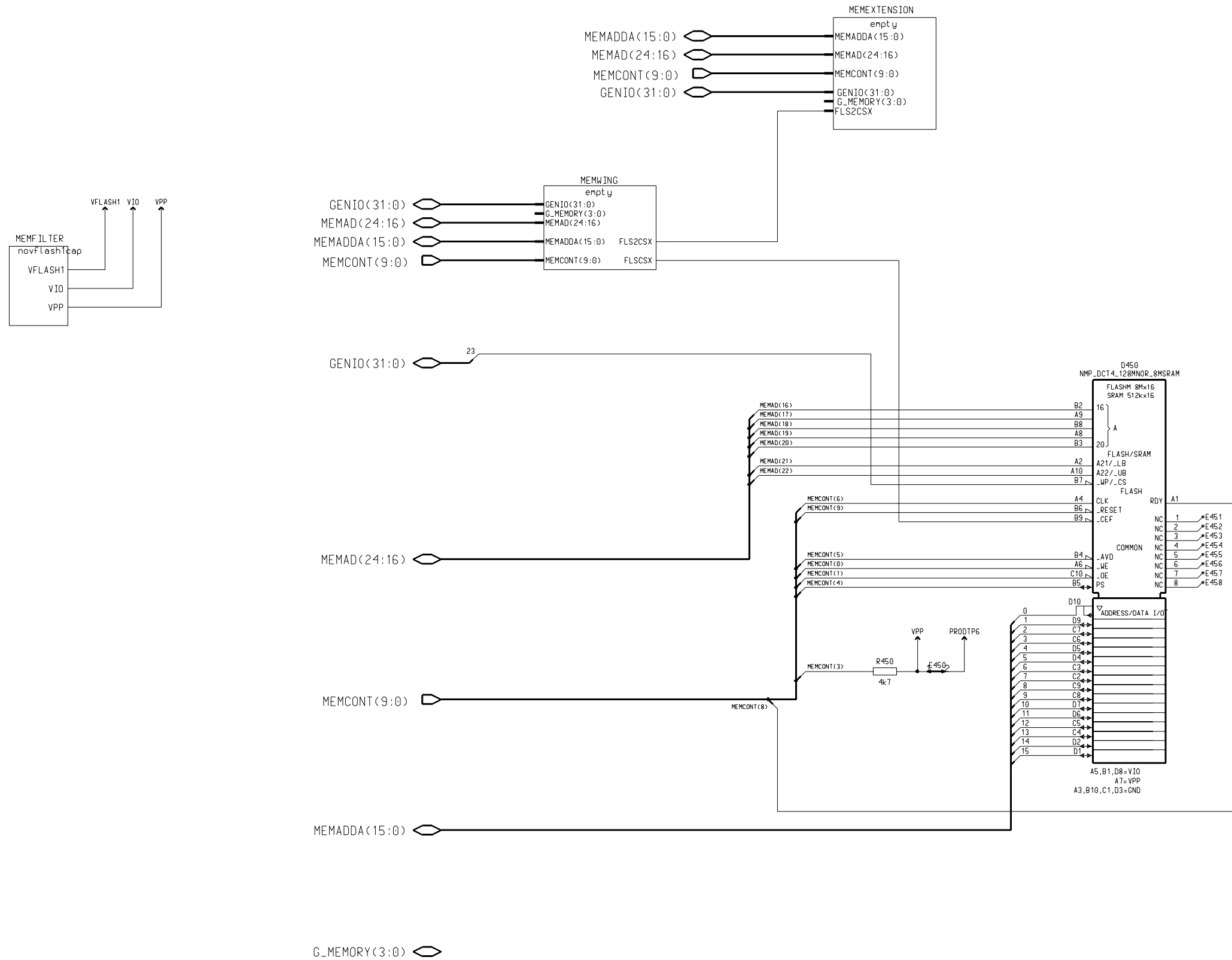
# UPP 8M Implementation



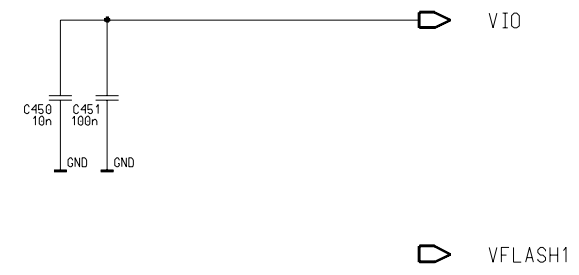
# Decoupling Capacitors for UPP



# Combo Memory

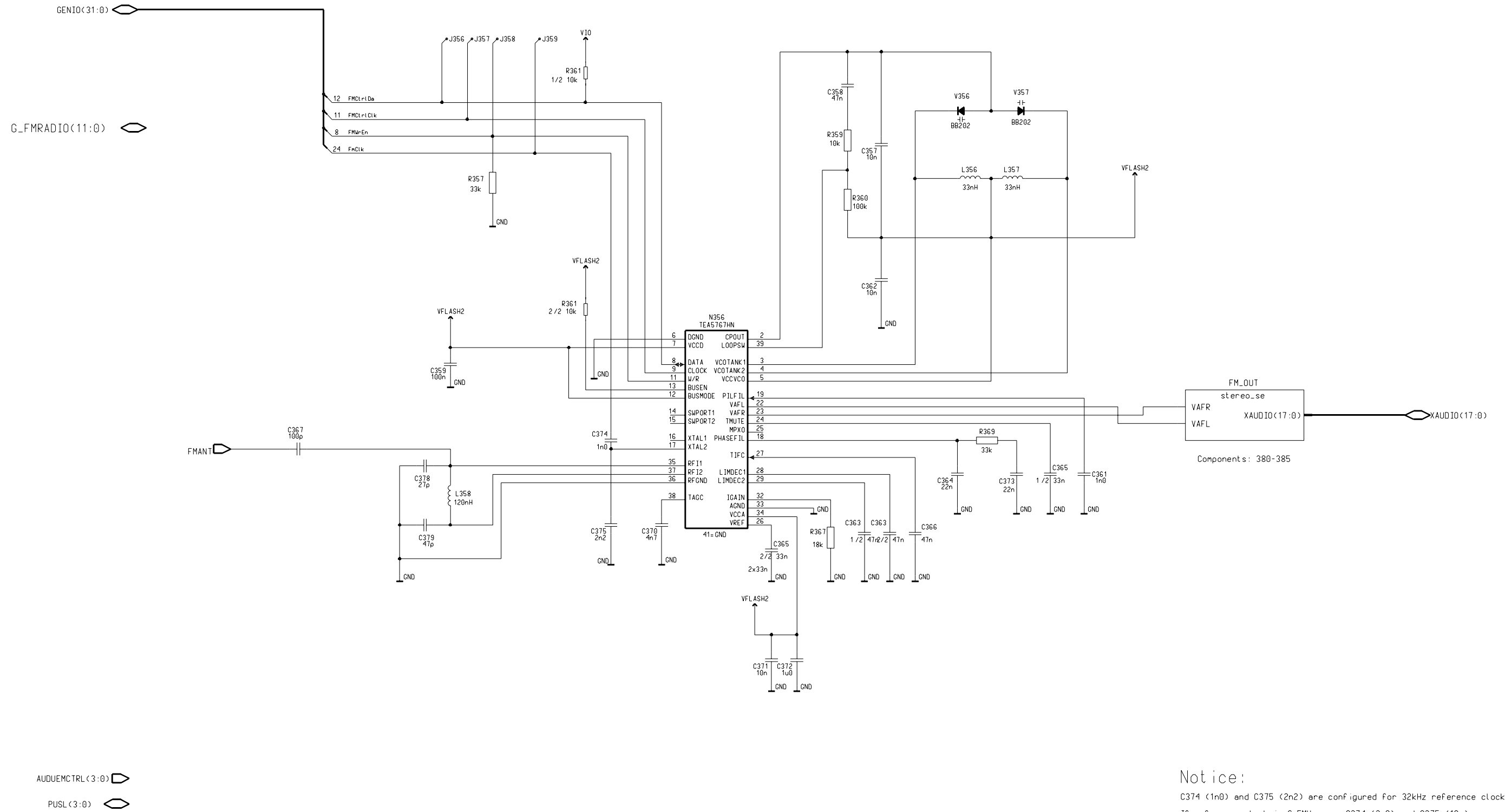


# Memory Without VFLASH1



FM Radio

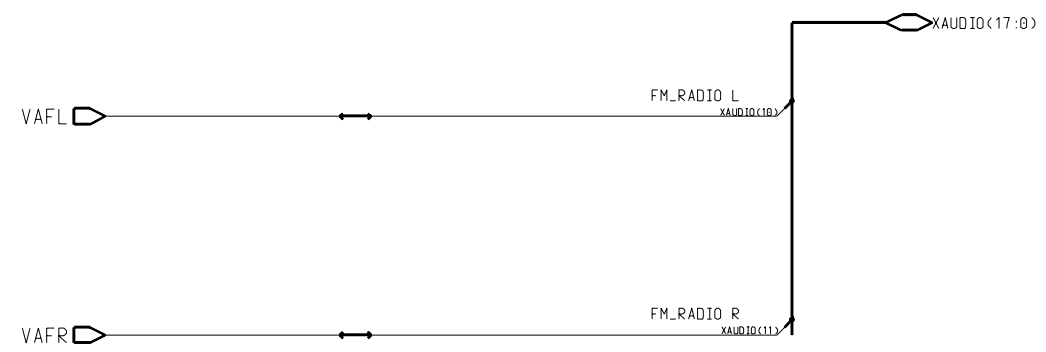
FMCLK = GENIO(24)



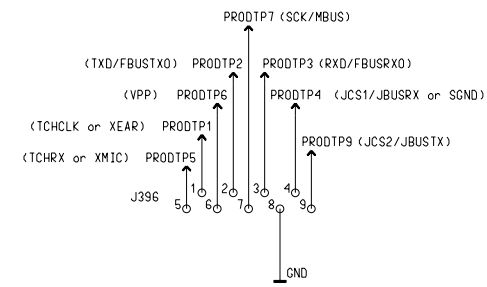
Notice:  
 C374 (1n0) and C375 (2n2) are configured for 32kHz reference clock  
 If reference clock is 6.5MHz, use C374 (3p9) and C375 (10p)



# FM Radio Out

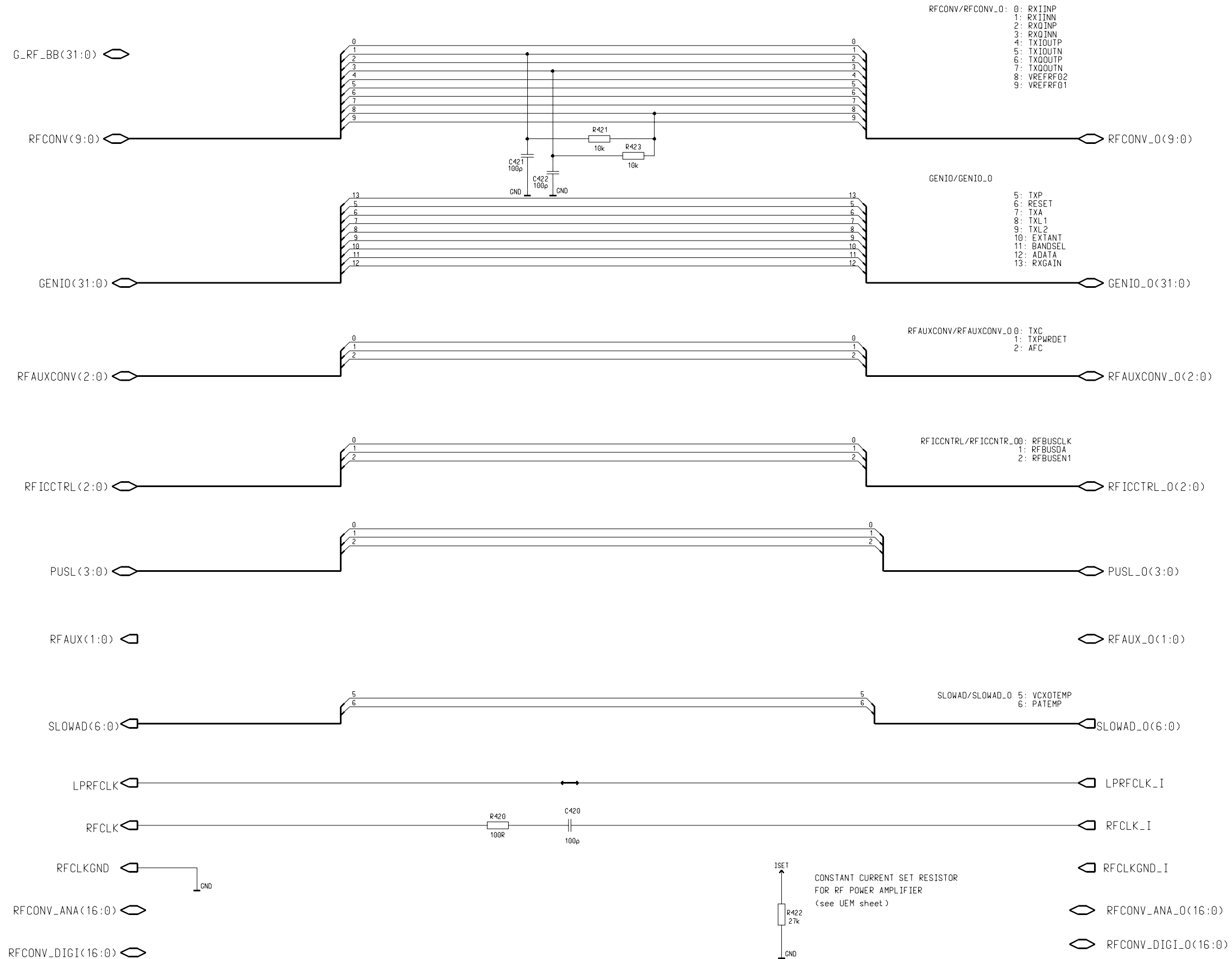


# Test Pattern



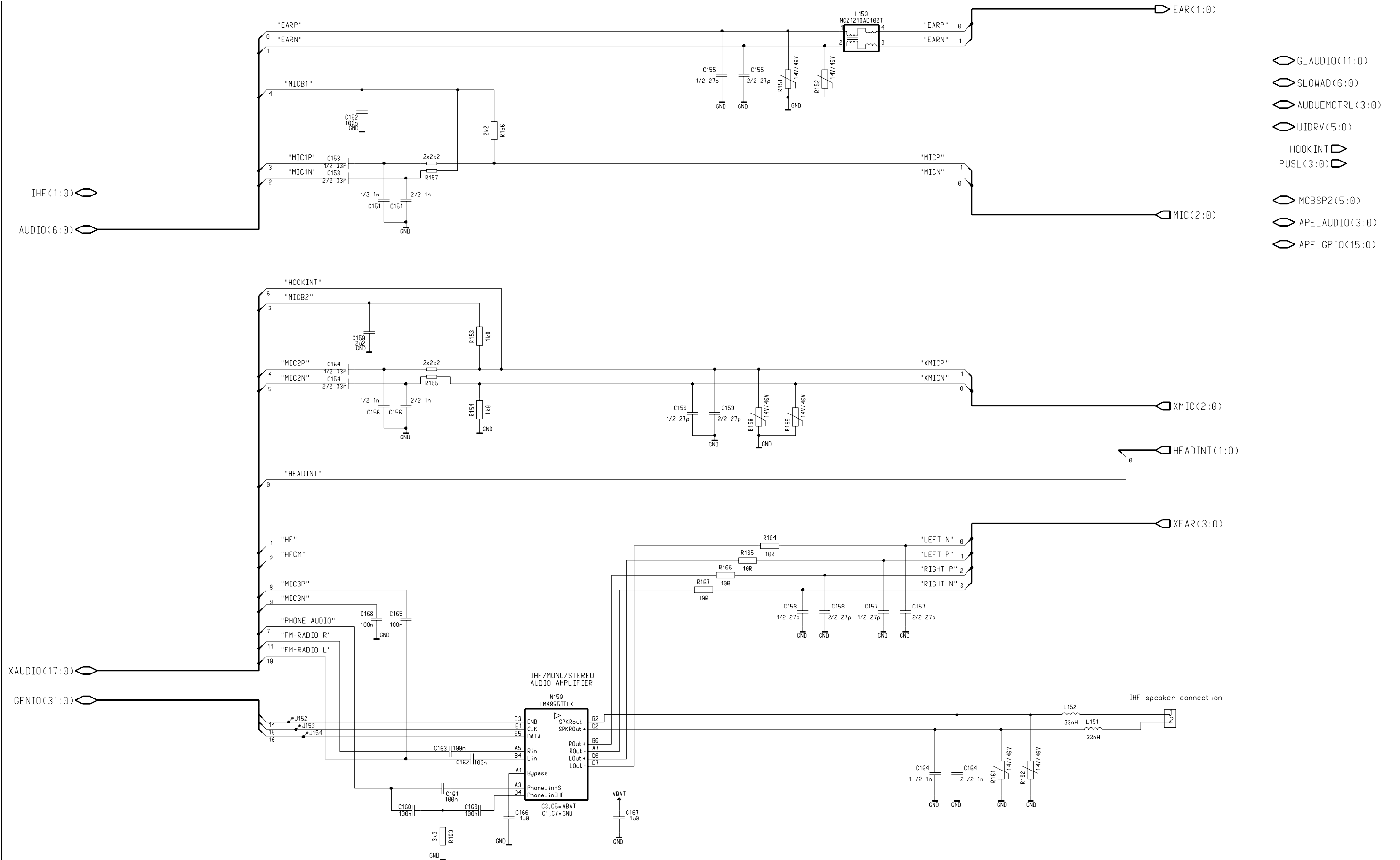
OUT

RF BB Interface



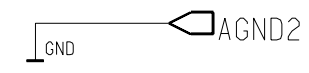
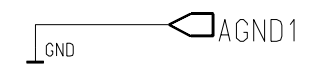
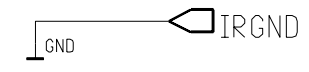
IPA1 AND IPA2 ARE USED IN RF, THE TOLERANCE OF R422 IS 1% (0402, 1430873)

Audio

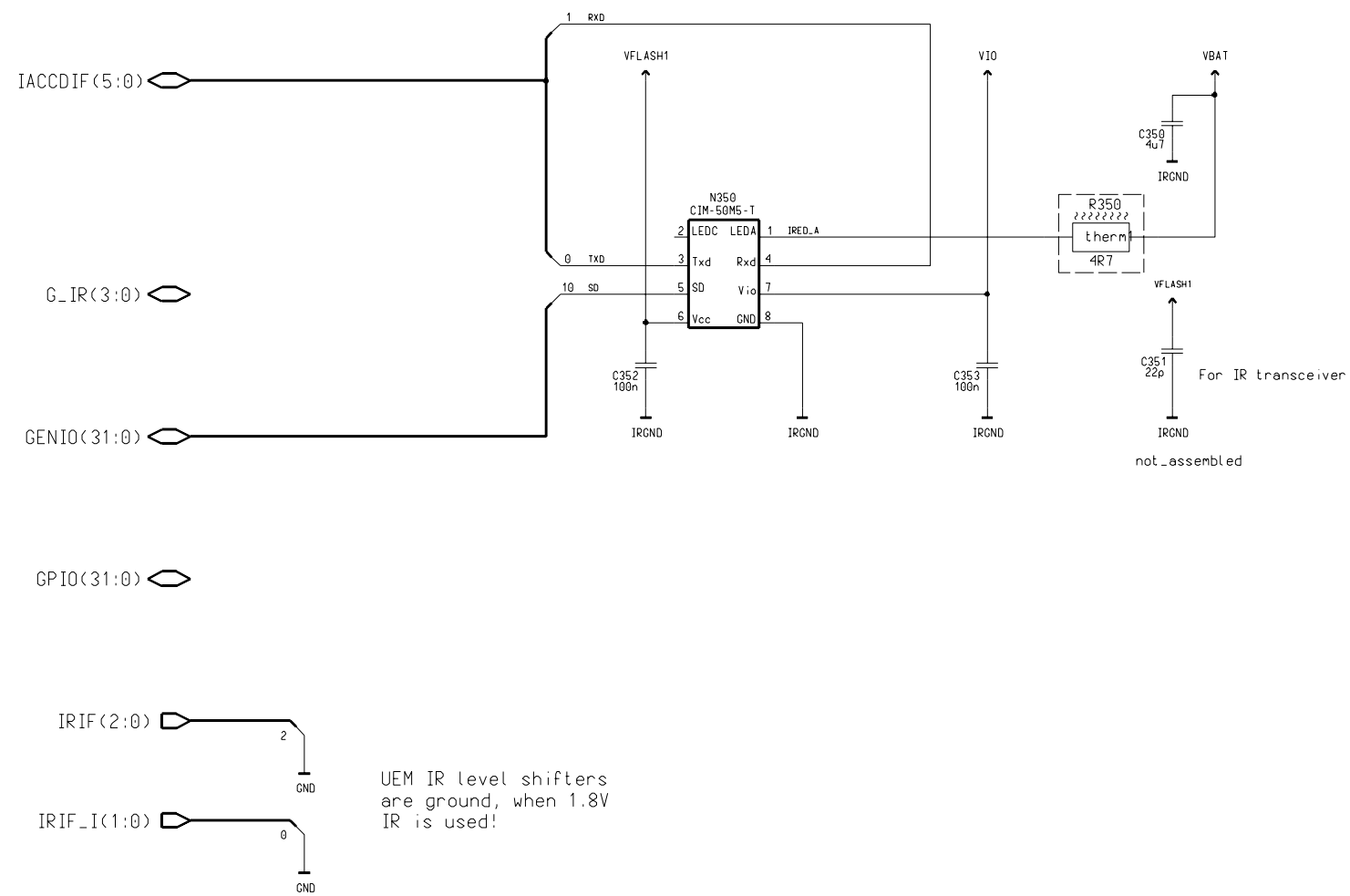


- ◻ G\_AUDIO(11:0)
- ◻ SLOWAD(6:0)
- ◻ AUDUEMCTRL(3:0)
- ◻ UIDRV(5:0)
- HOOKINT ◻
- PUSL(3:0) ◻
- ◻ MCBSP2(5:0)
- ◻ APE\_AUDIO(3:0)
- ◻ APE\_GPIO(15:0)

# Multi GND



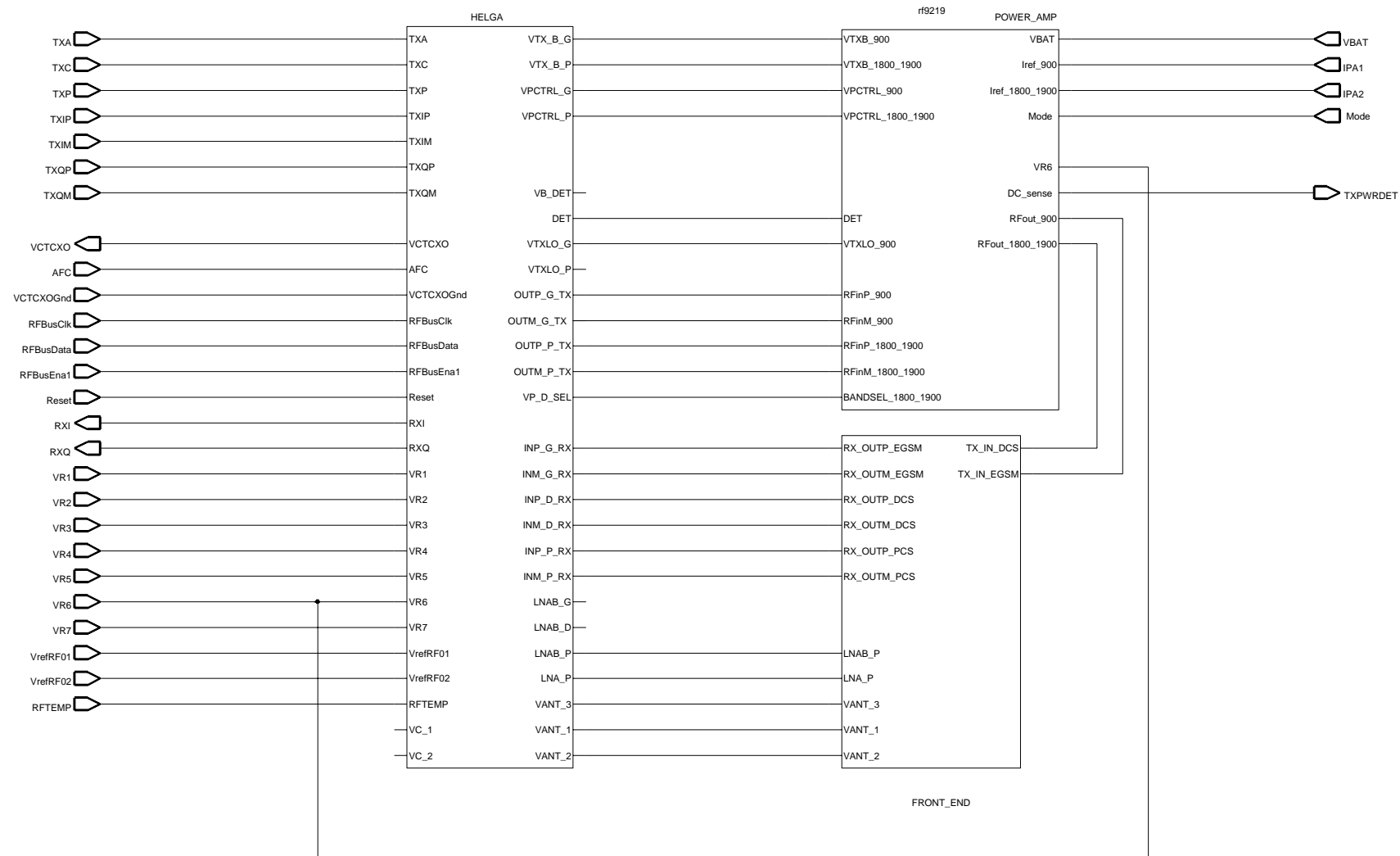
# IR Module



Used referenses

- C 350 - 353
- N 350
- R 350

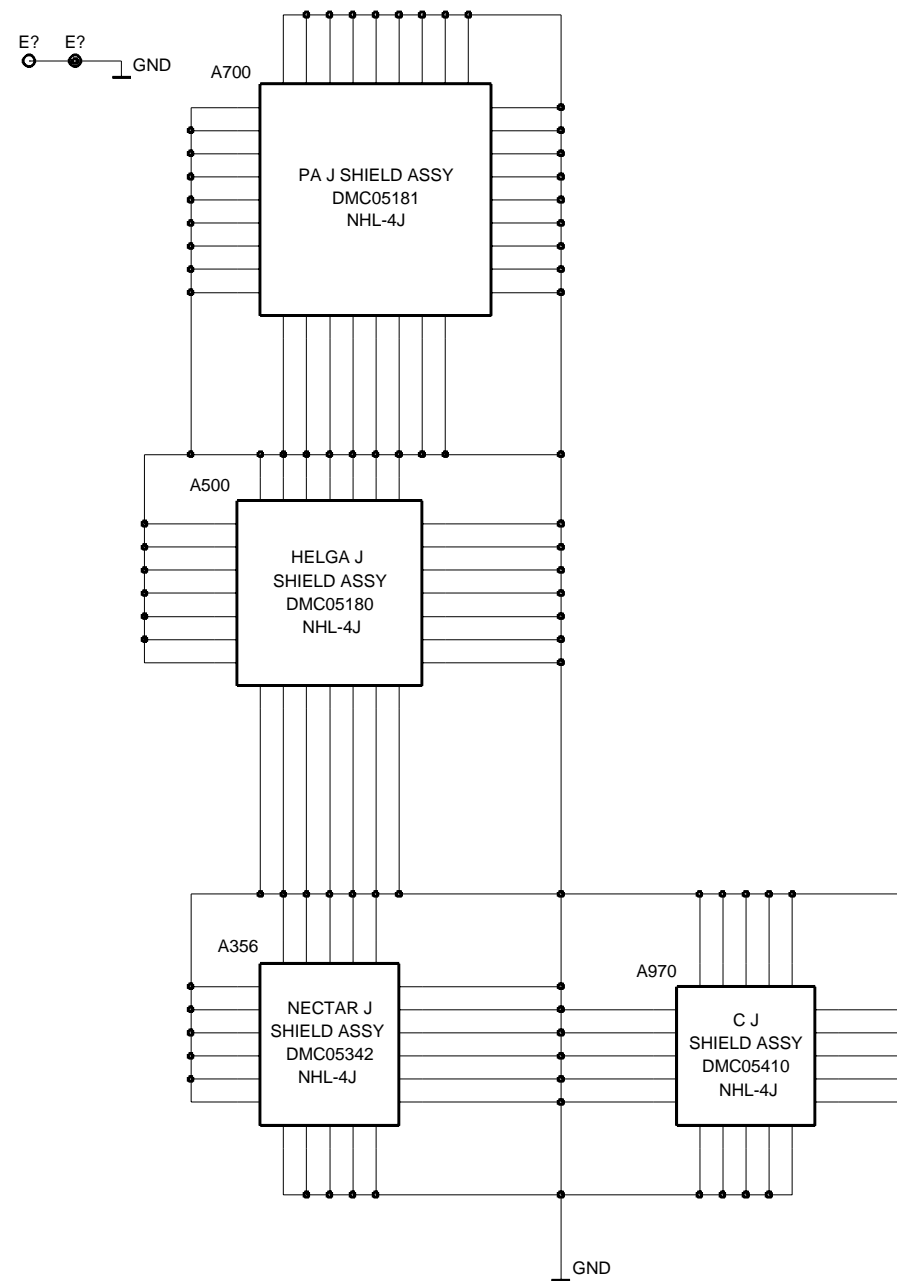
RF



# RF Shields and Vias

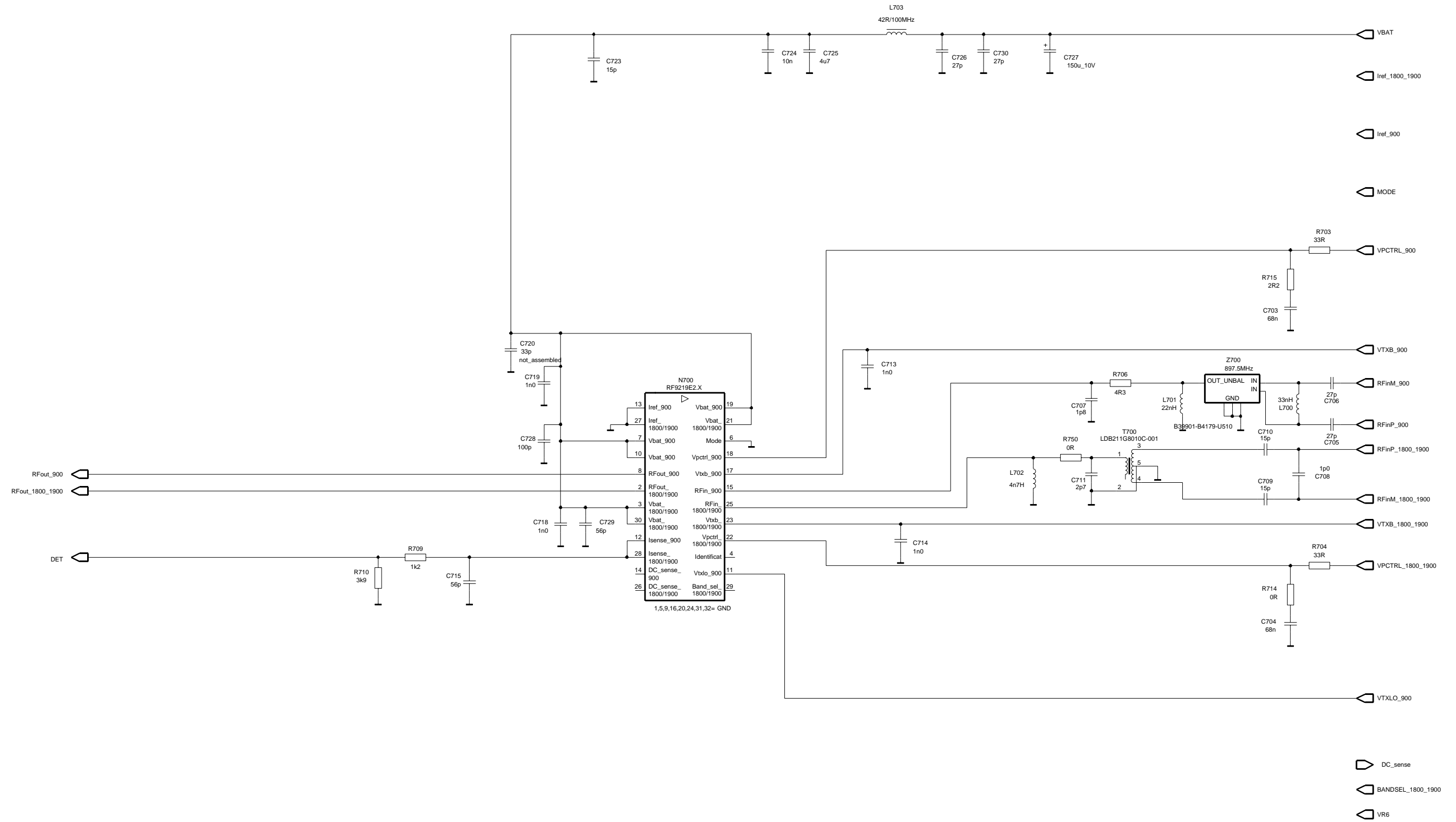
BB GLOBAL GND HOLES

RF GLOBAL GND HOLES





# Power Amplifier and Detection



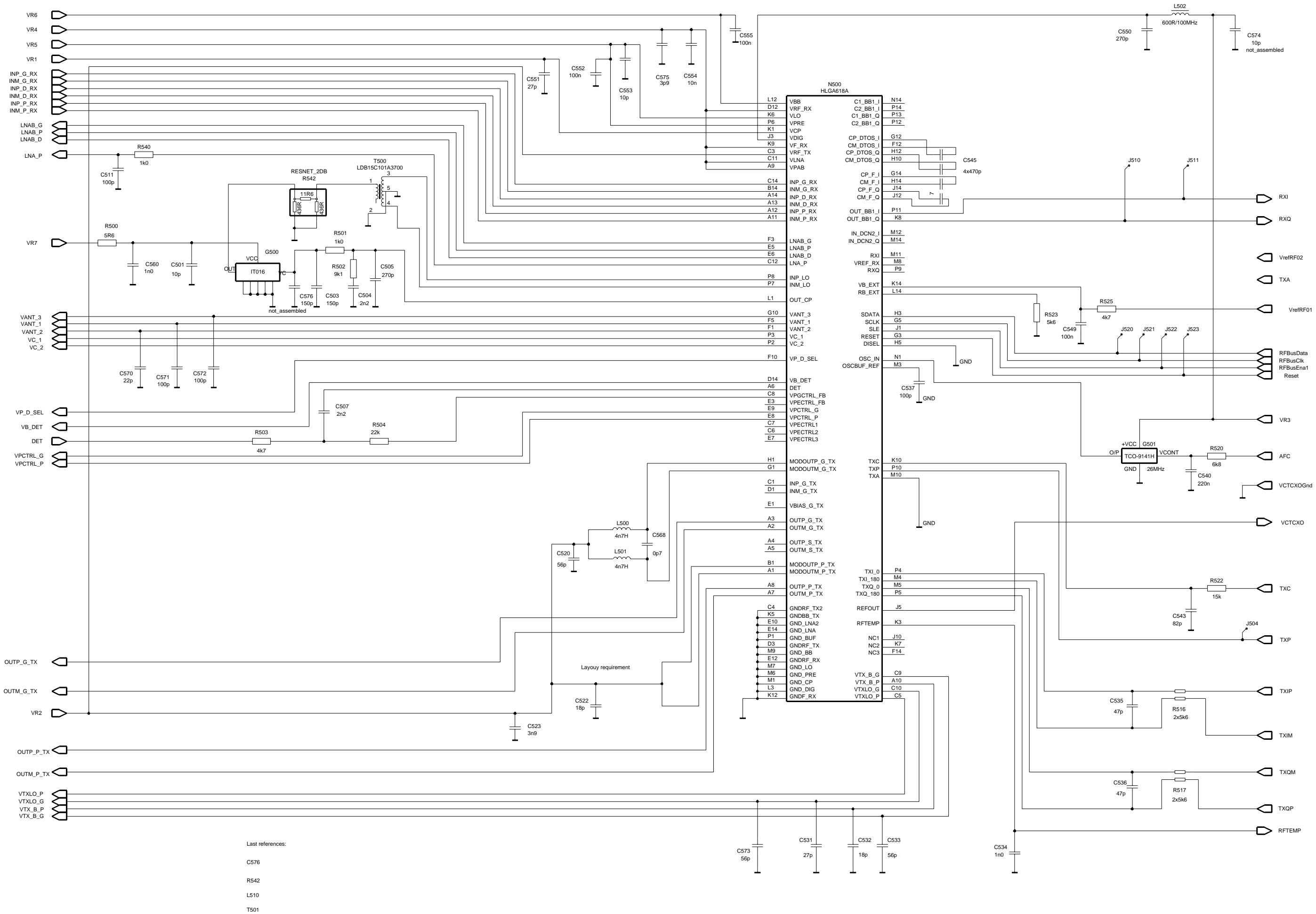
Last references:

C729

R715

L704

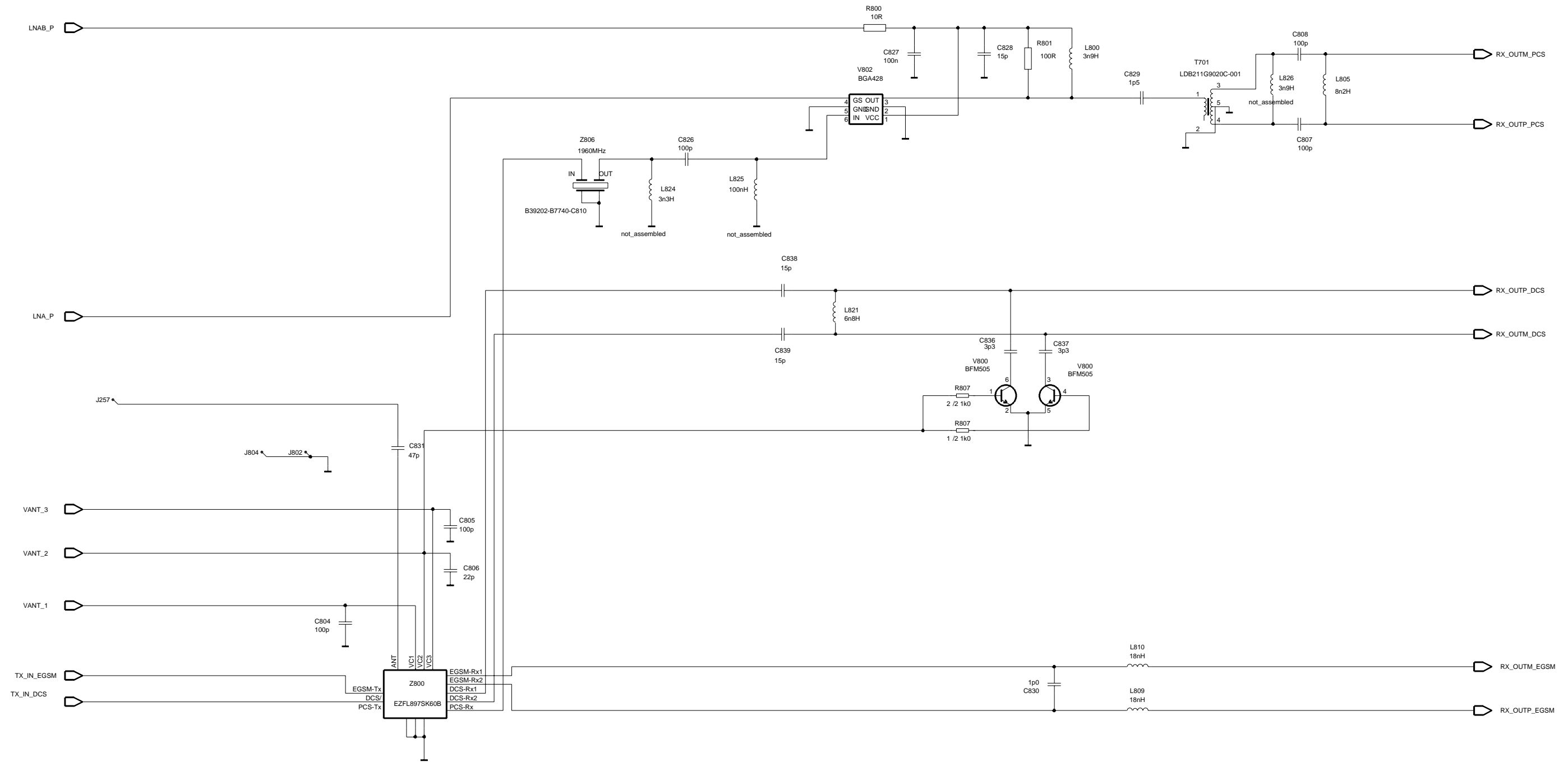
HELGA



Last references:

- C576
- R542
- L510
- T501

# RX Front End and Antenna Switch



Last references:

C835

R807

L825



# Assembly Values Diagram Top

