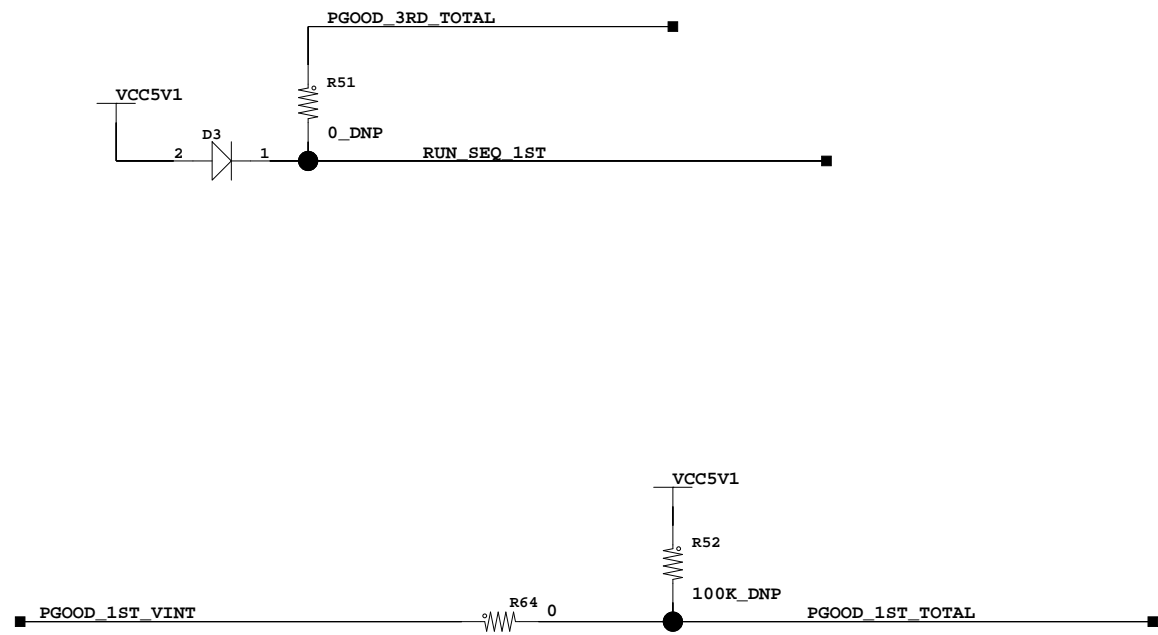


ADDC Schematic INDEX

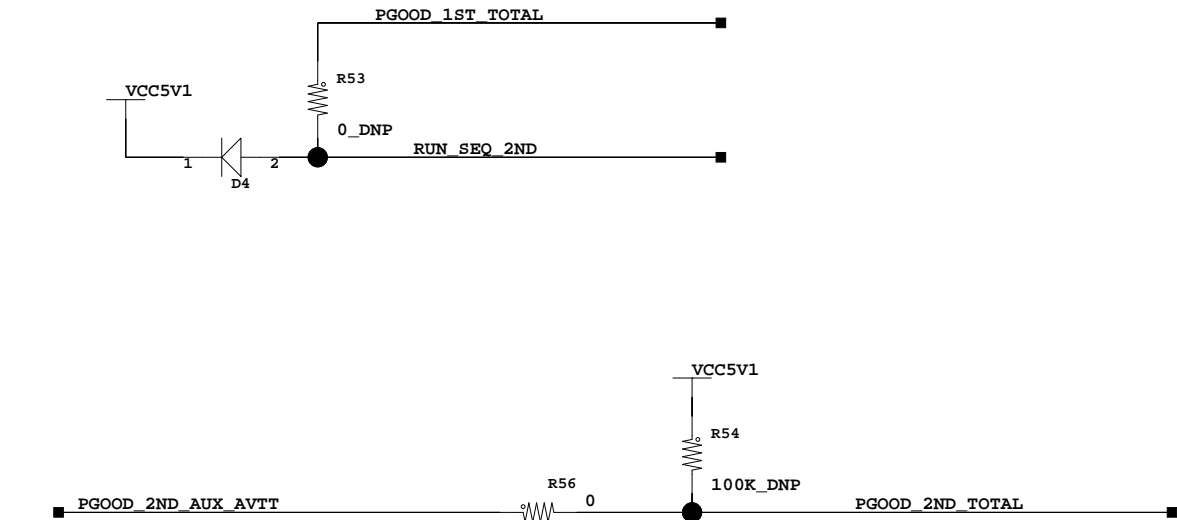
Page 1-2:	Power Supply Chips
Page 3:	Power Connector
Page 4-5:	GBTx Power & General IO
Page 6:	GBTx Configuration & Serial Interface
Page 7:	GBTx Clock Output
Page 8:	SLVS clock Translators
Page 9-15:	FPGA Schematics
Page 16:	QSFP connector with cage
Page 17:	36p mini SAS connector

CHECKED, 3/3/2013

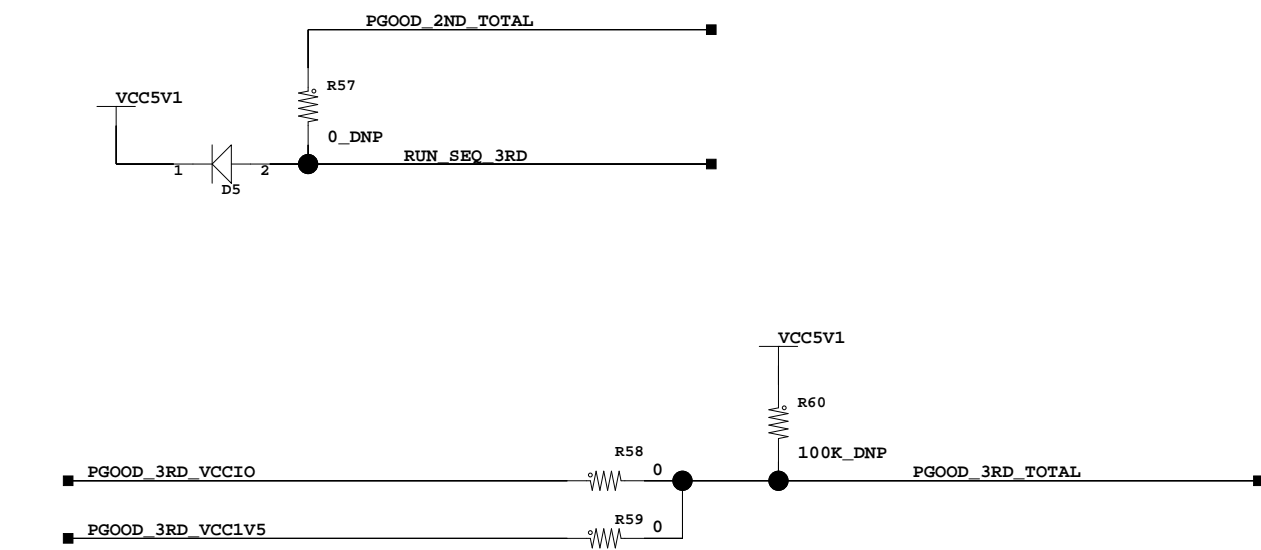
First Stage VCCINT(1V), MGTAVCC(1V)



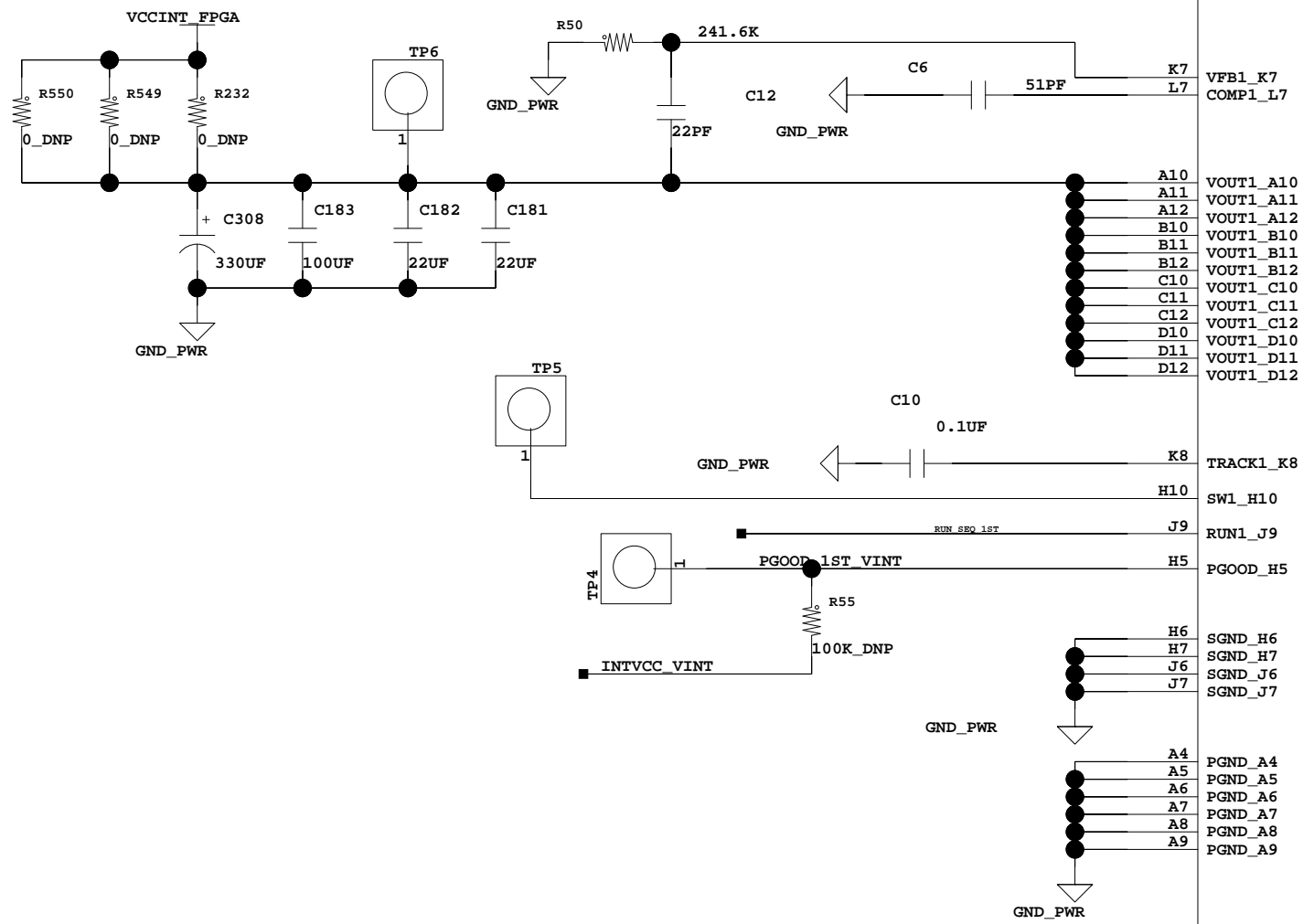
Second Stage VCCMGTAVTT(1V2), VCCAUX(1V8)



Third Stage VCCIO(3V3,2V5,1V5), VCCA(1V5)



VCCINT_FPGA 1.0V

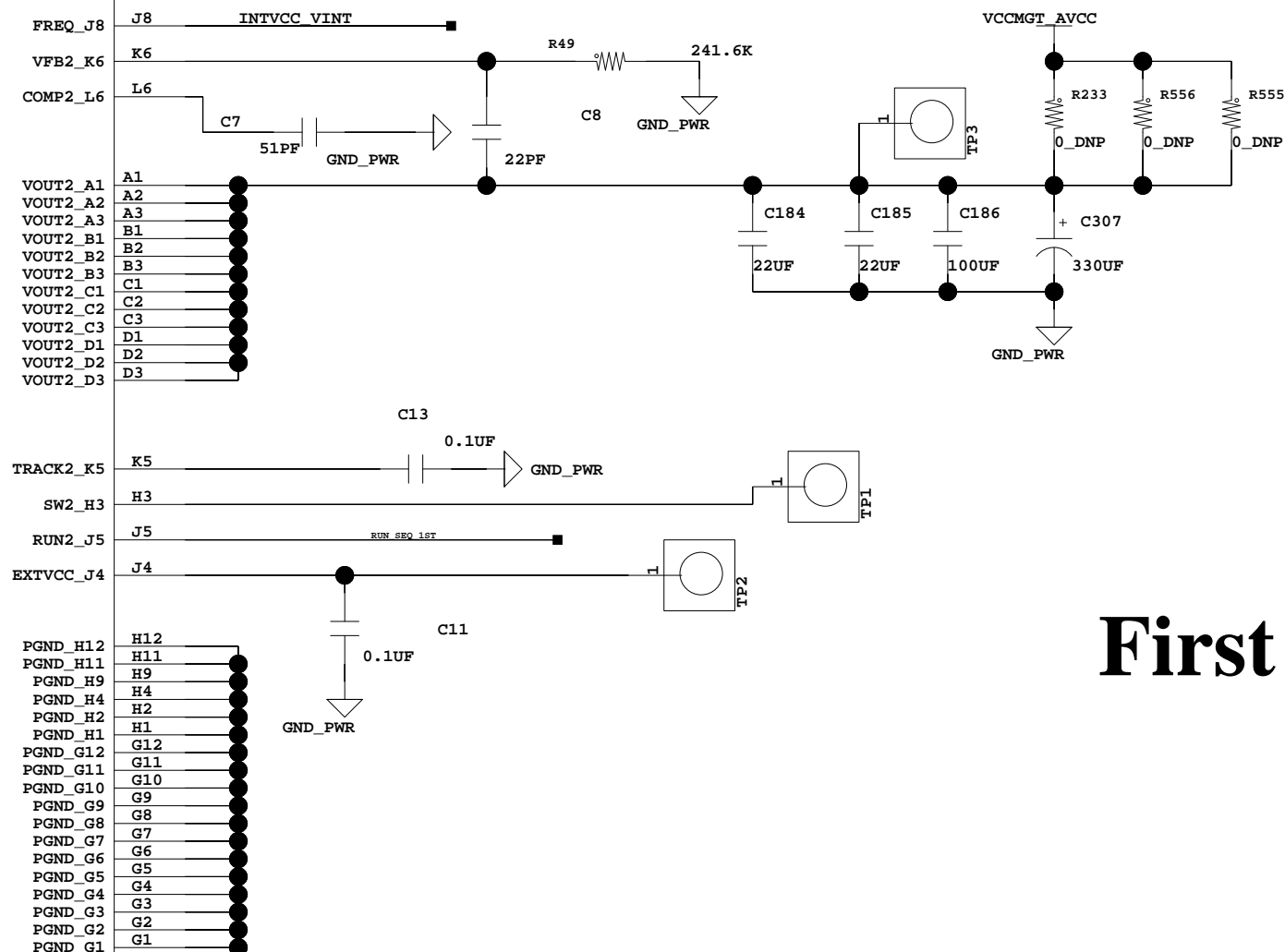


LTM4619

Dual 4A DC/DC Regulator

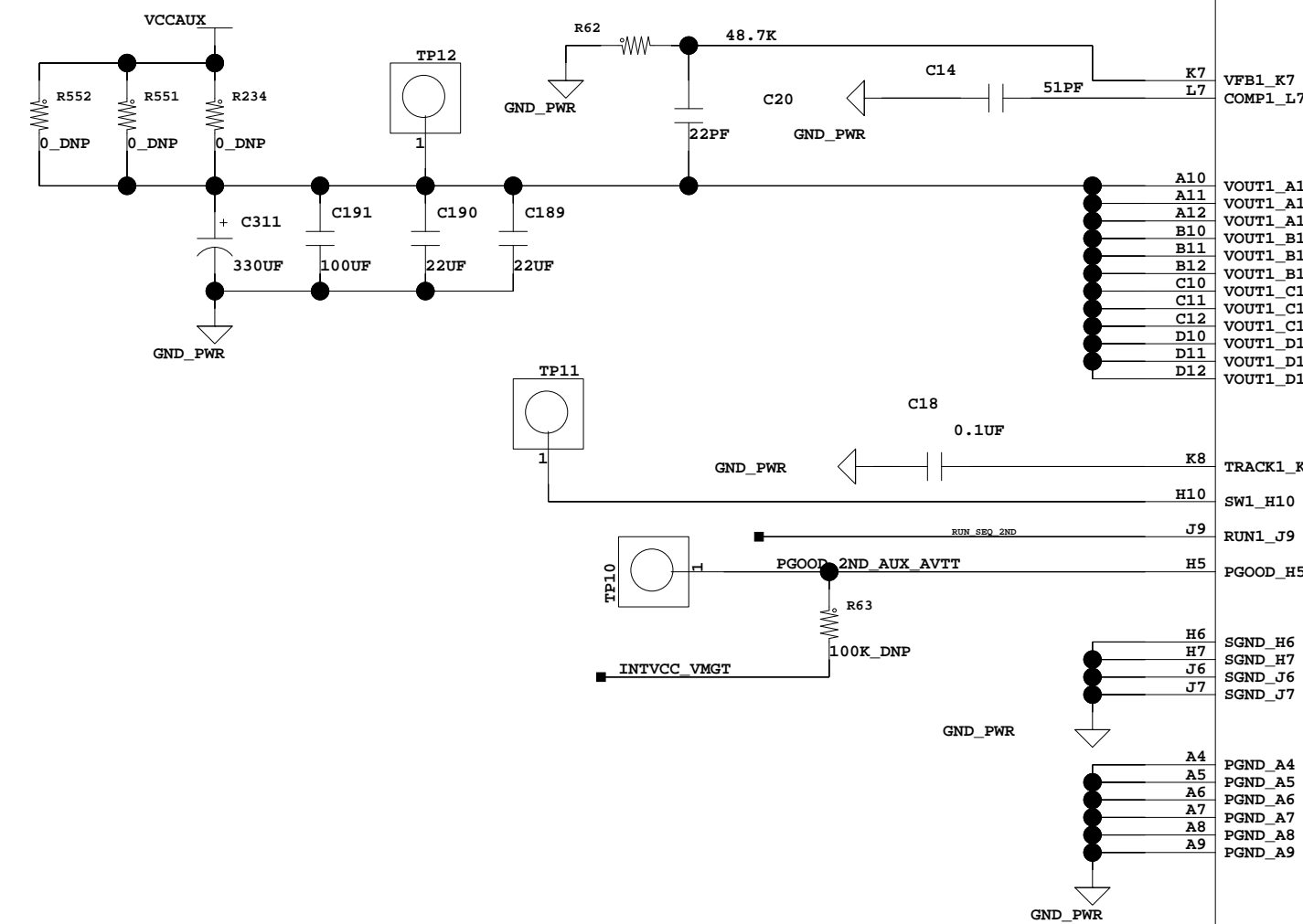
U15

VCCMGT_AVCC 1.0V



First Stage

VCCAUX 1.8V

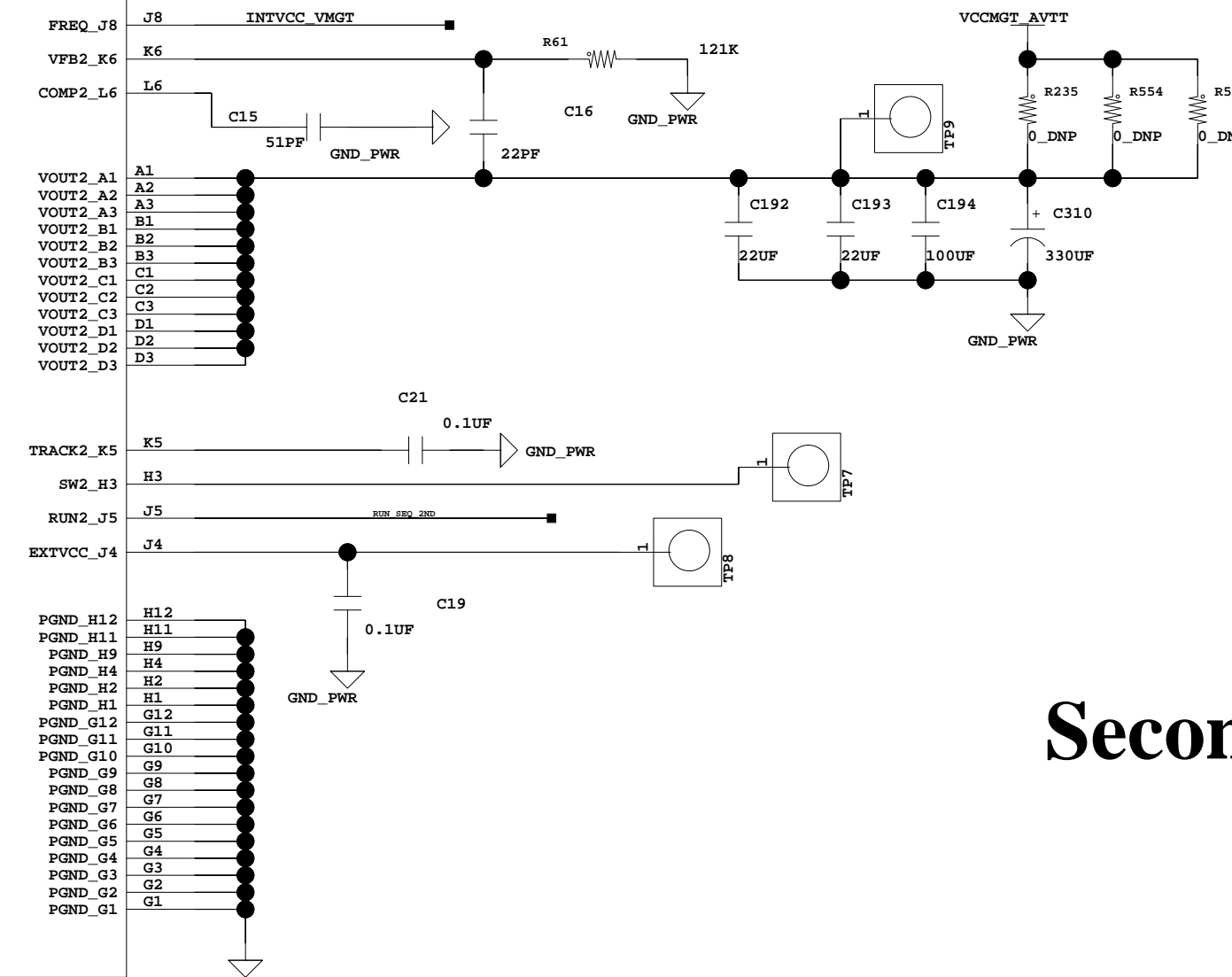


LTM4619

Dual 4A DC/DC Regulator

U16

VCCMGT_AVTT 1.2V



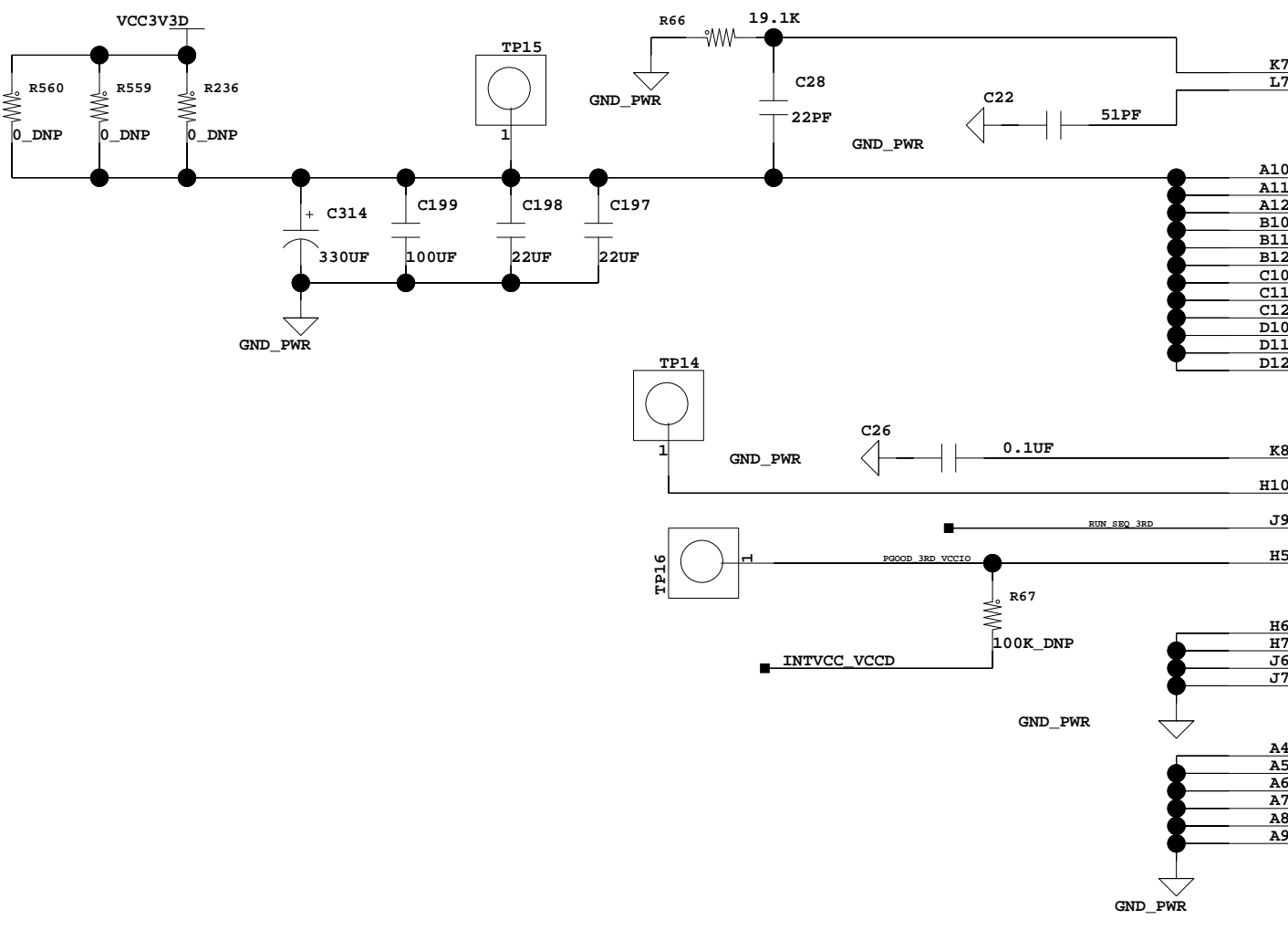
Second Stage

COMPANY	
TITLE	
DESIGN	DATE
REV	REV
DATE	DATE
REV	REV
DATE	DATE
REV	REV
DATE	DATE
REV	REV
DATE	DATE

Third Stage

CHECKED, 3/3/2013

YCC3V3D
3.3V

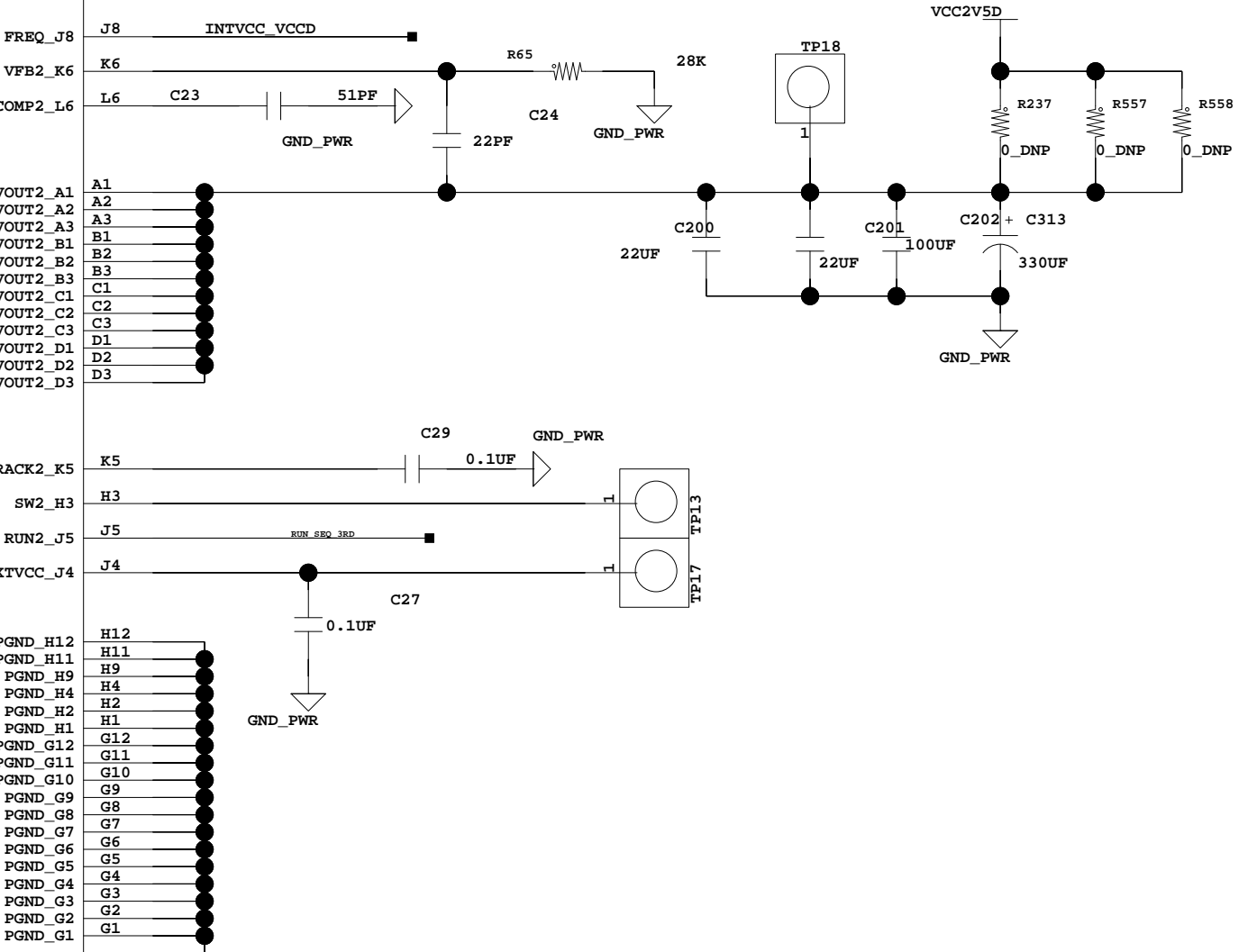


LTM4619

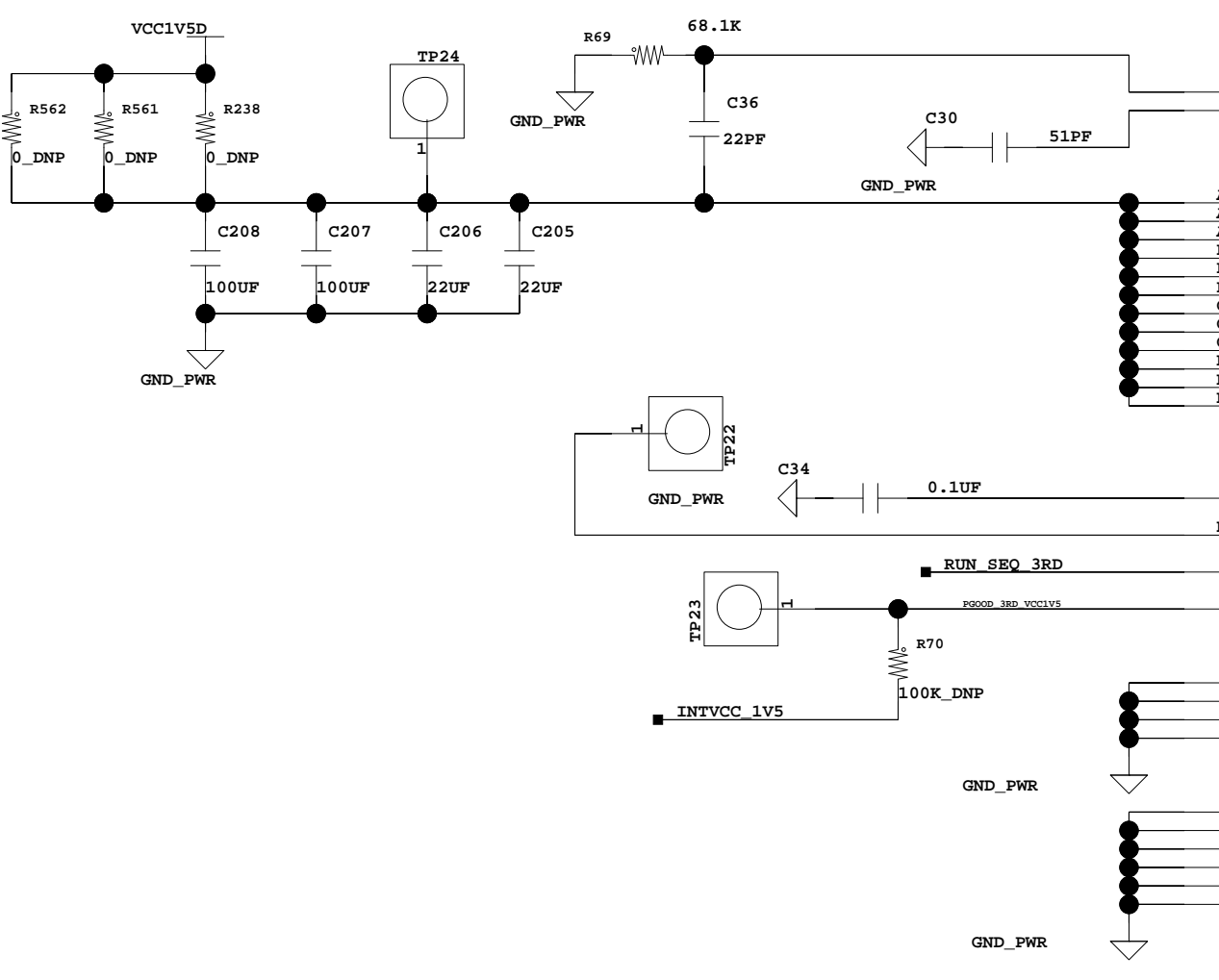
Dual 4A DC/DC Regulator

U17

YCC2V5D
2.5V



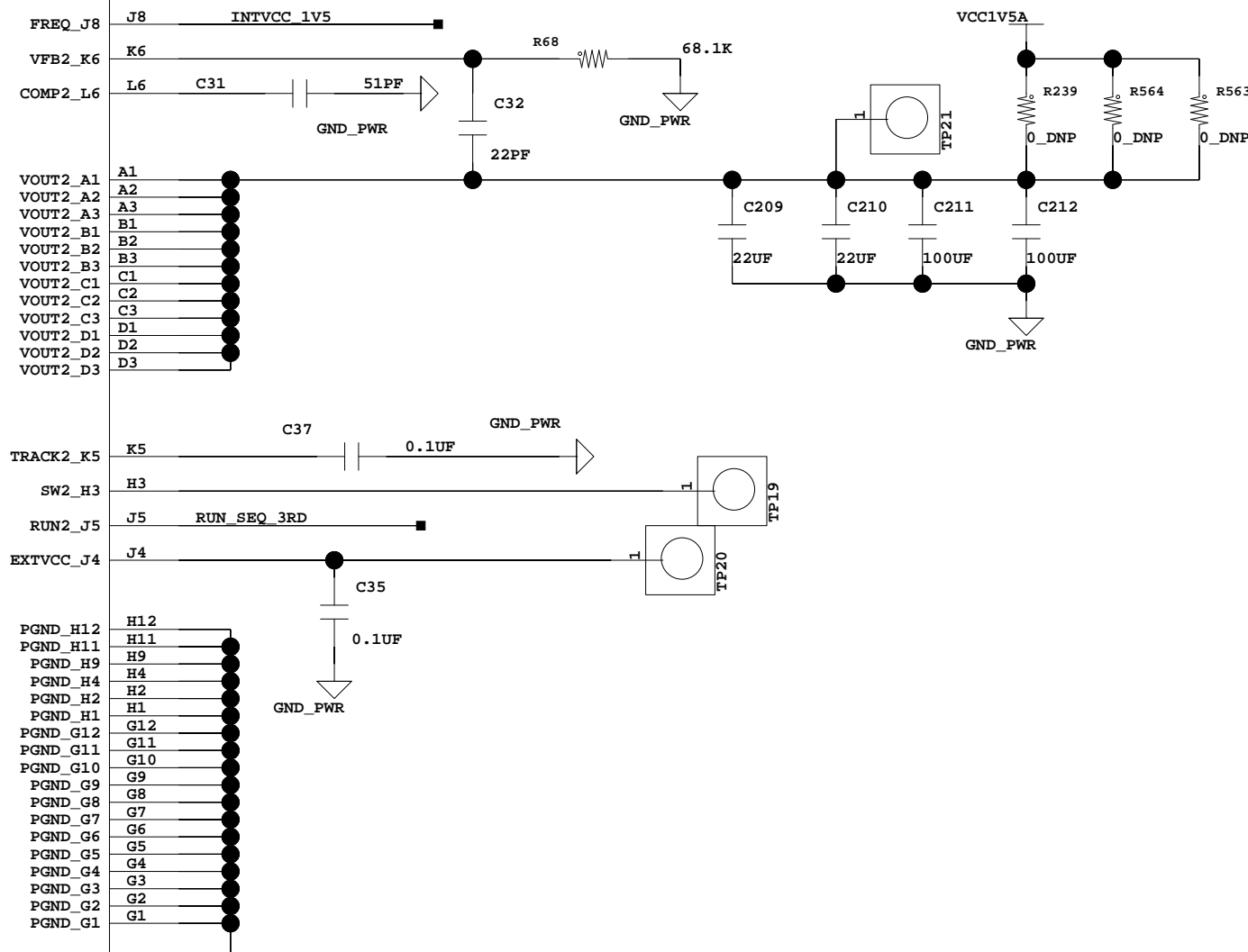
YCC1V5D
1.5V



LTM4619

Dual 4A DC/DC Regulator

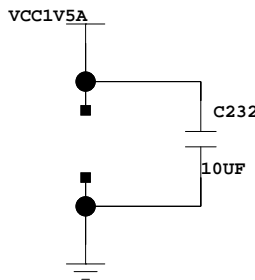
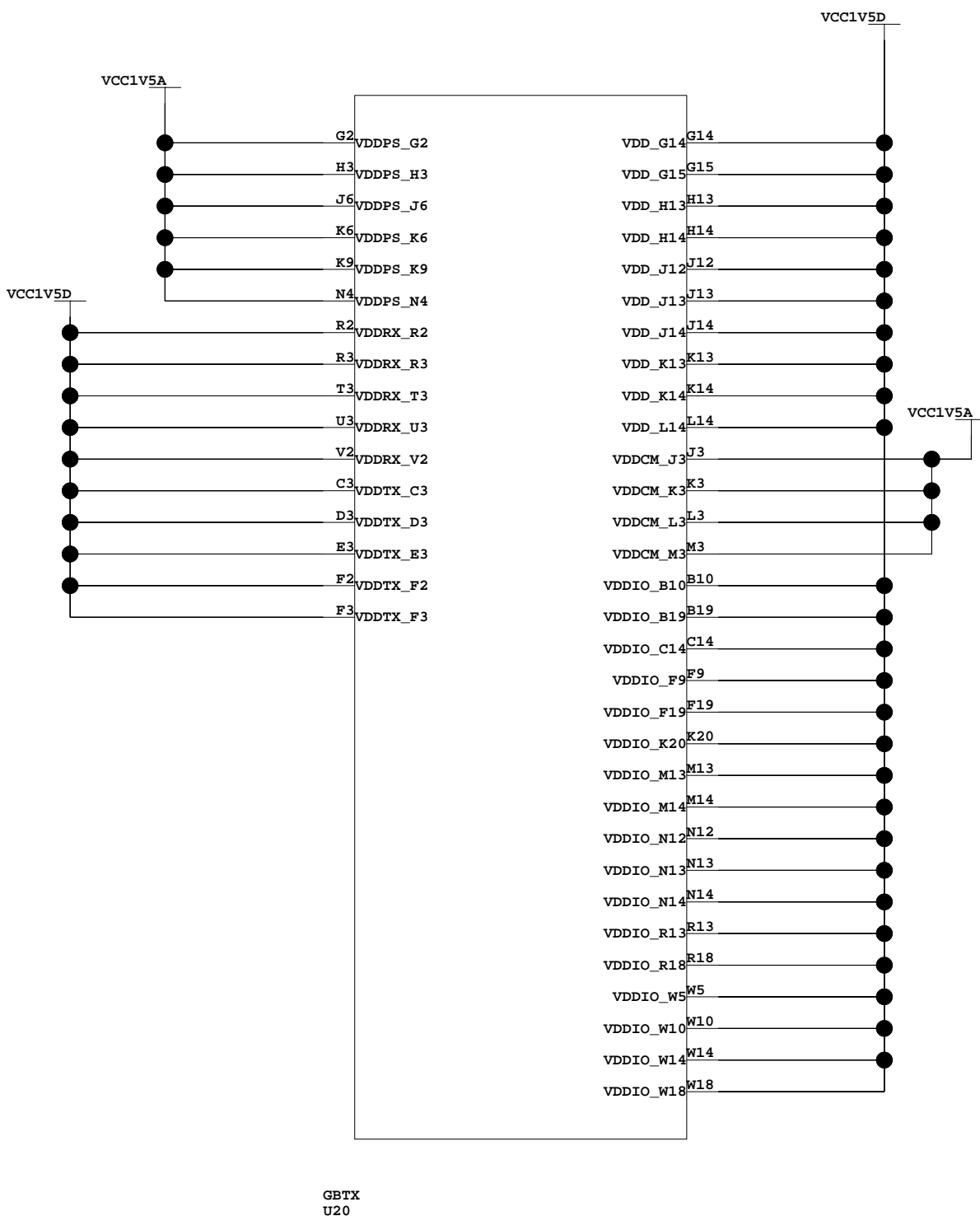
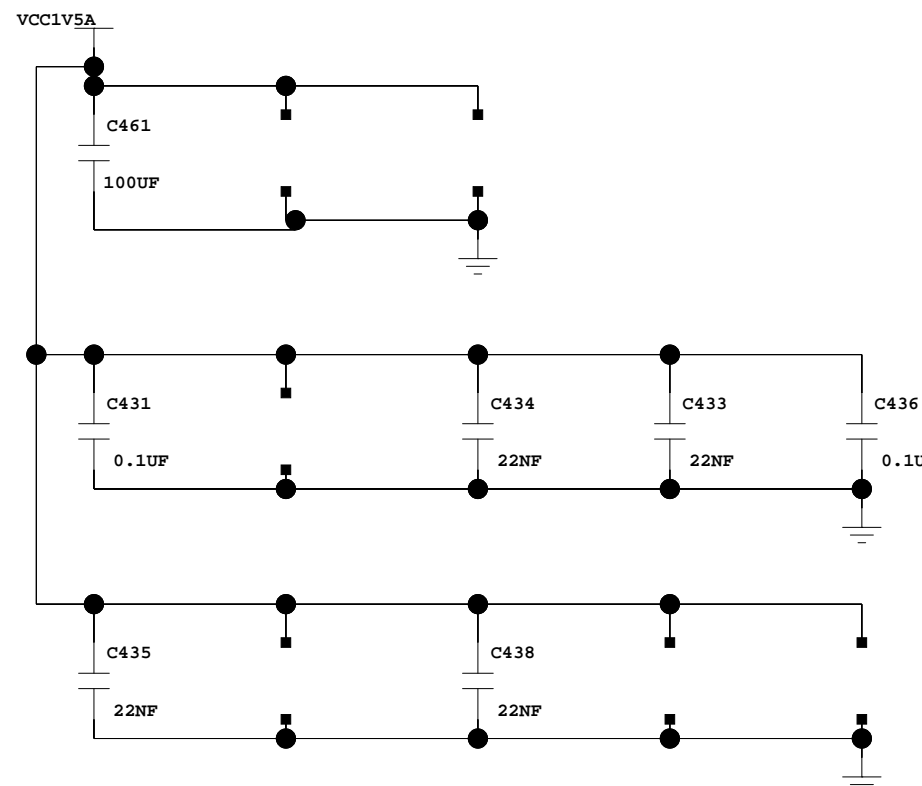
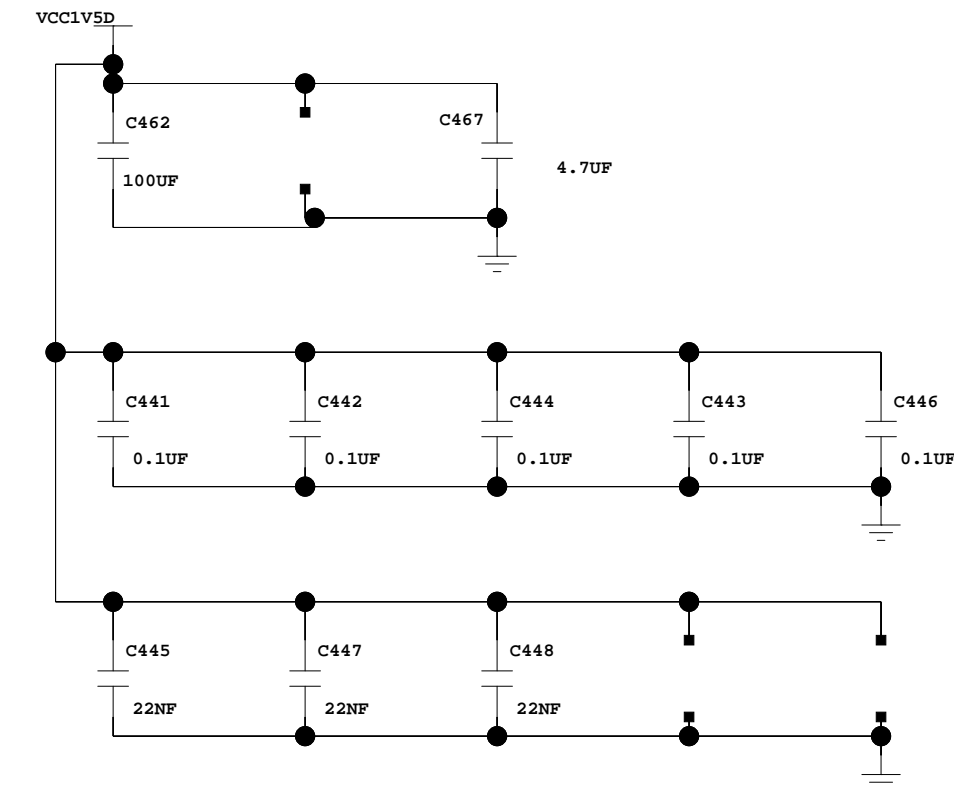
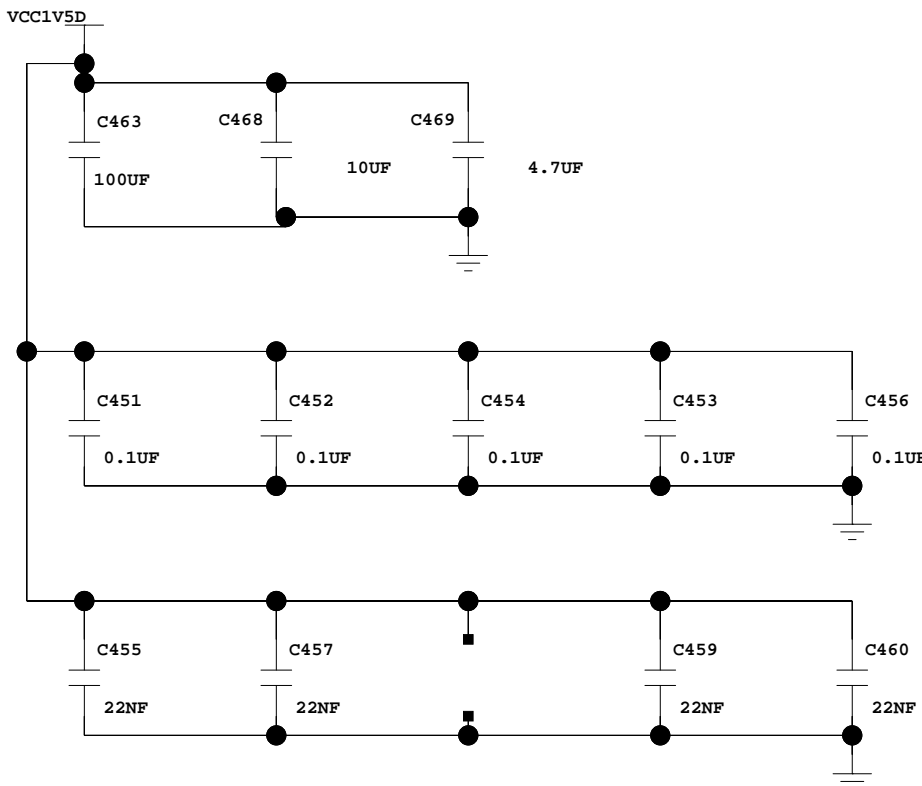
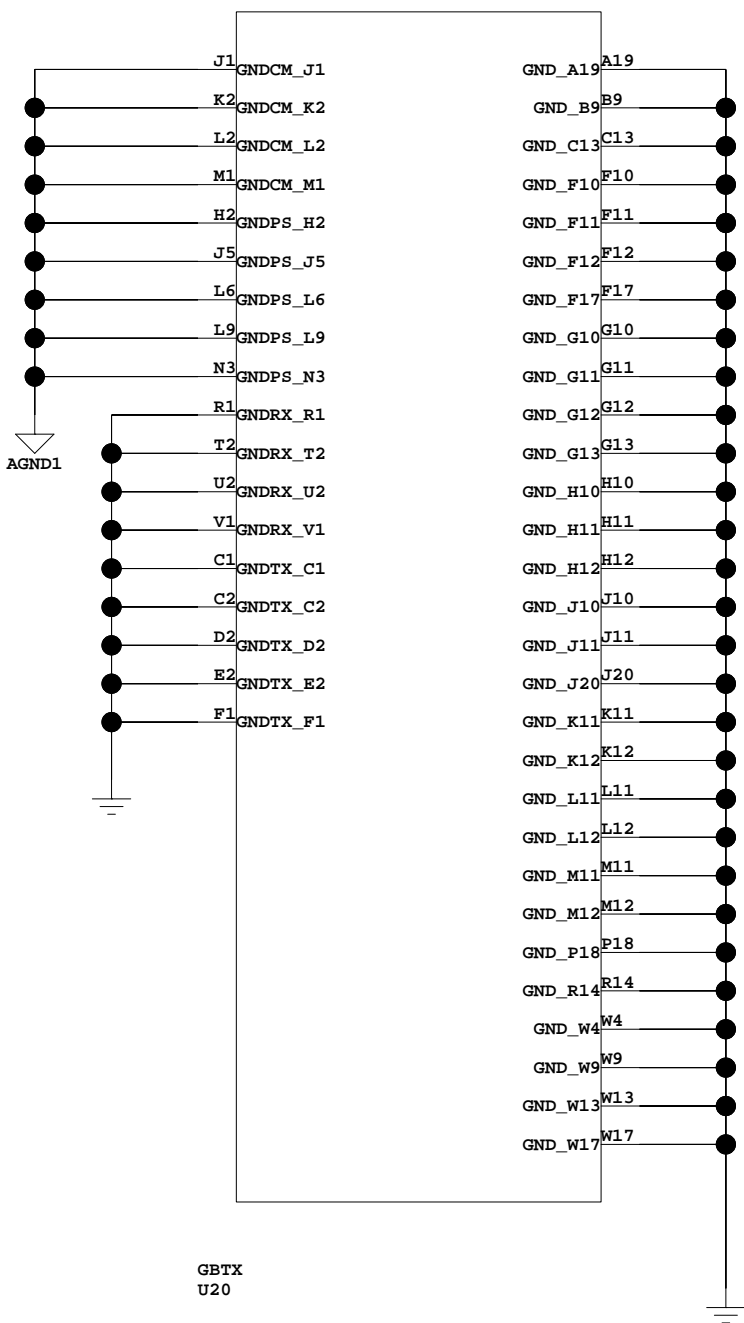
U18



COMPANY			
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2013	D	REV	2013

CHECK voltage and filter once again

3/3/2013



NOTE

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GBTX_PWR_GND				
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PSAAN				

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CHECKED, 3/3/2013

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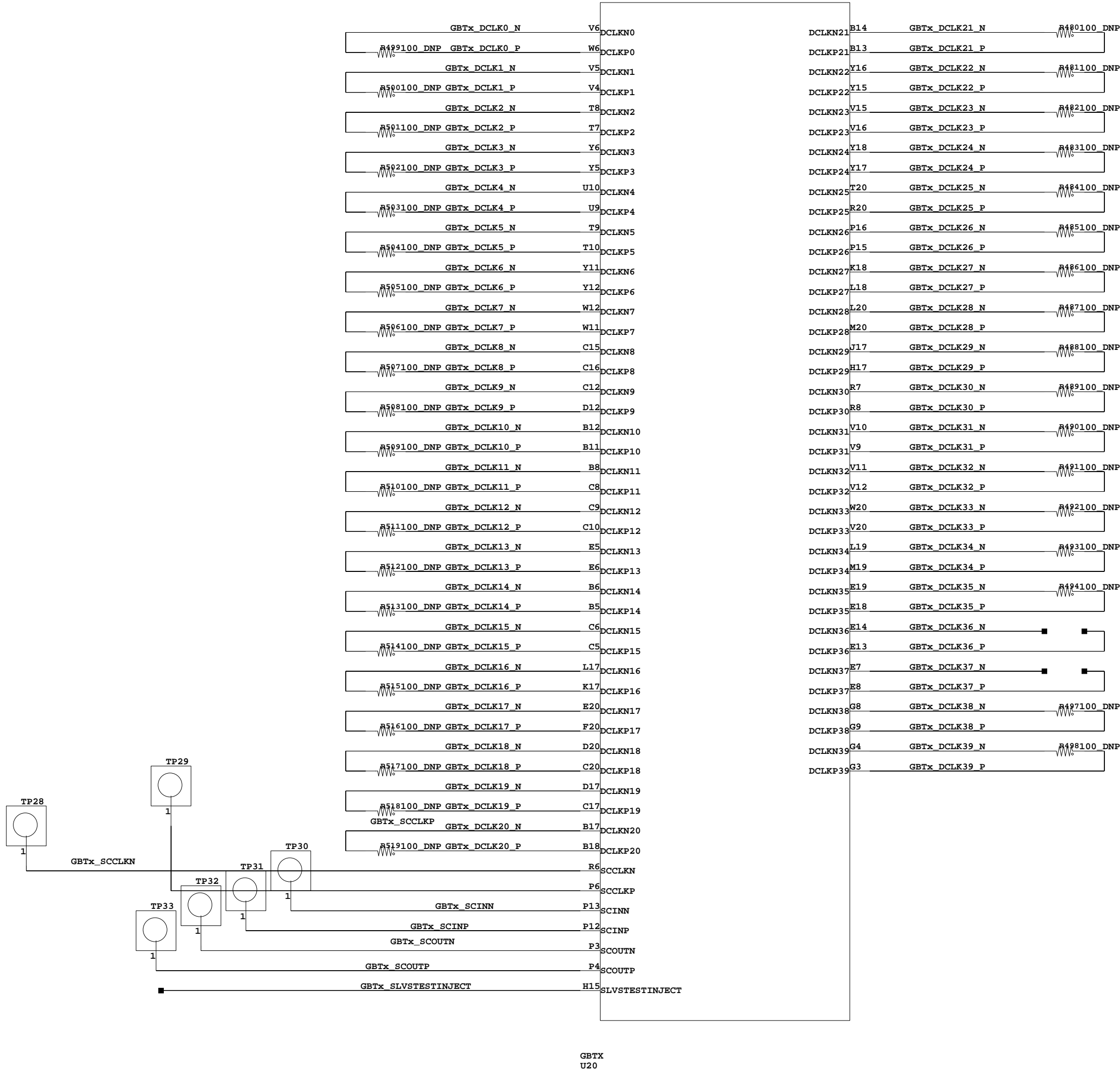
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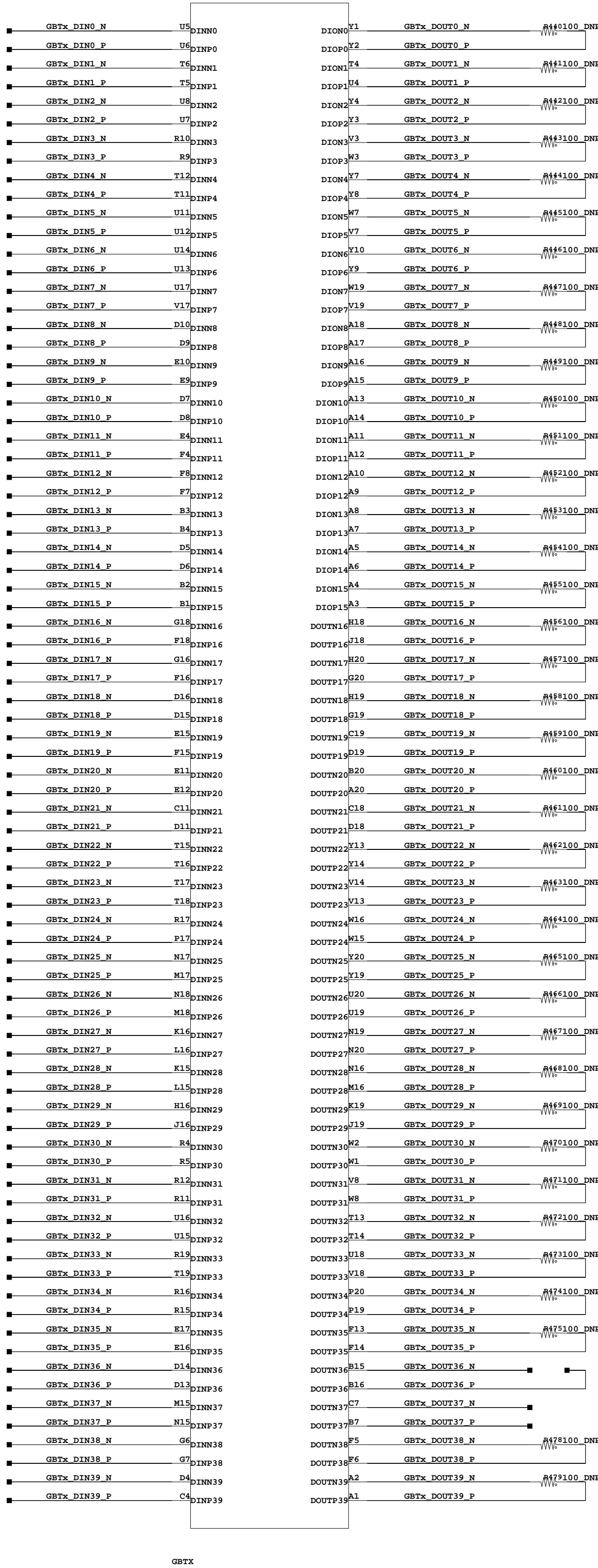
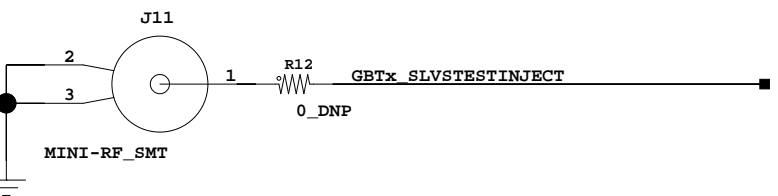
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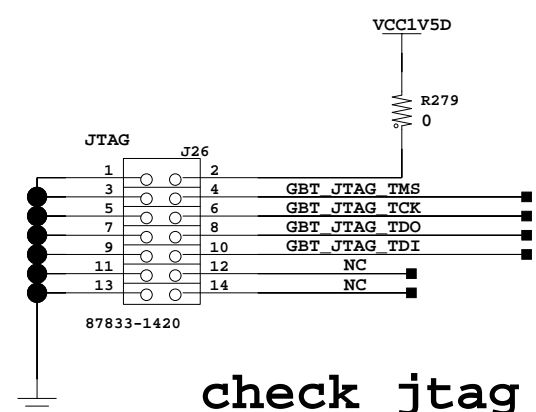
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SC test connections check again

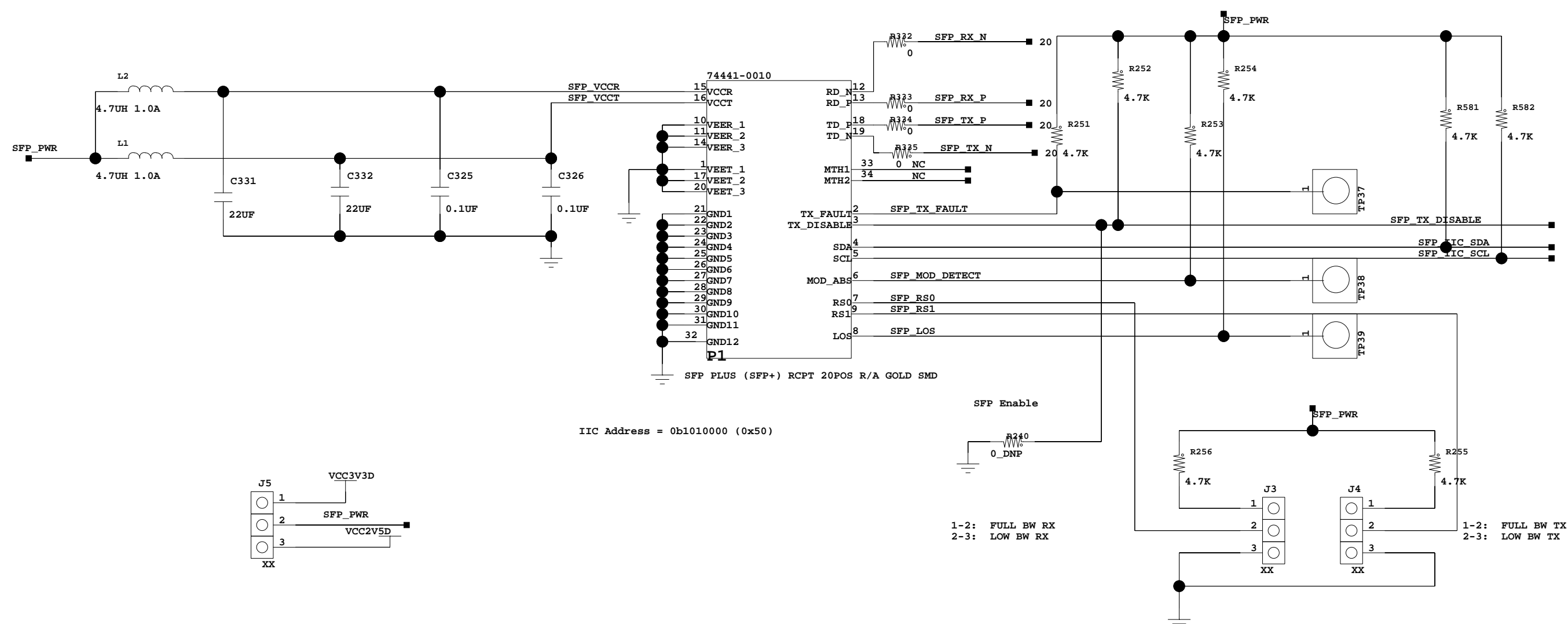


COMPANY	
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REV	DATE
GBTX	DATE
DATE	DATE



```
check jtag voltage for GBT
```

SFP+ power selectable, 2.5V, 3.3V

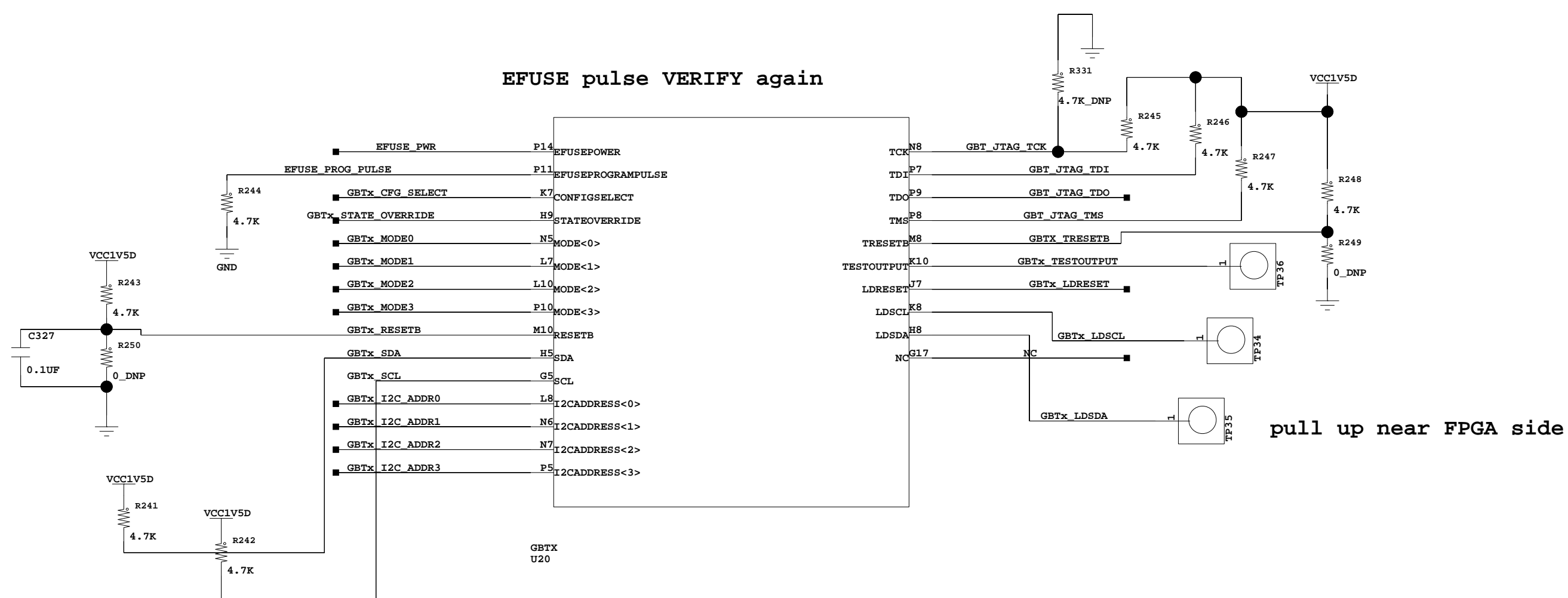


VTRX should be package compatible with SFP+
Be careful to check the sfp and cage package again

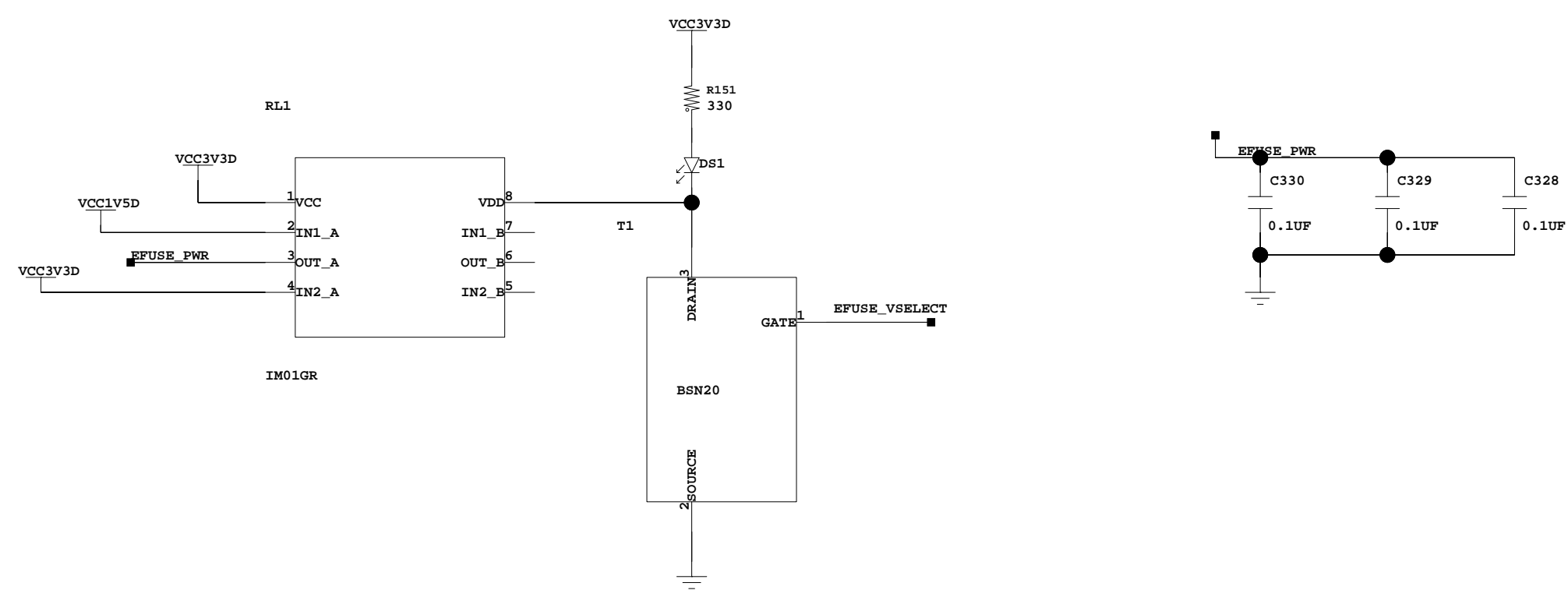
cage: 74754-0101,
the module and cage selection is from AC705

EFUSE PWR CHECK AGAIN

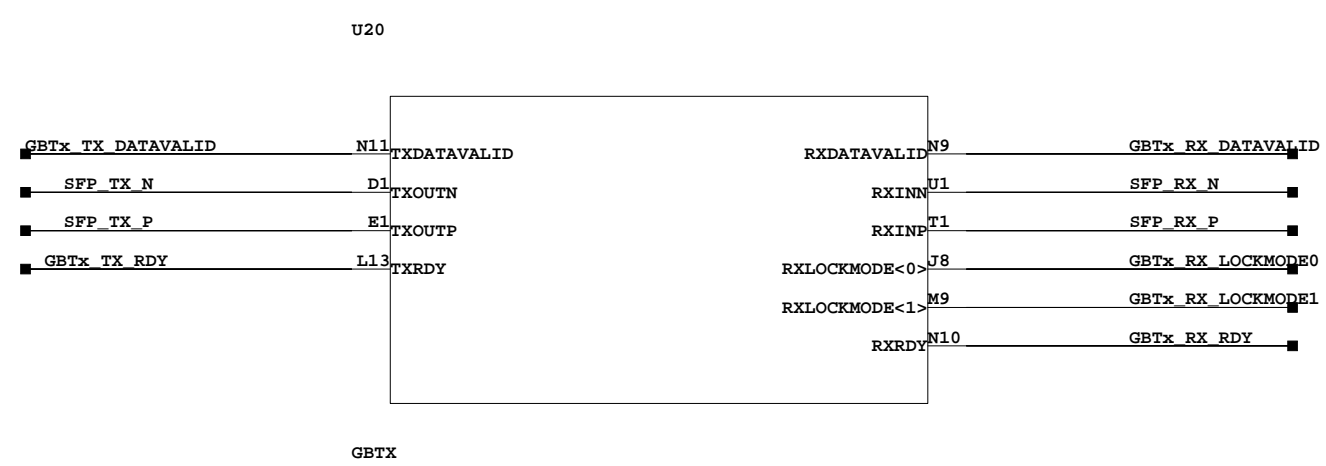
EFUSE pulse VERIFY again



pull up near FPGA side

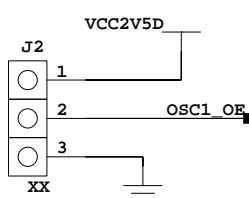
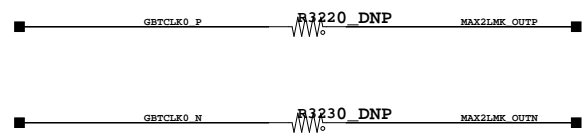
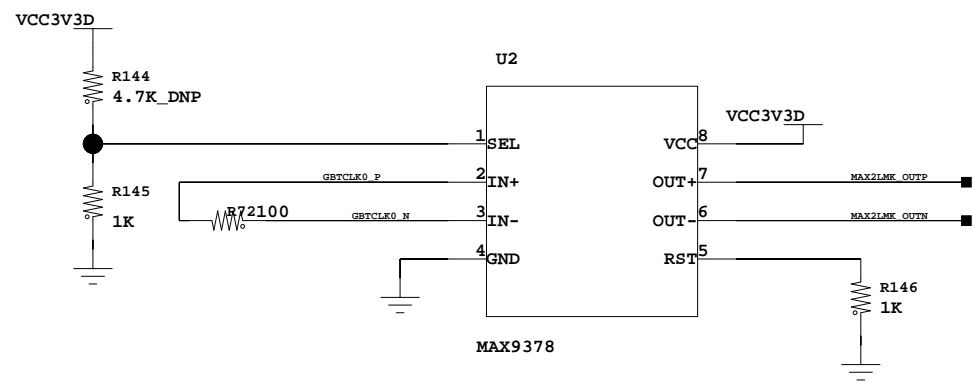


```
efuse pwr relay, programming under 3.3v
```

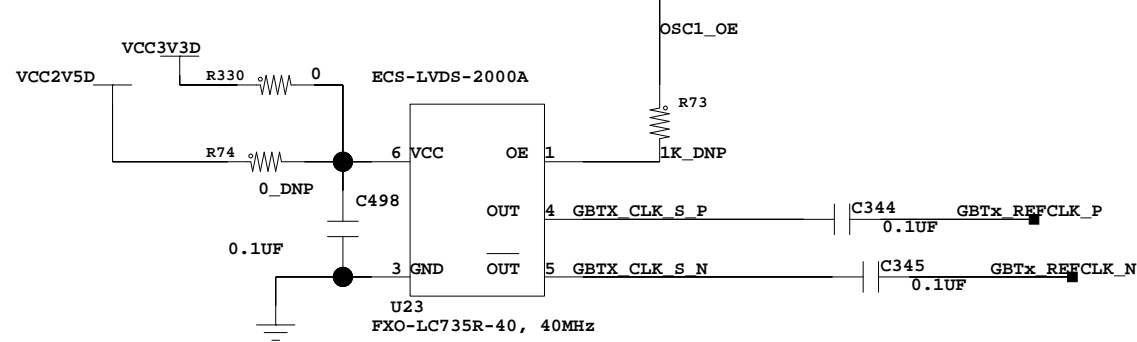


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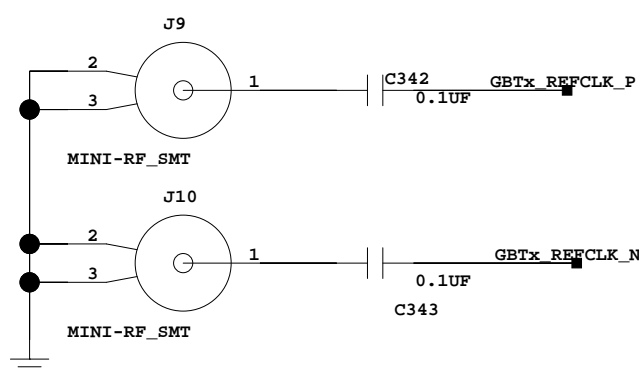
CHECKED, 3/3/2013



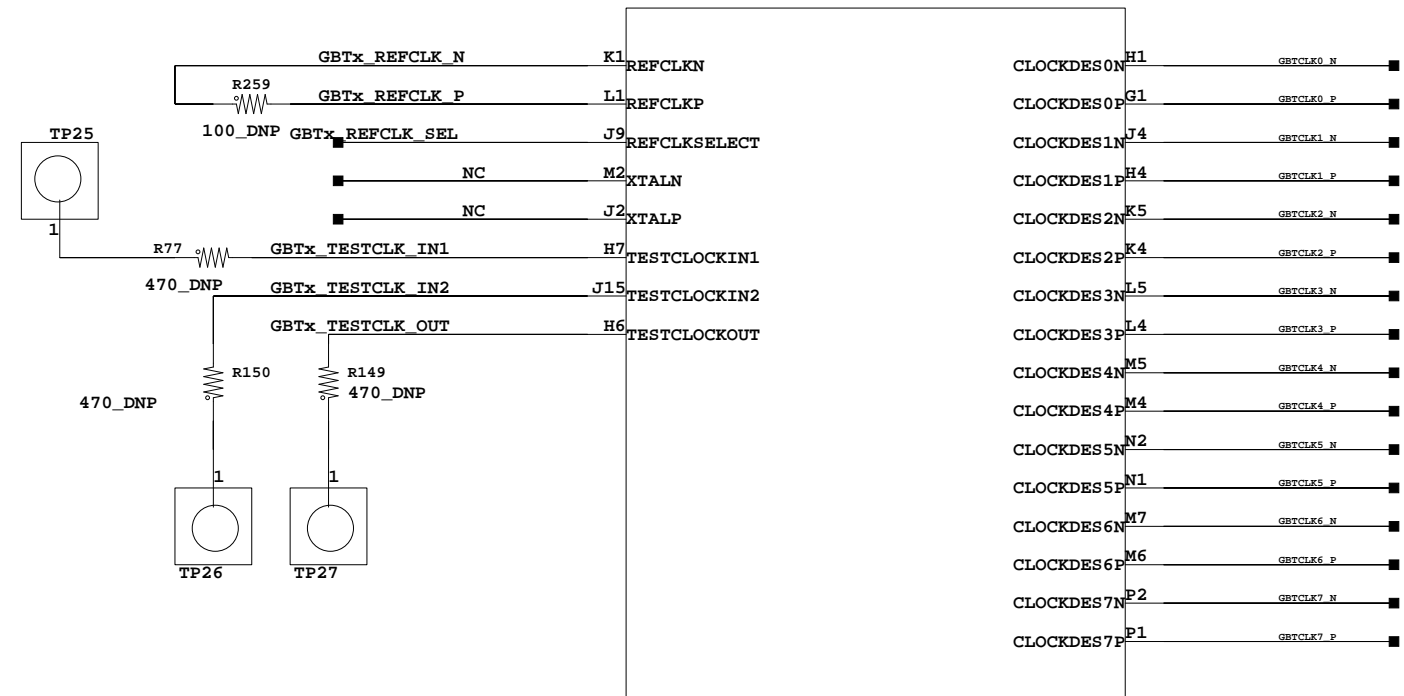
ADD 3.3V option for U23



Revised for smt clk input

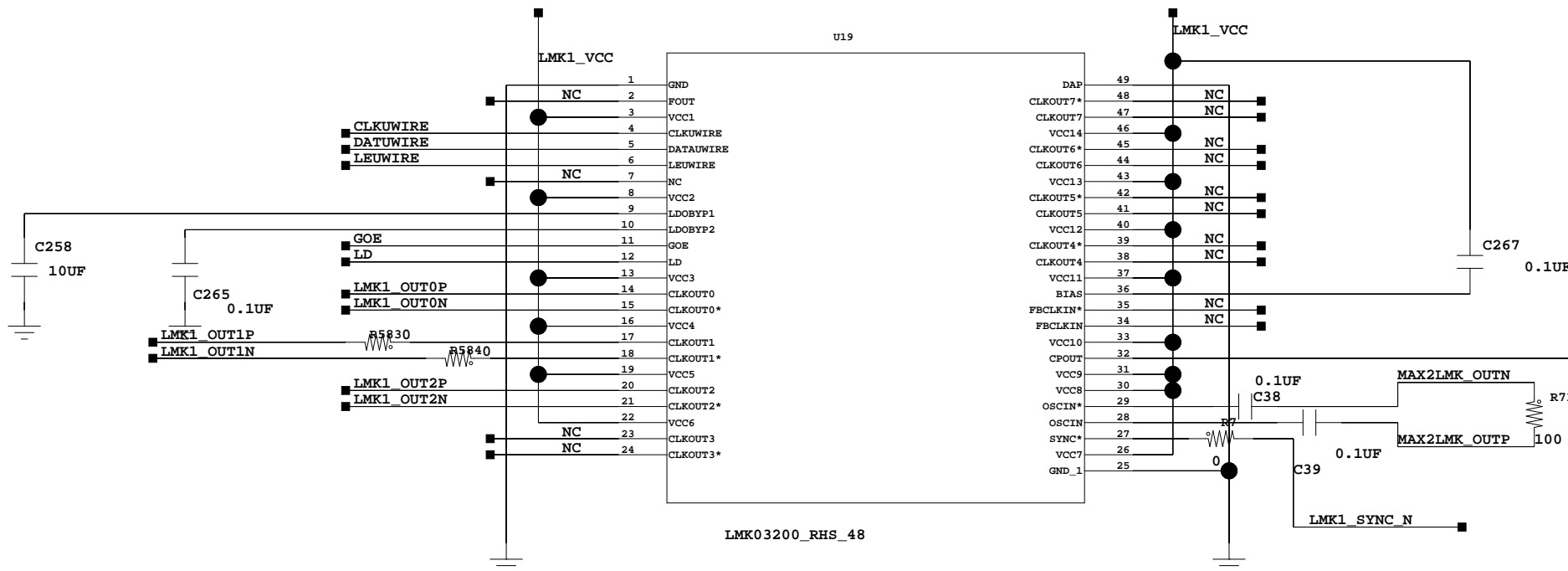
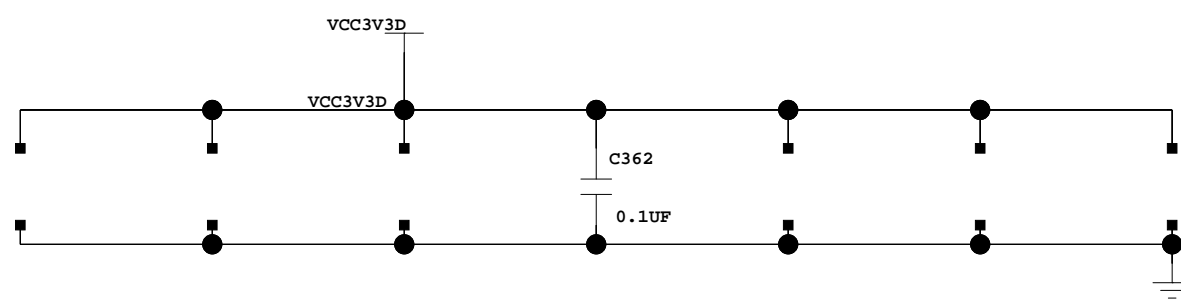


Check the XTAL pins



GBTX
U20

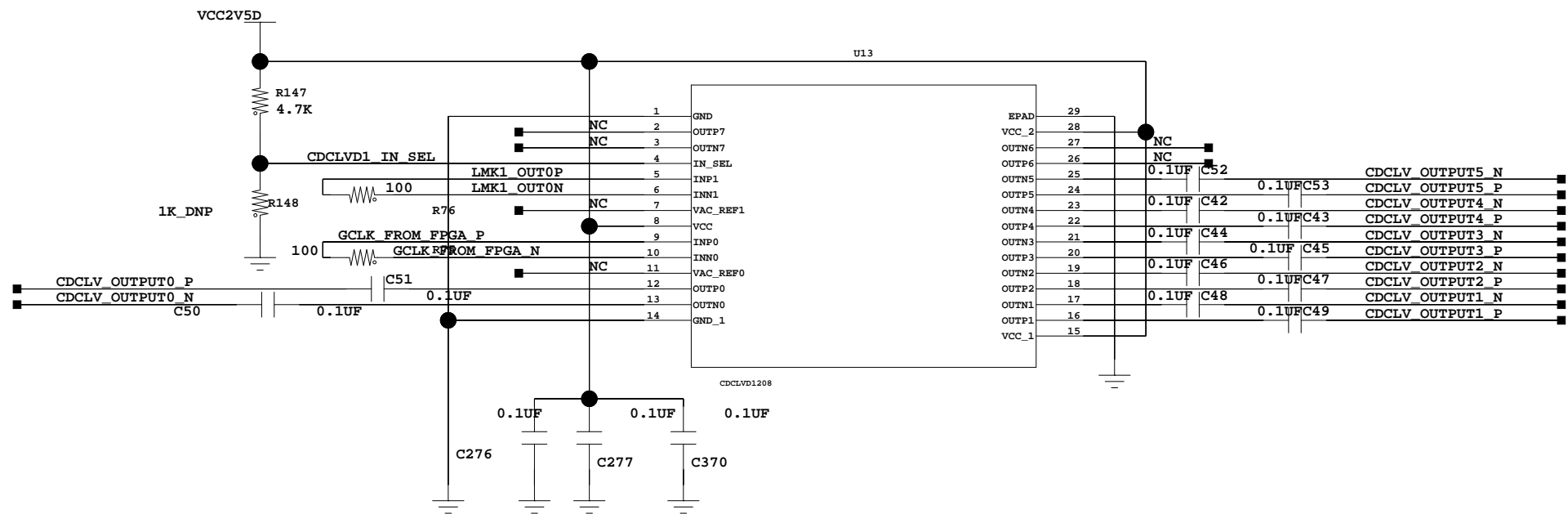
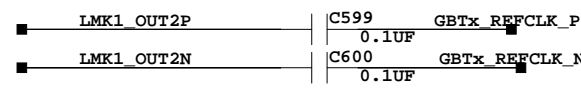
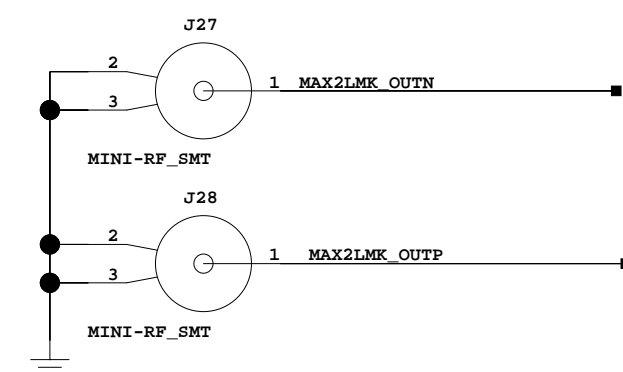
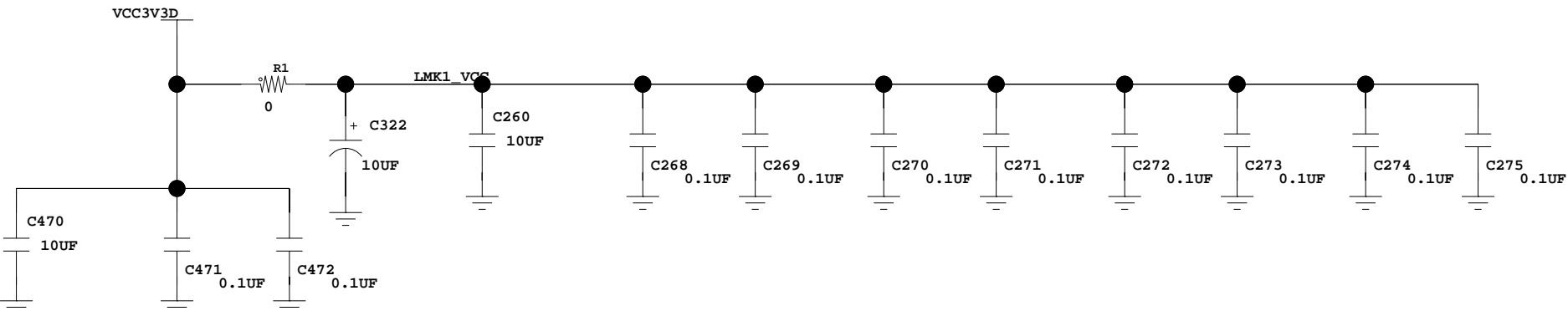
ADD TEST POINT FOR GBTXCLK1_



add cap for 3v3d here

ADD VIAS on the RPAD to gnd

add more source for LMK03200 CLK INPUT

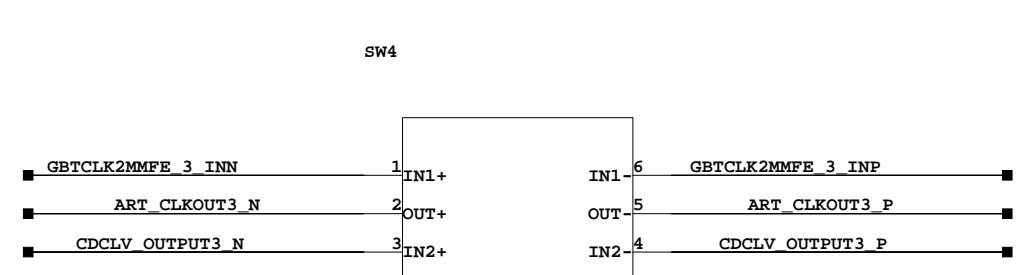
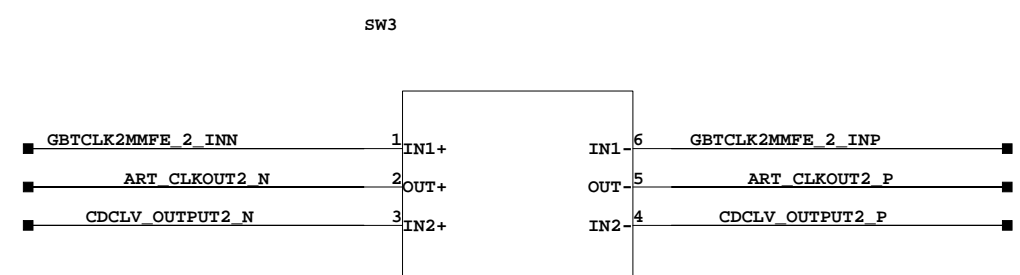
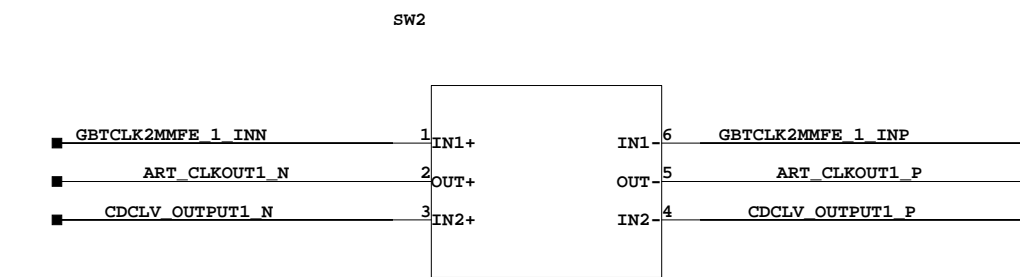
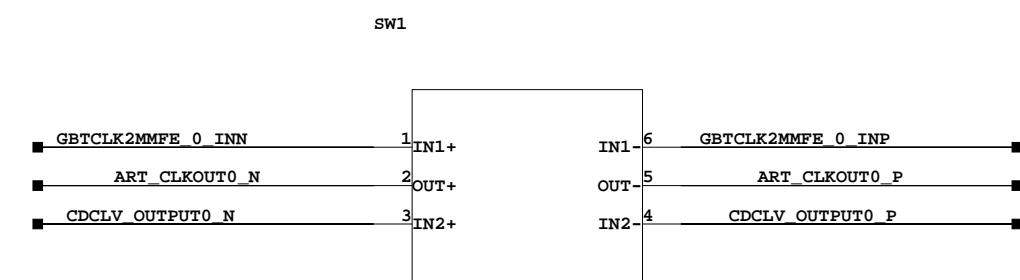
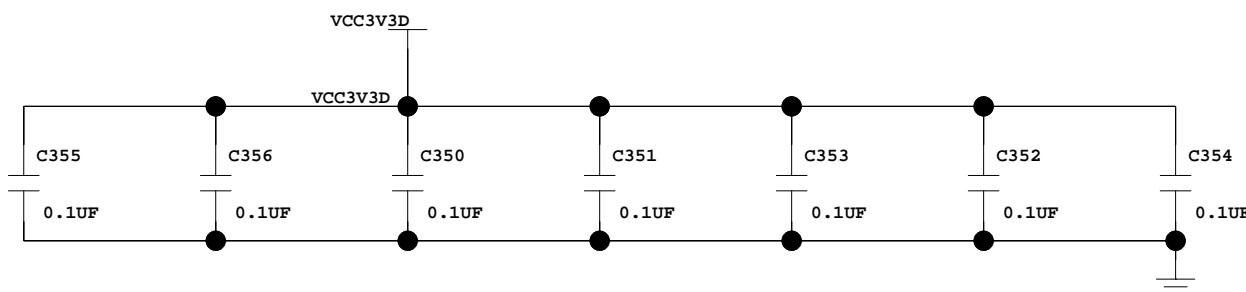
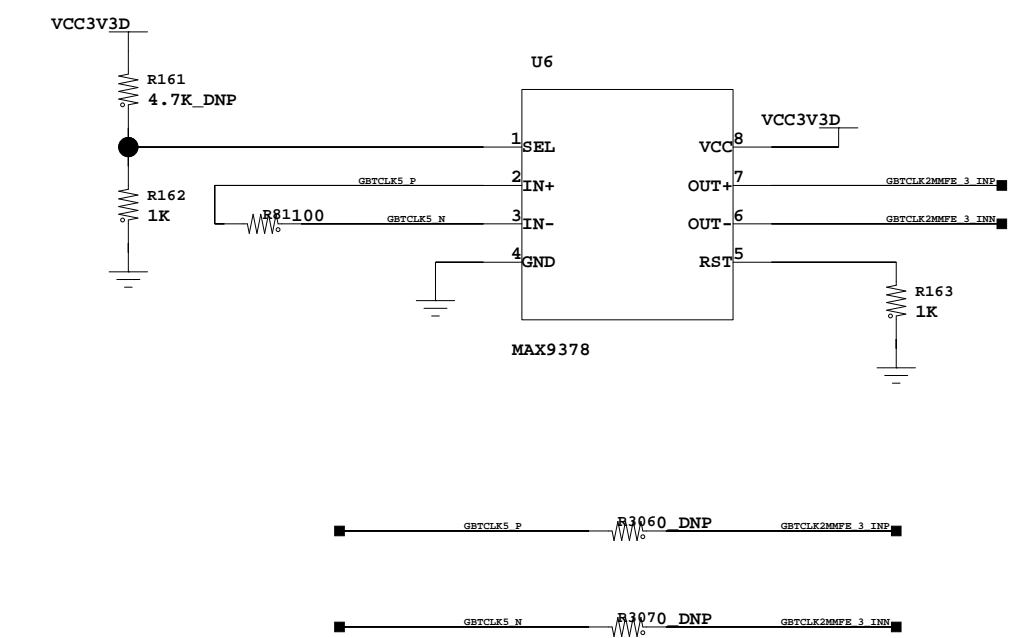
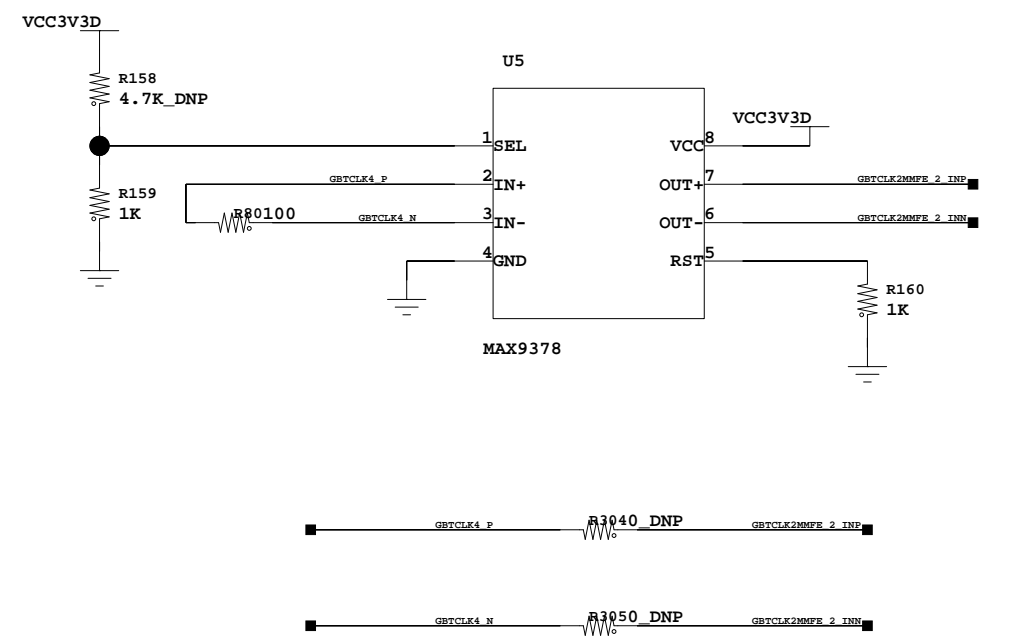
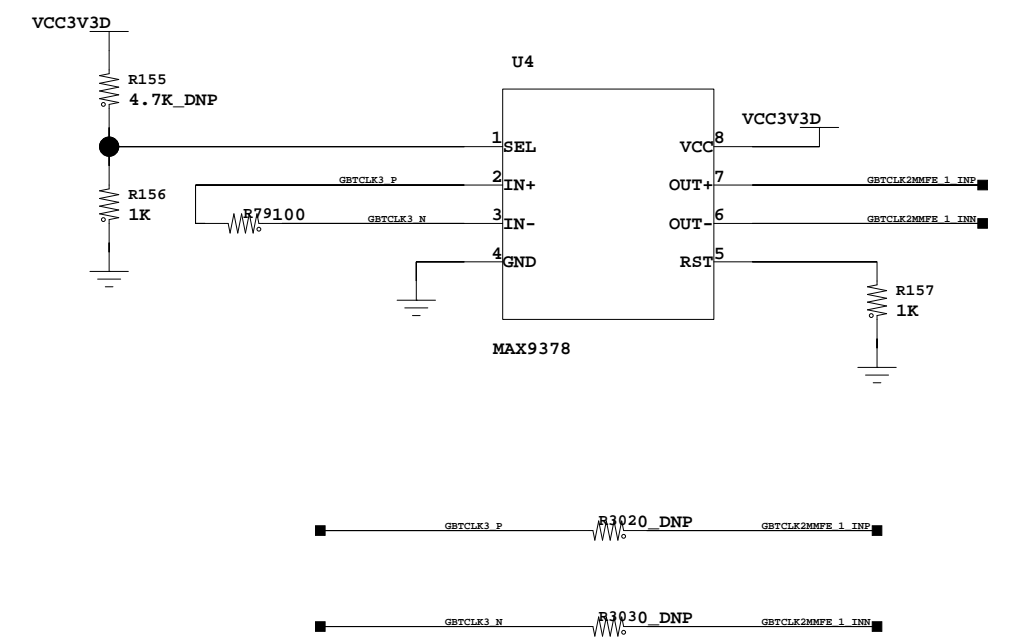
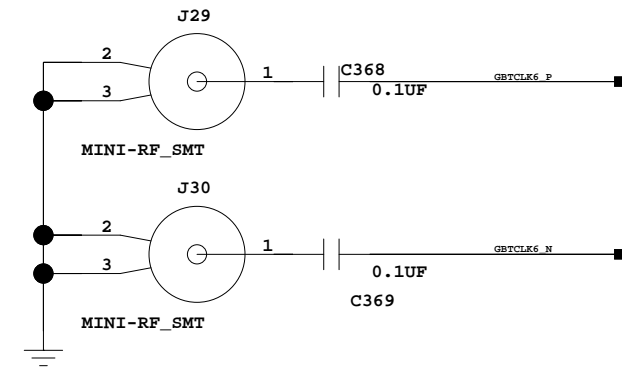
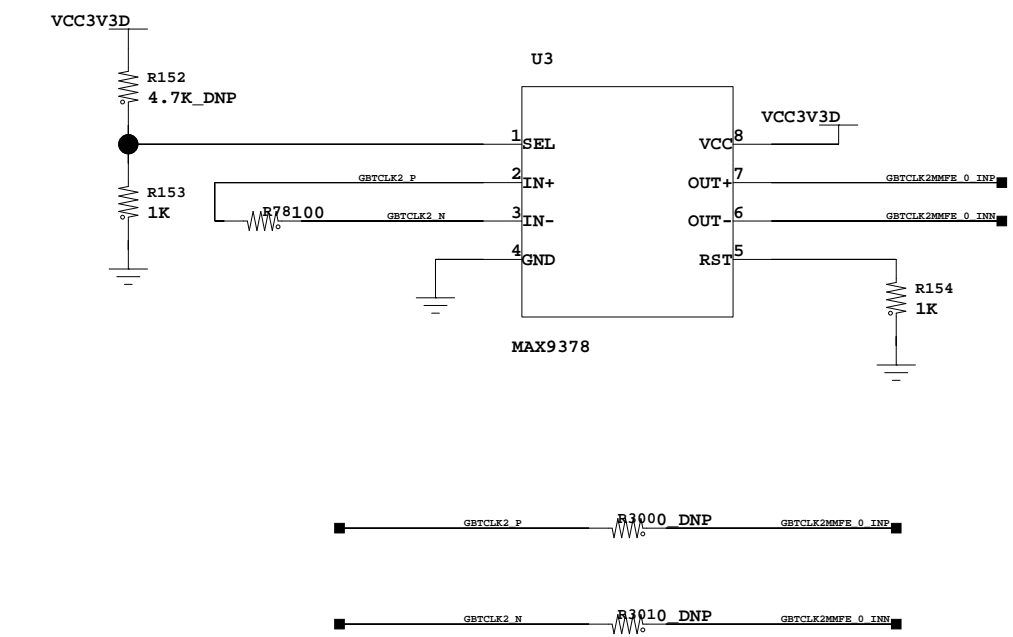


use SN65LVDT122PW as clock slvs backup

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DRAWN	DATE

CHECKED, 3/3/2013



NOTE		COMPANY	
		TITLE	
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PSAAN		DATE	

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TITLE	
SUBST	
DATE	

CHECKED, 3/3/2013

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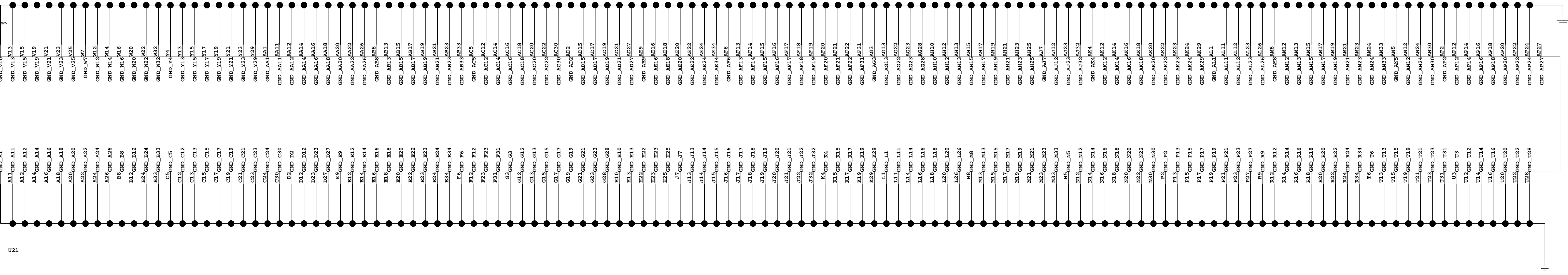
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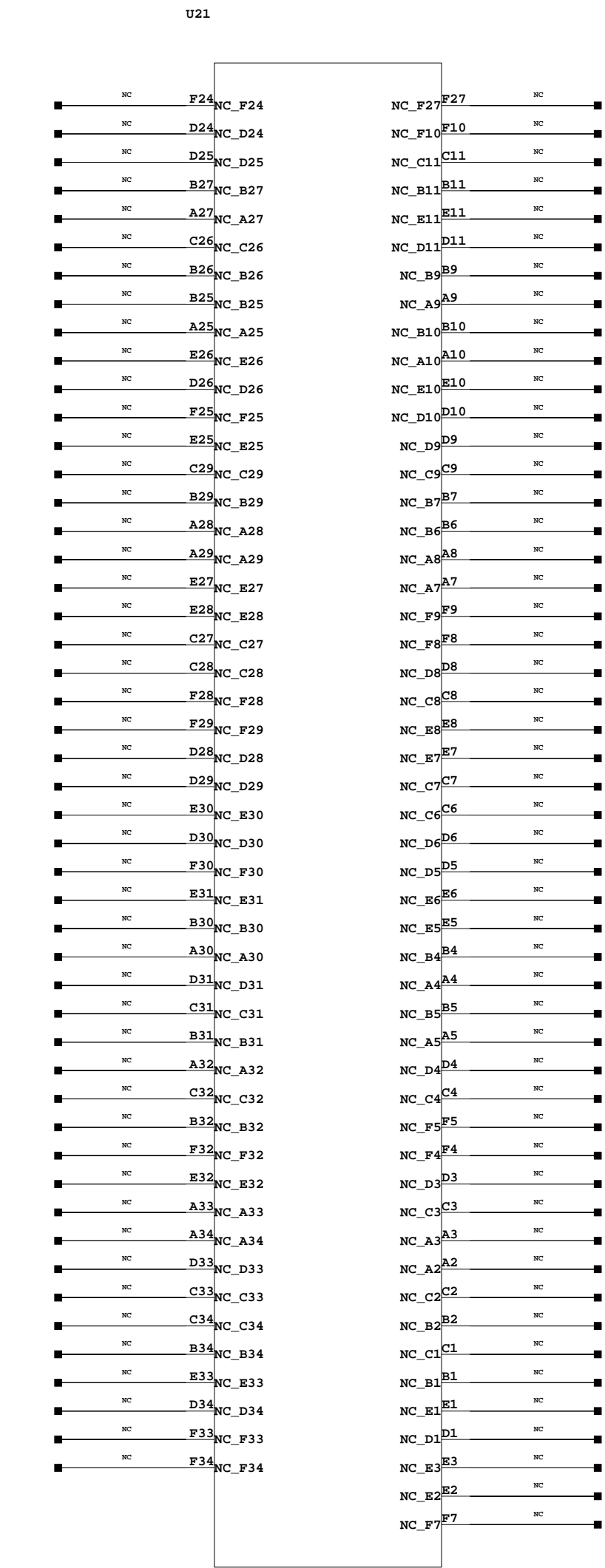
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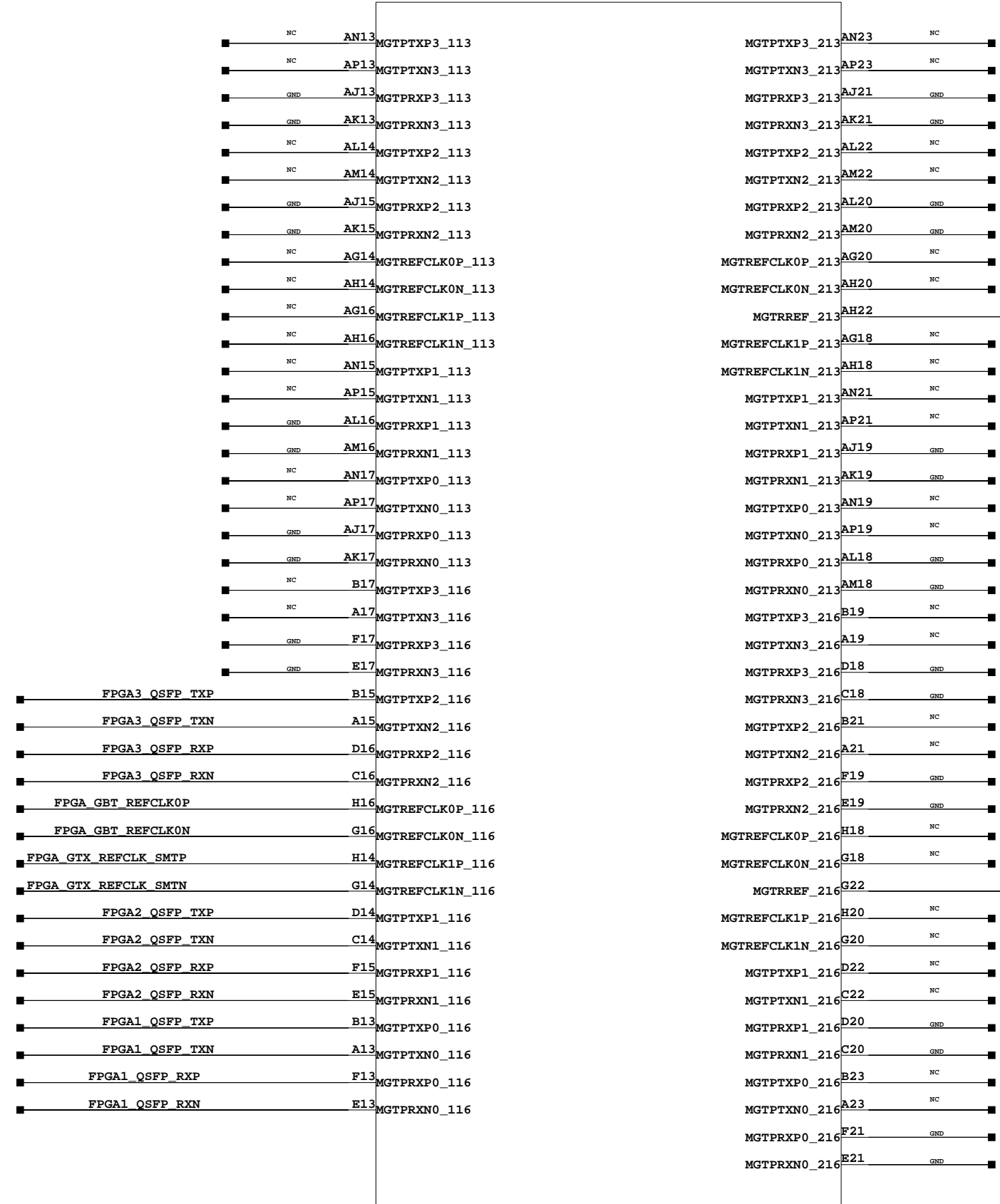
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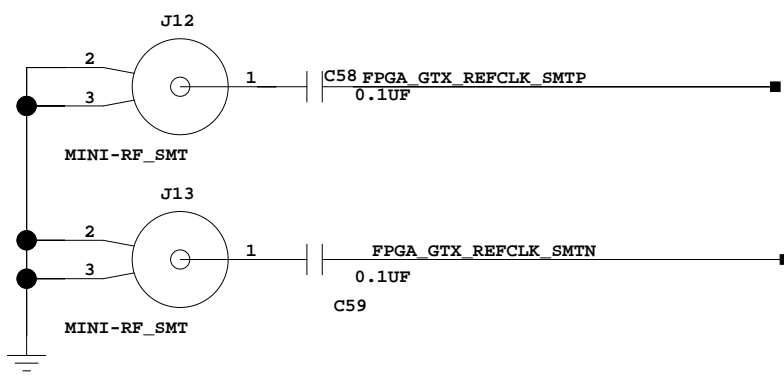
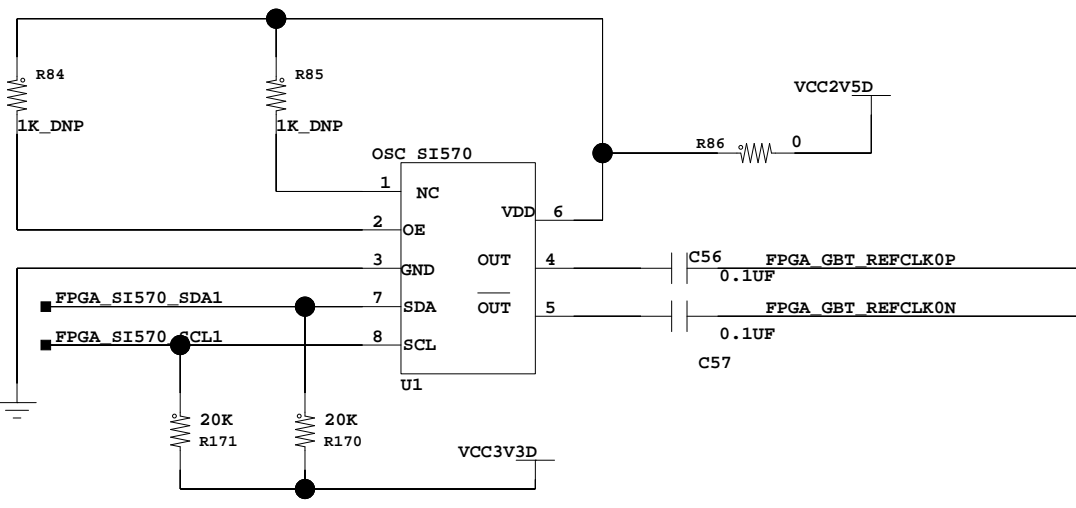
XC7A200T-FFG1156-GND



XC7A200T-FFG1156-GND



XC7A200T-FFG1156-GND
U21



NOTE

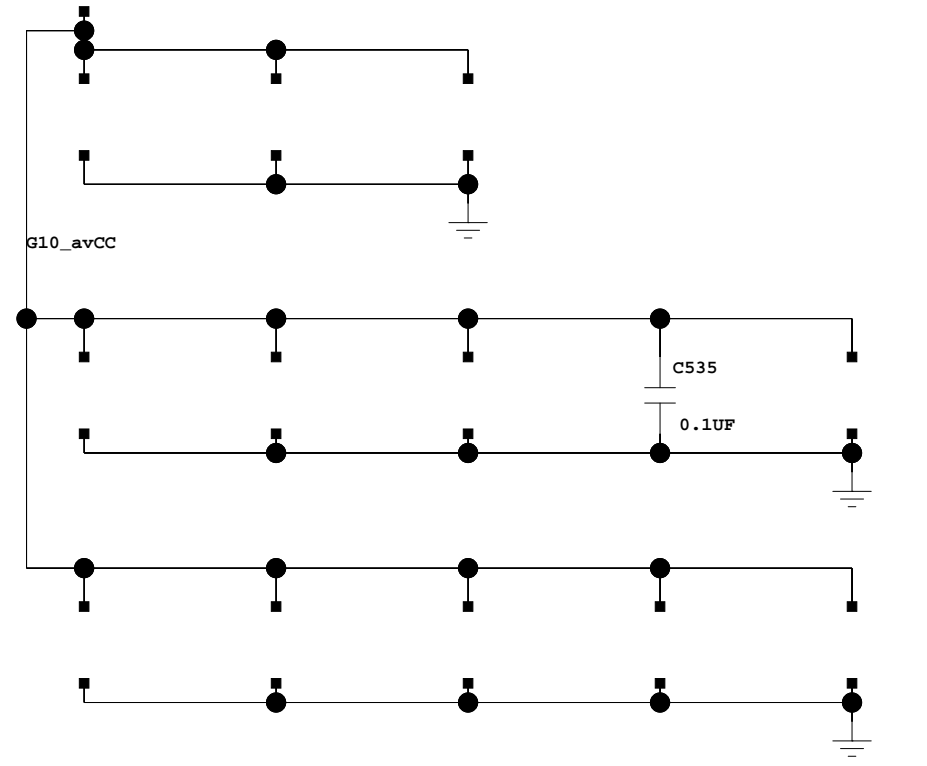
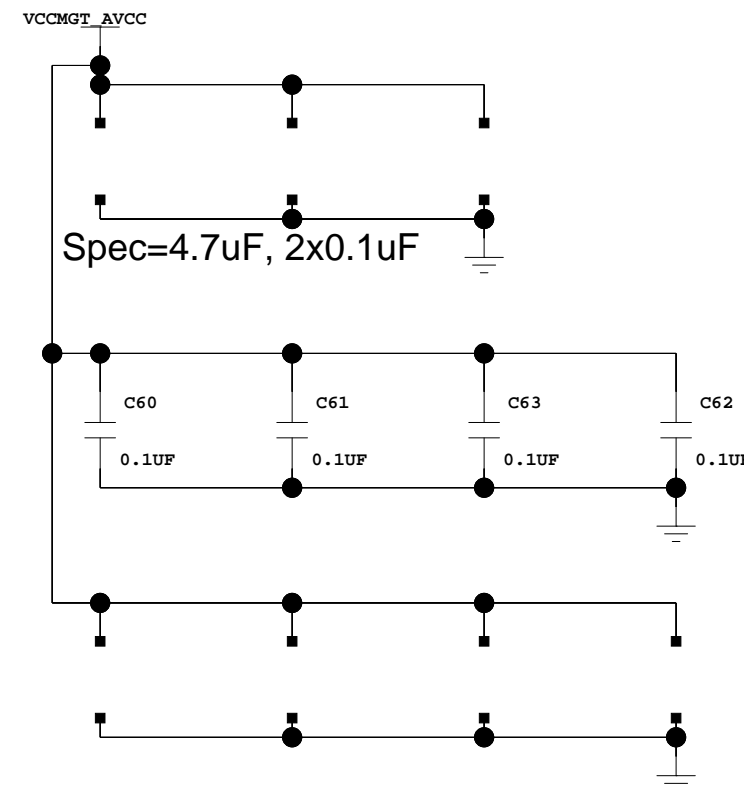
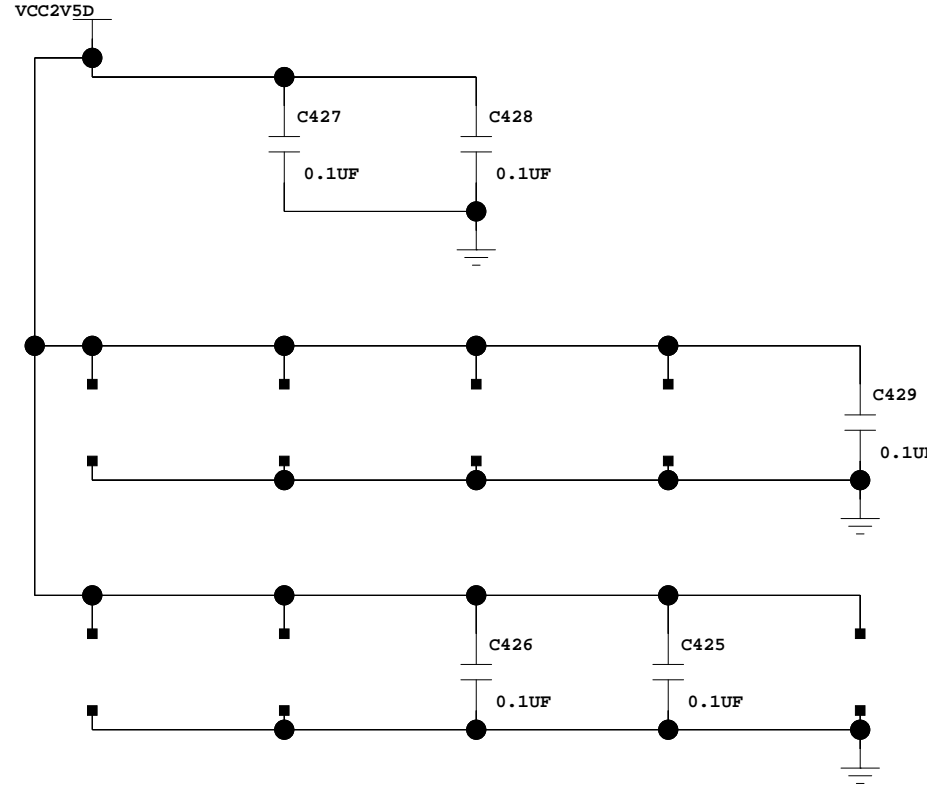
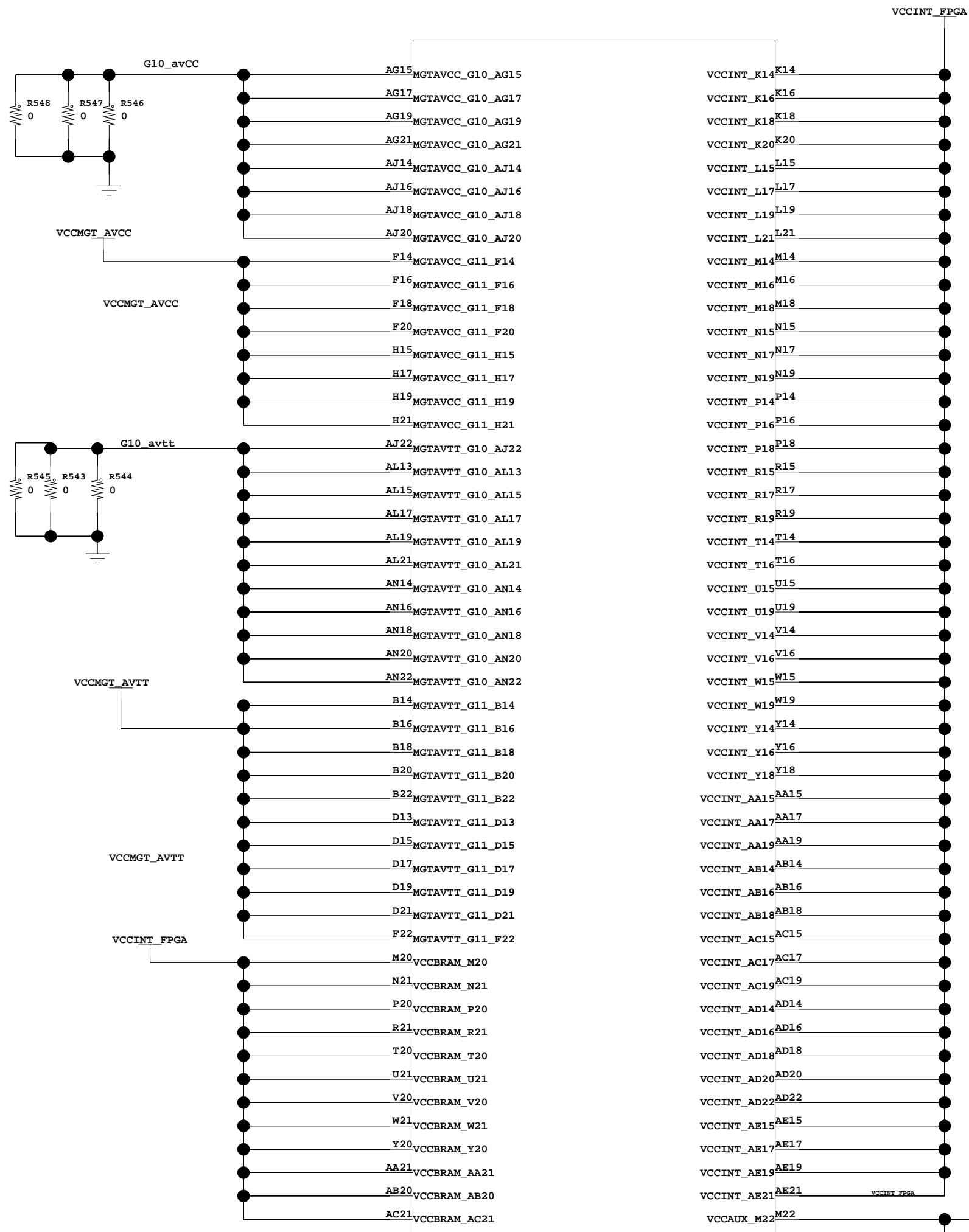
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DRAWN			DATE

FFGA 200T GND

CHECKED, 3/3/2013

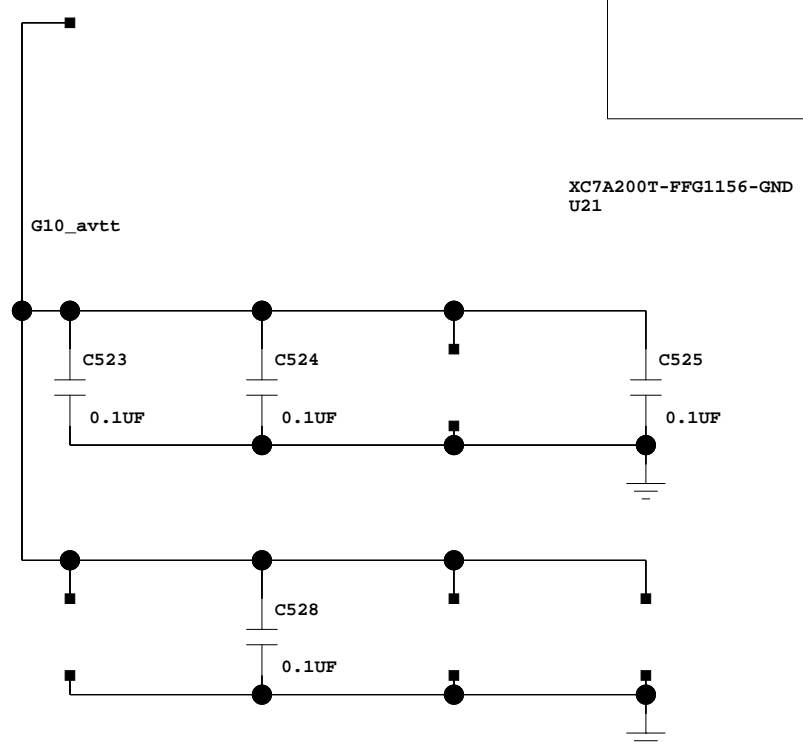
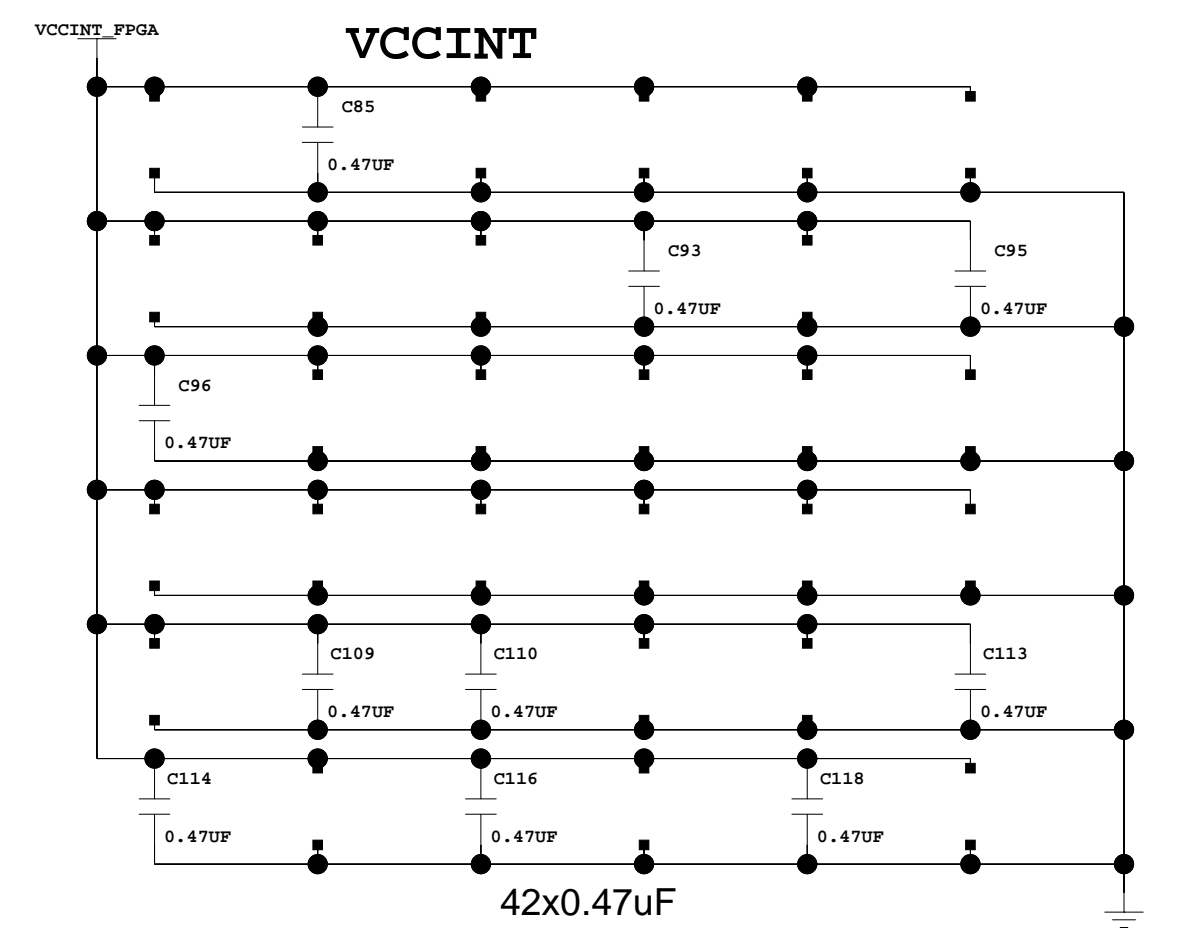
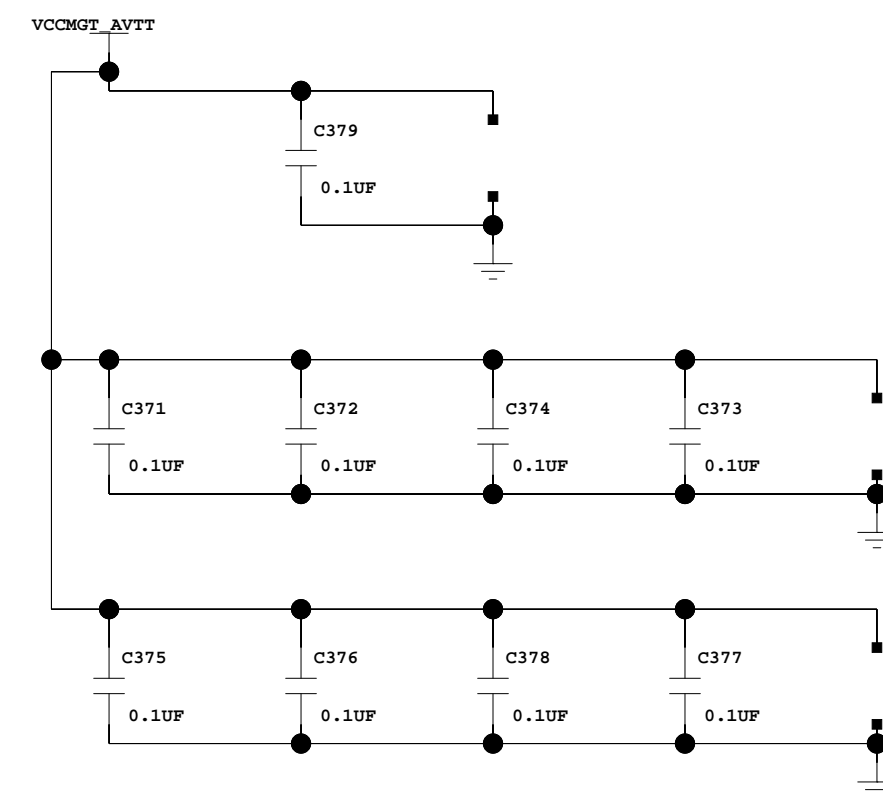
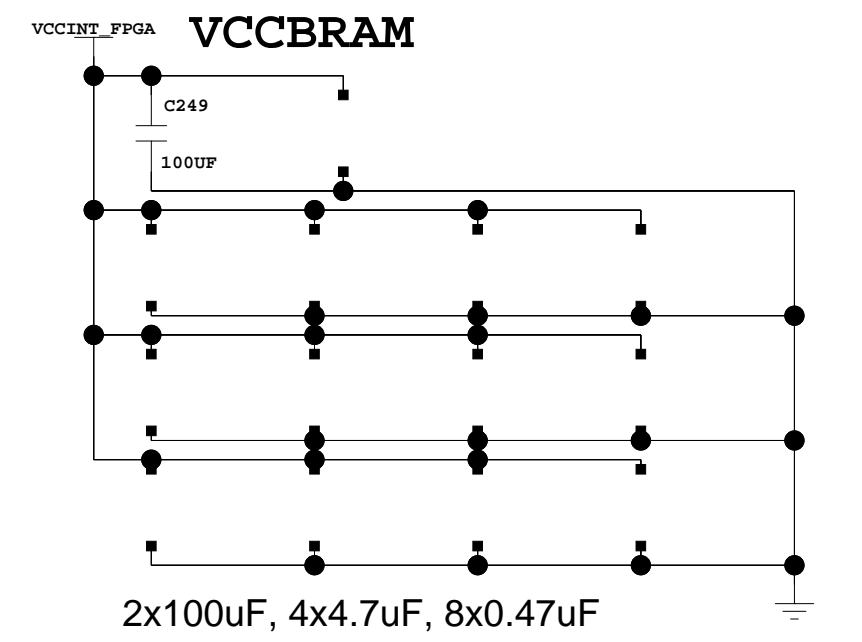
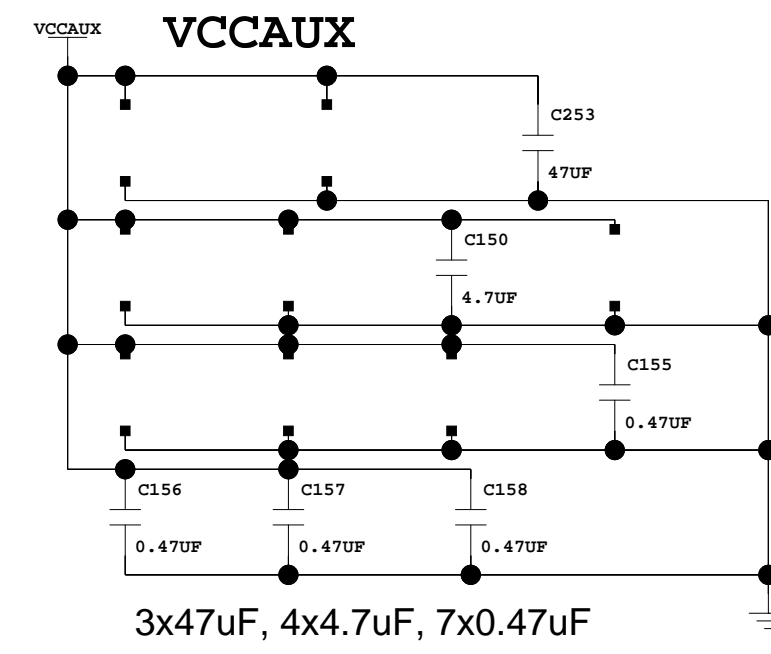
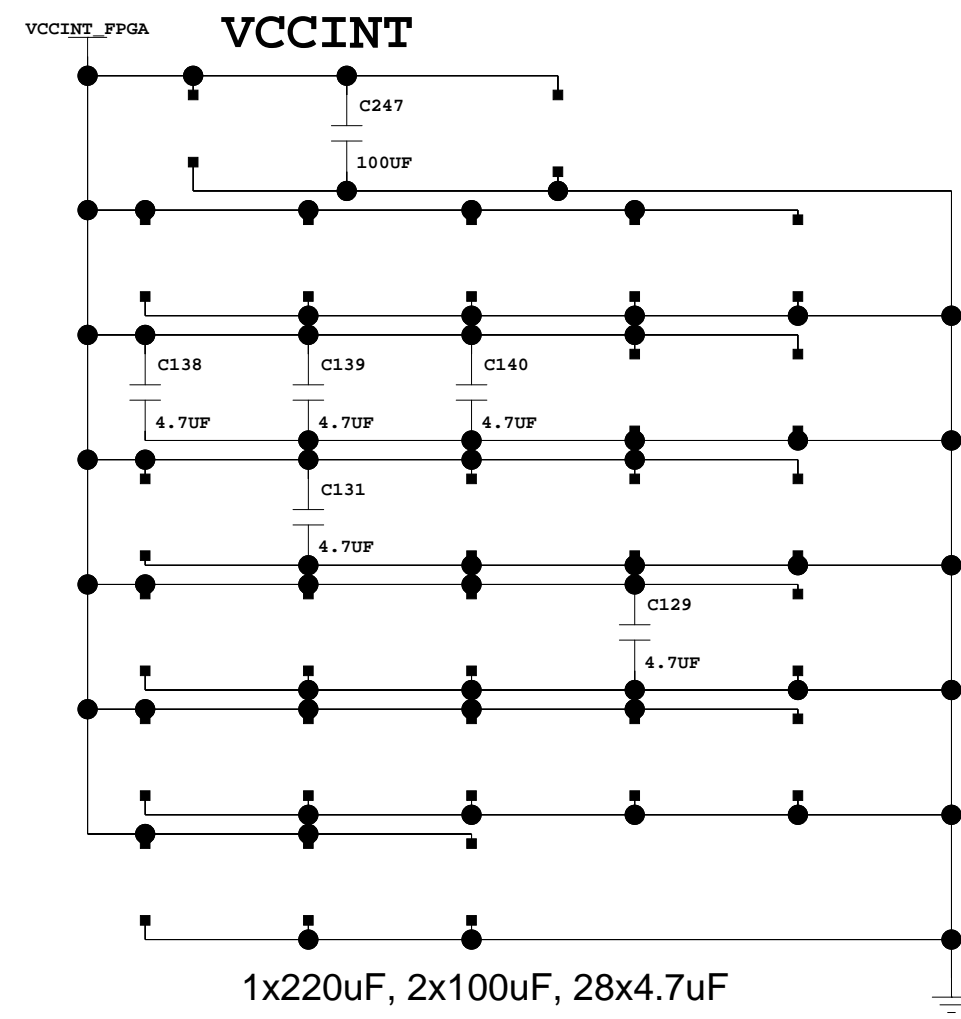
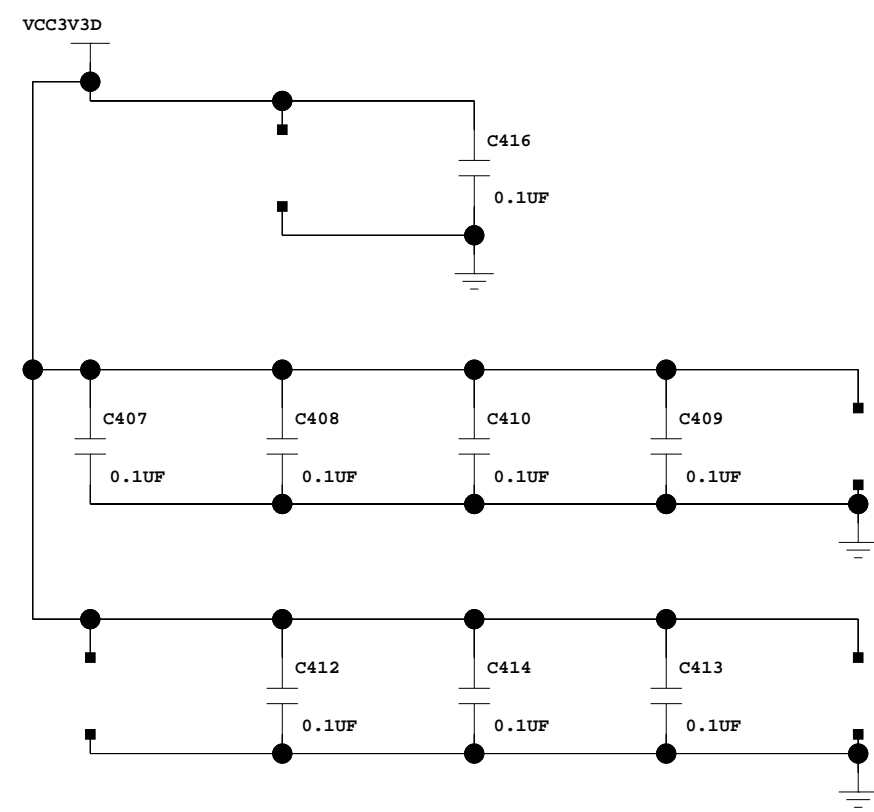
Consider use only 1 bank of MGT

Place MGT 0.1uF caps within the FPGA via field on the bottom of the board, one for each MGT power pin/GND pin pair



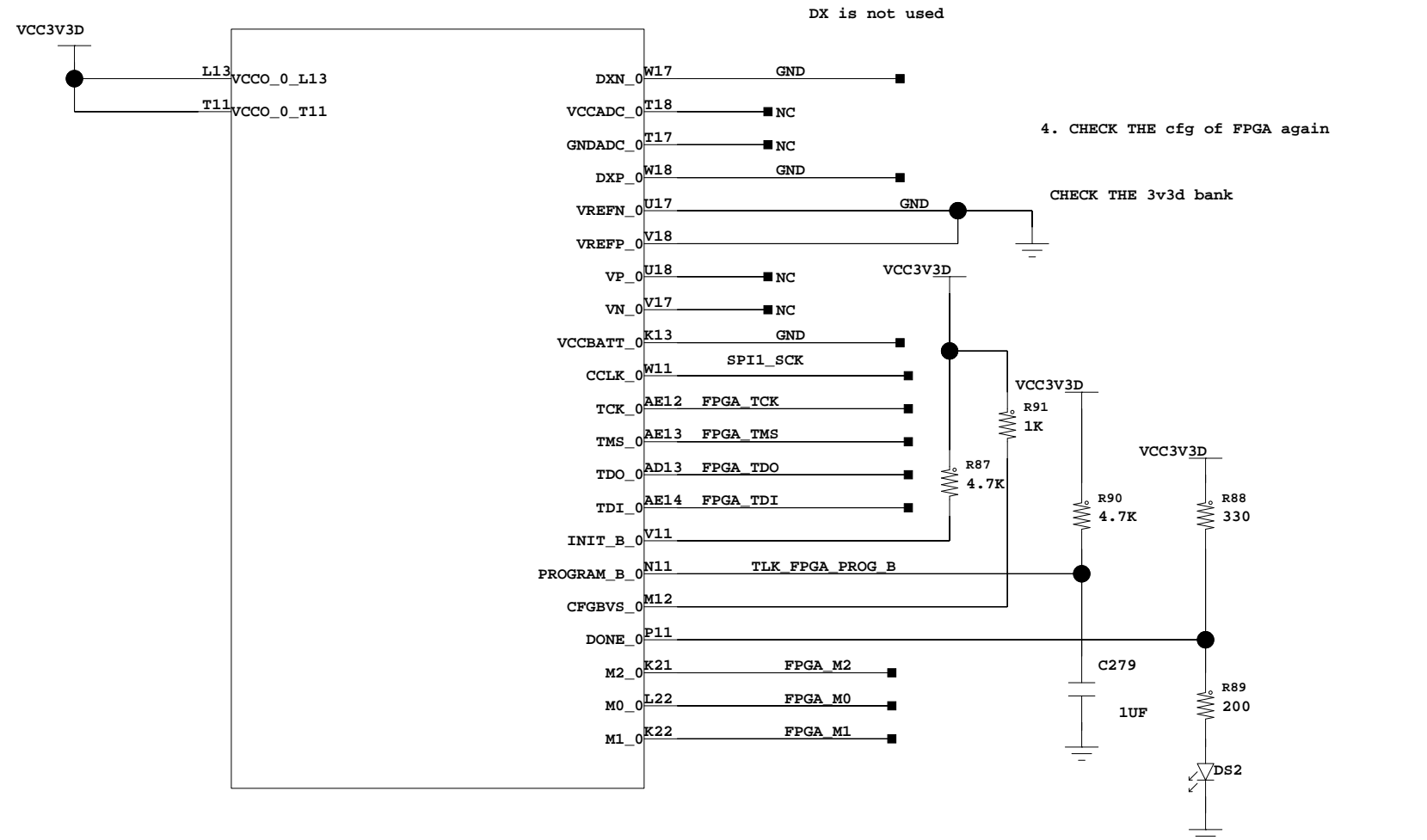
USE VCCINT FOR VCCBRAM

Adjust the Filter cap value in PCB layout

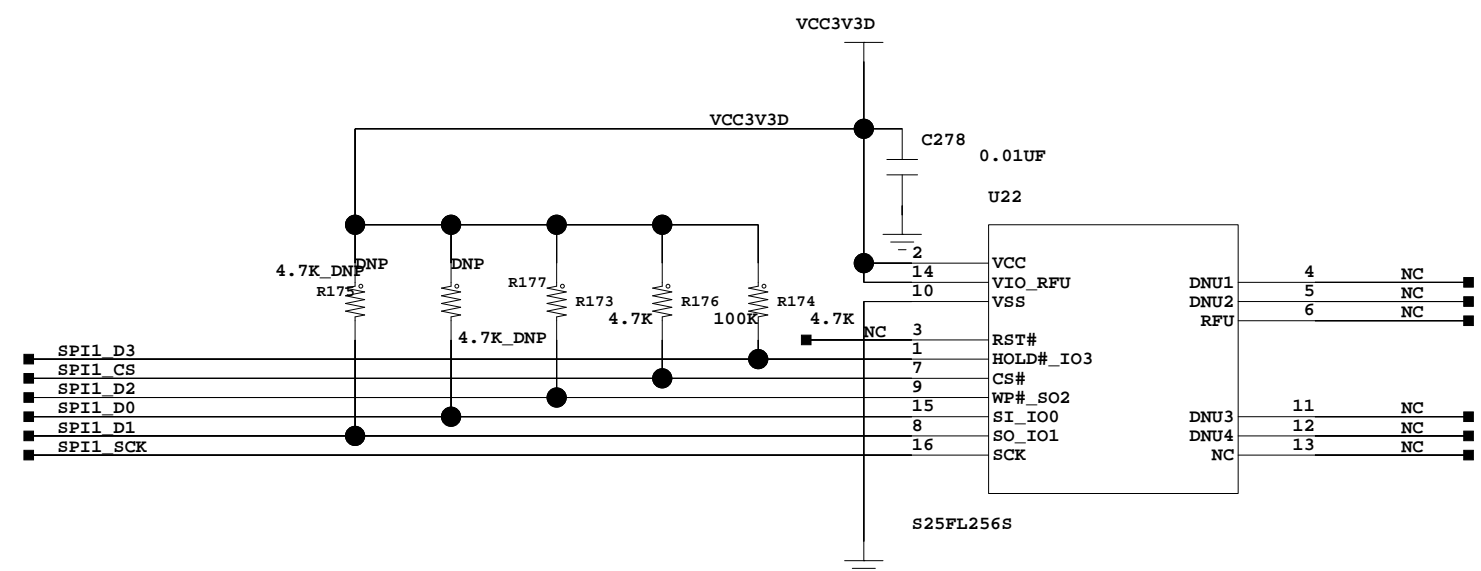
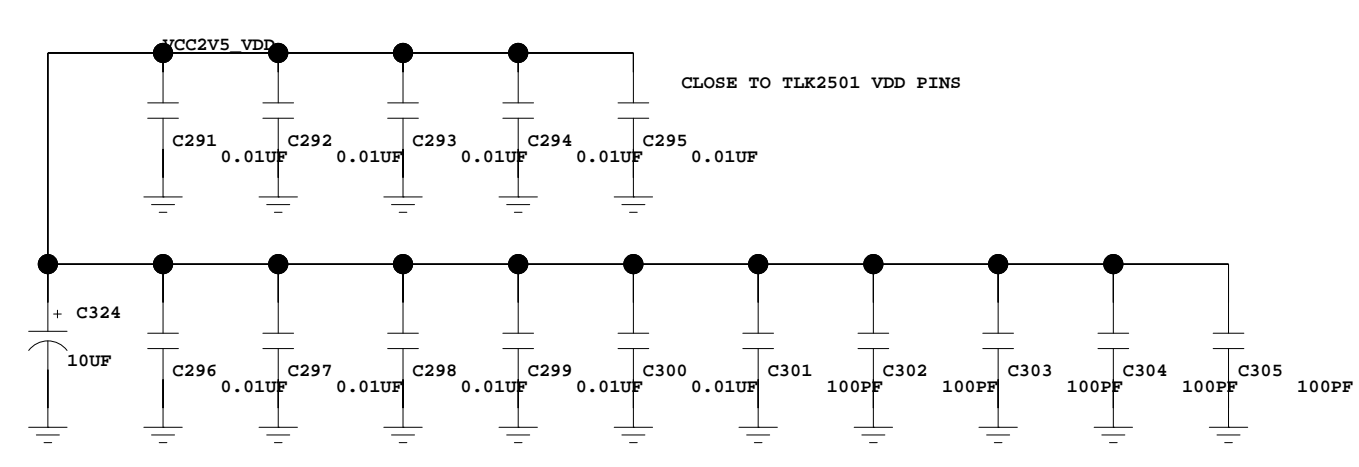
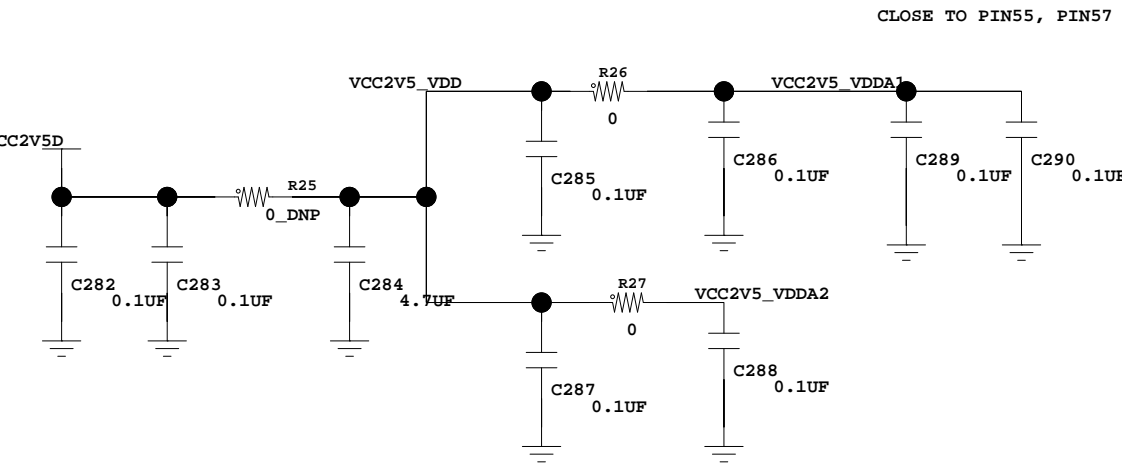
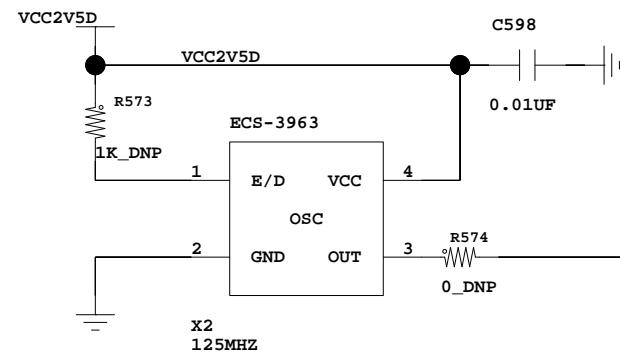
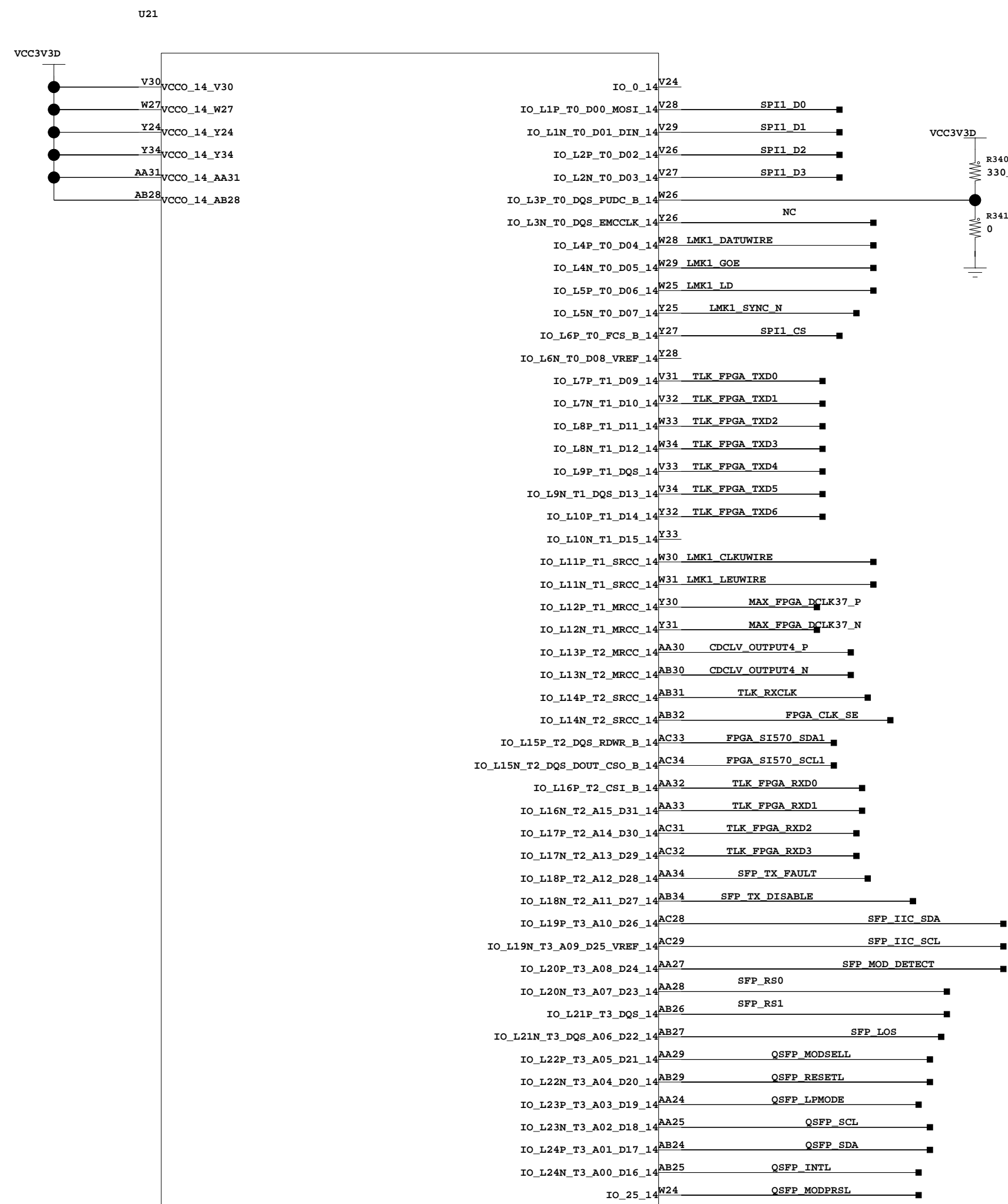
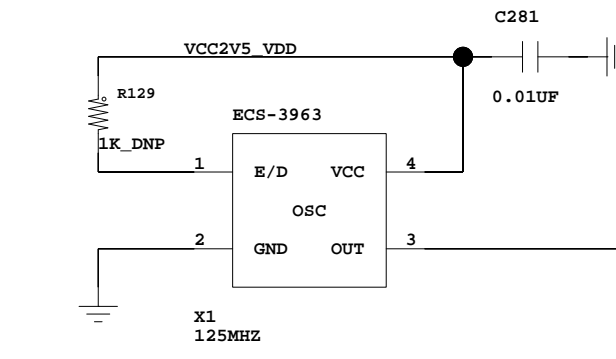
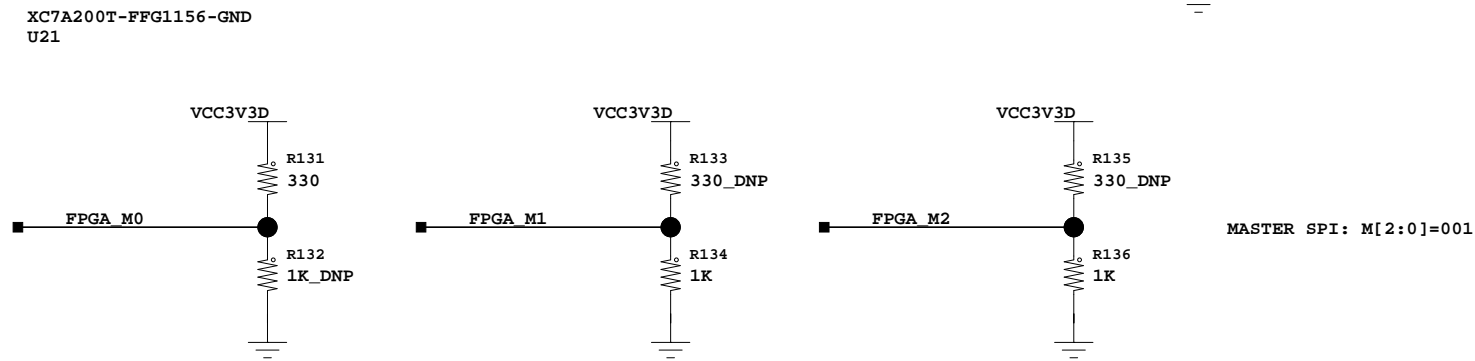
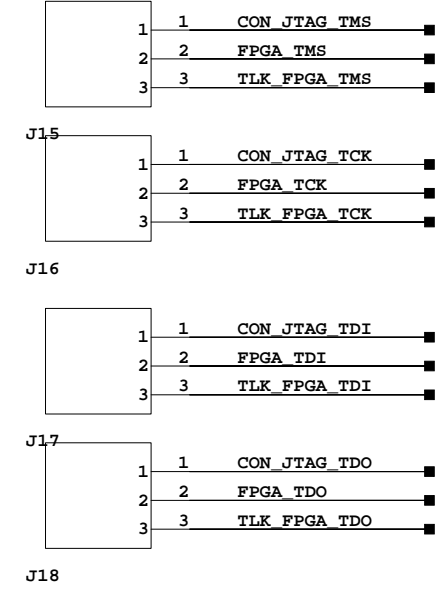
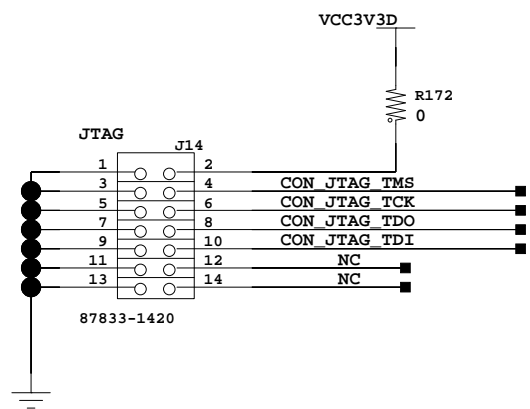


CHECKED, 3/3/2013

JTAG: 1 for FPGA, 1 for GBTX



check the voltage for a7 jtag

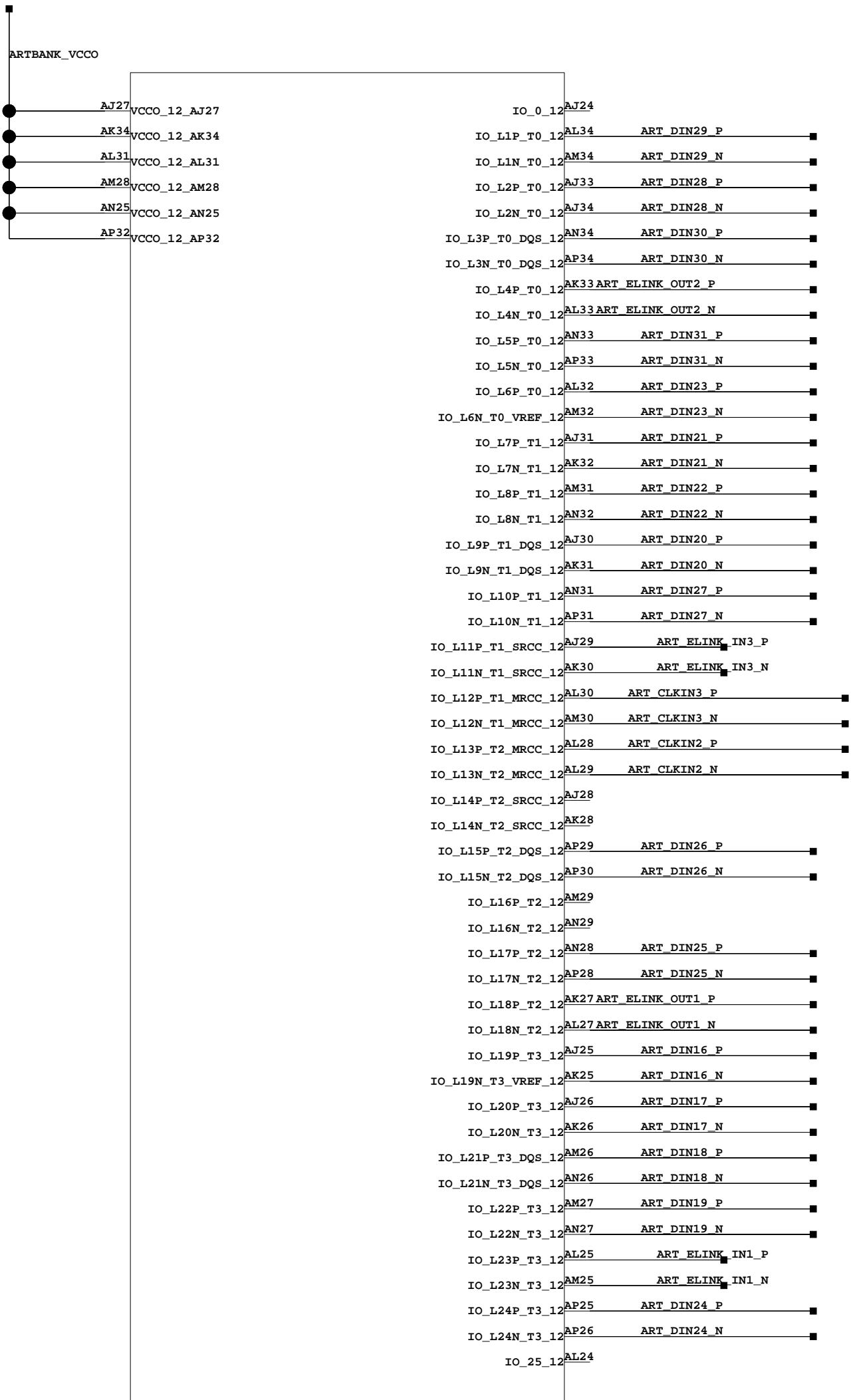


XC7A200T-PPG1156-GND

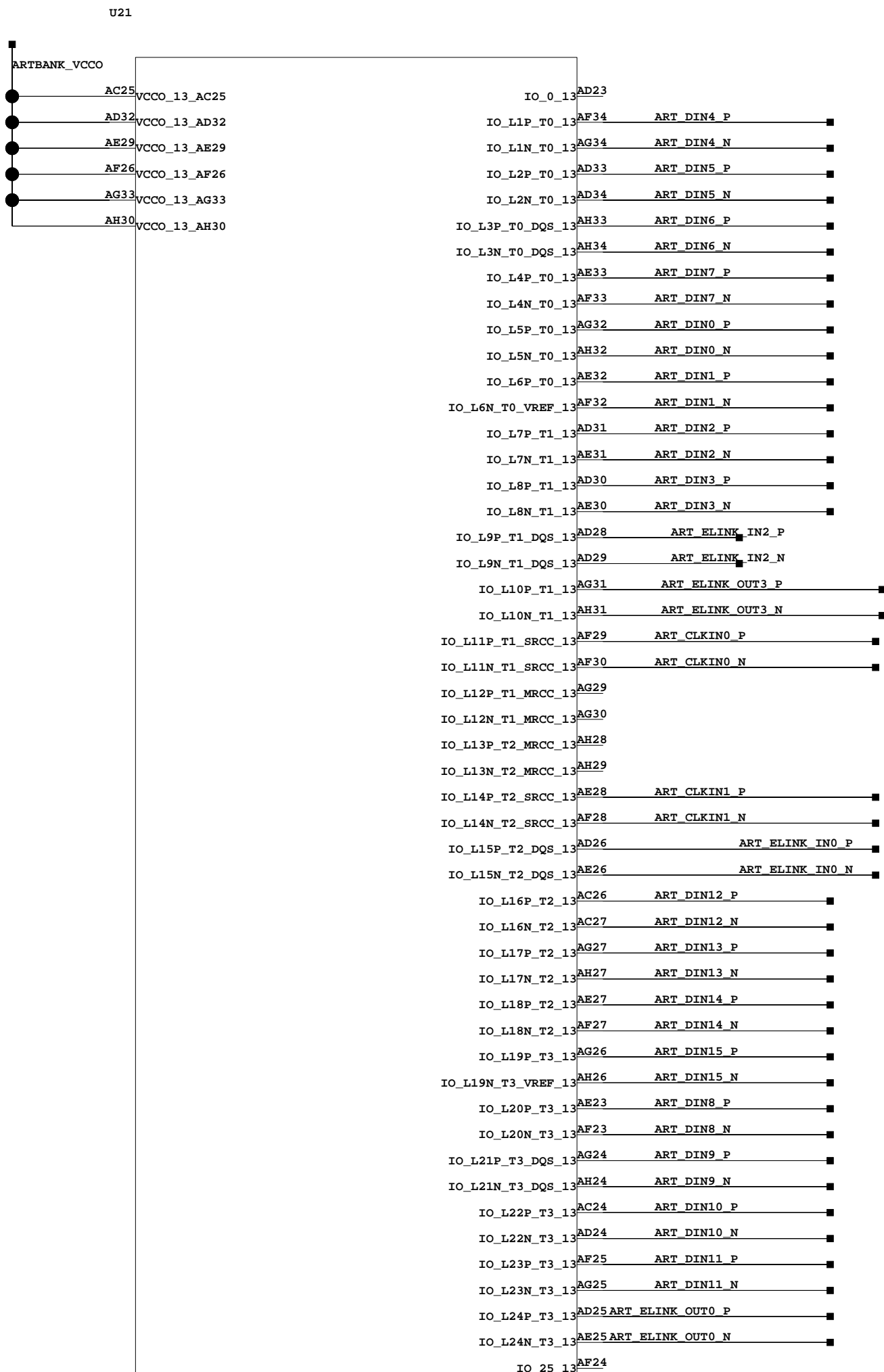
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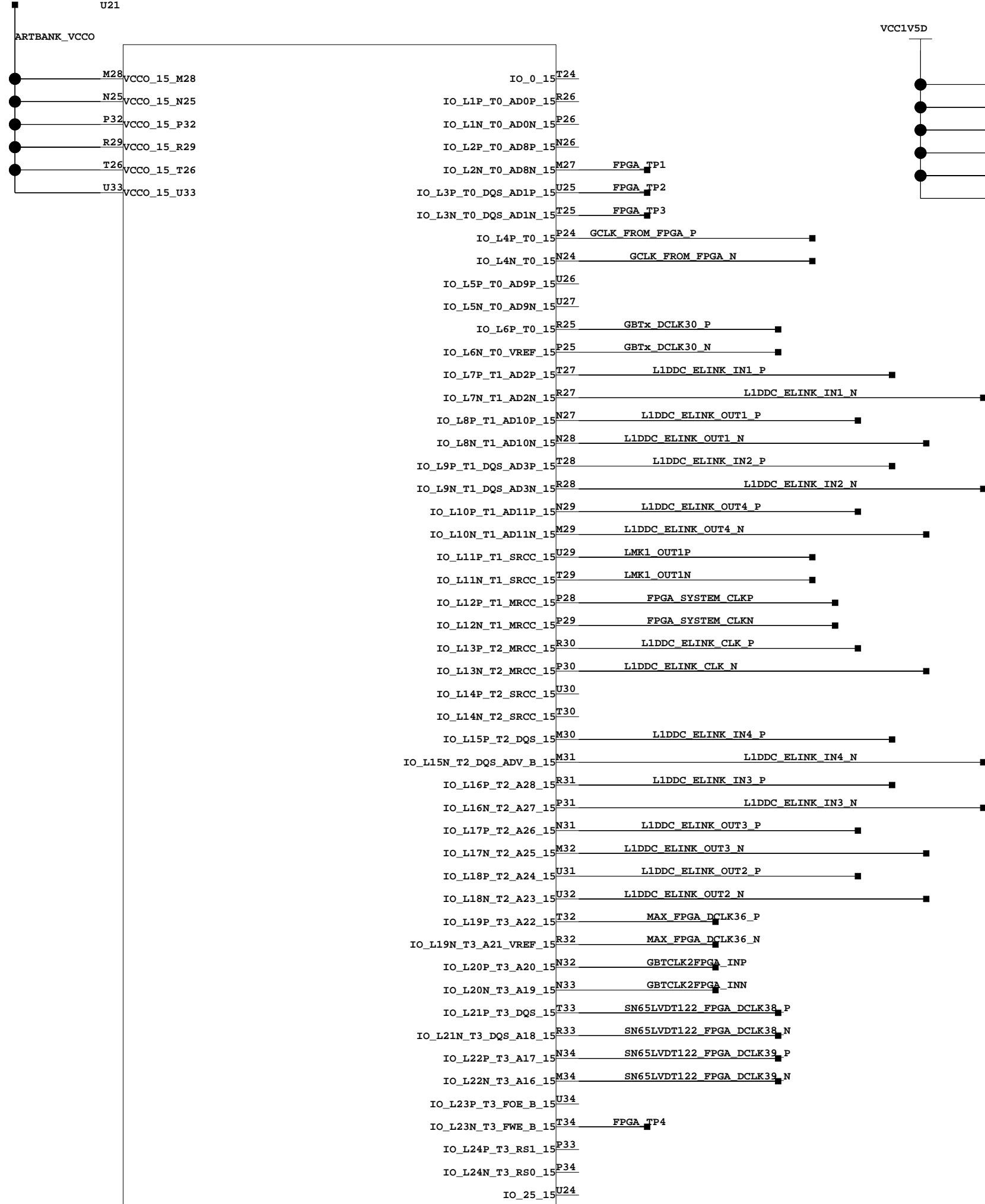
ADD vcc1v5 in this bank



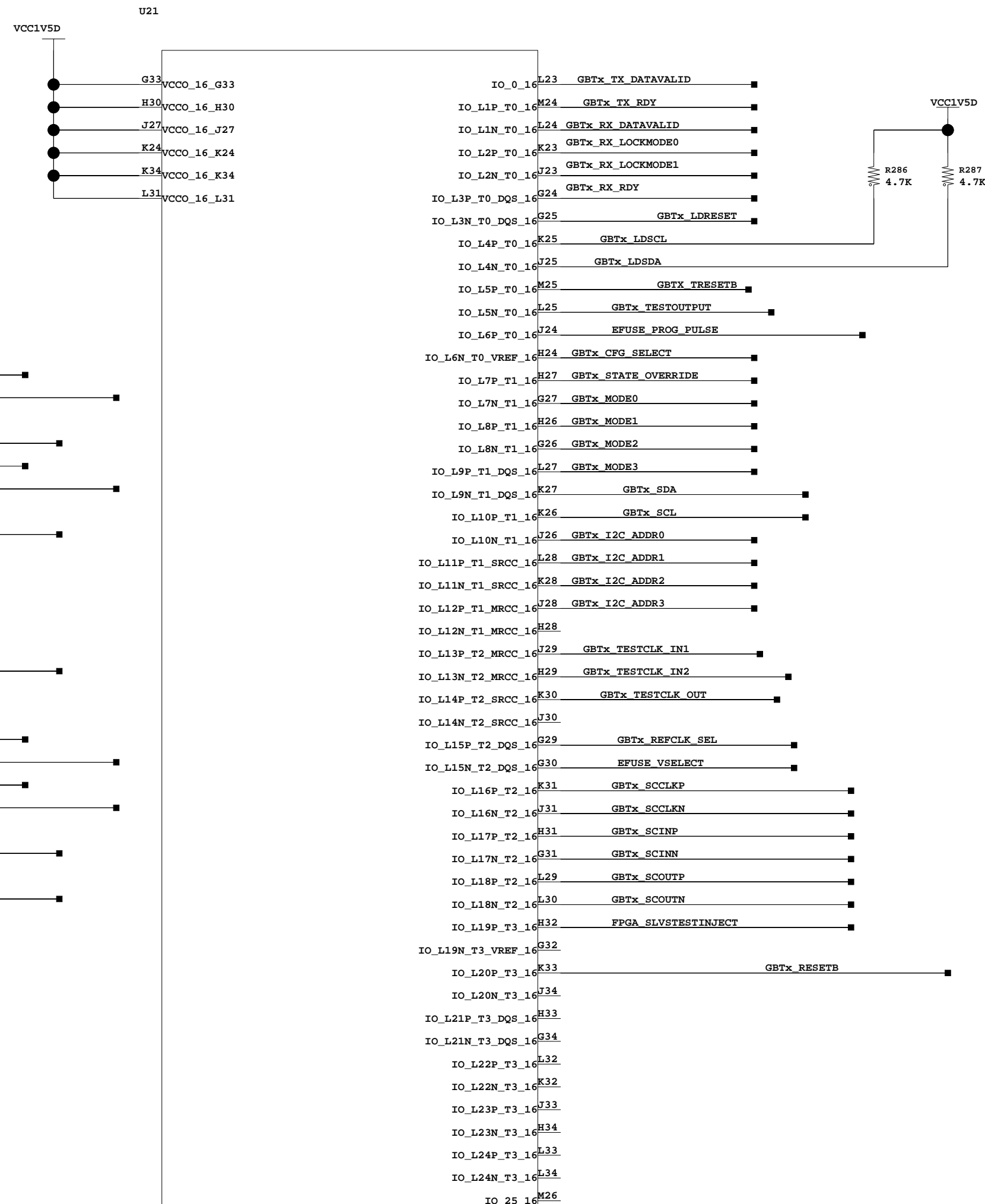
GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND
U21



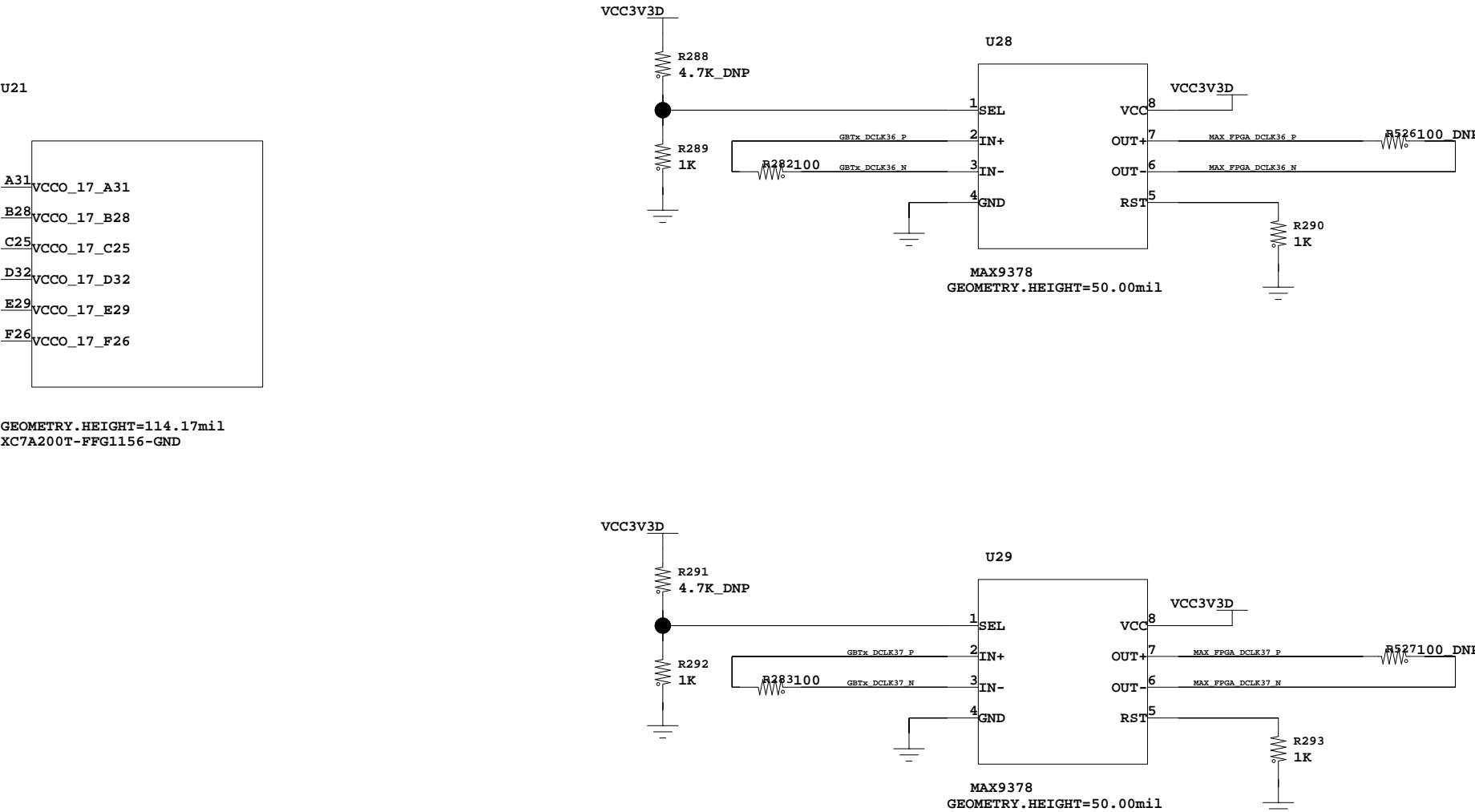
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XC7A200T-PPG1156-GND



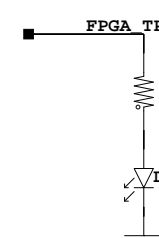
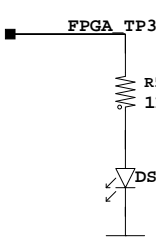
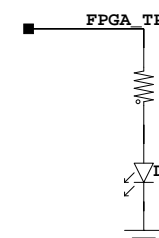
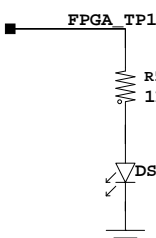
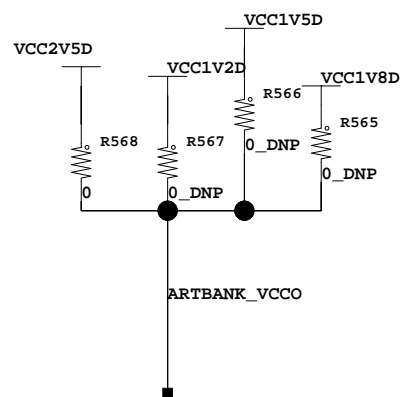
GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND



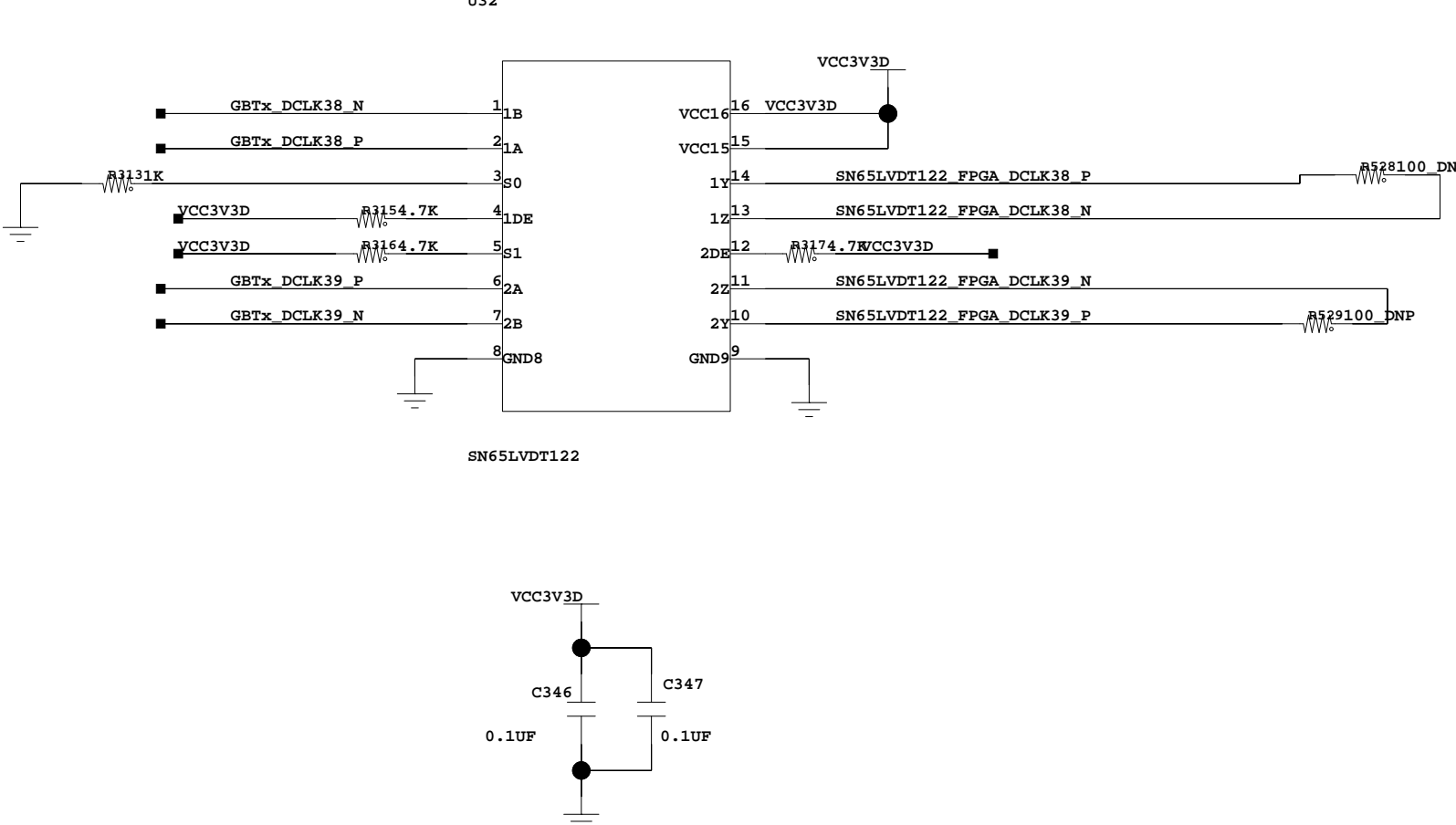
GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND



GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND

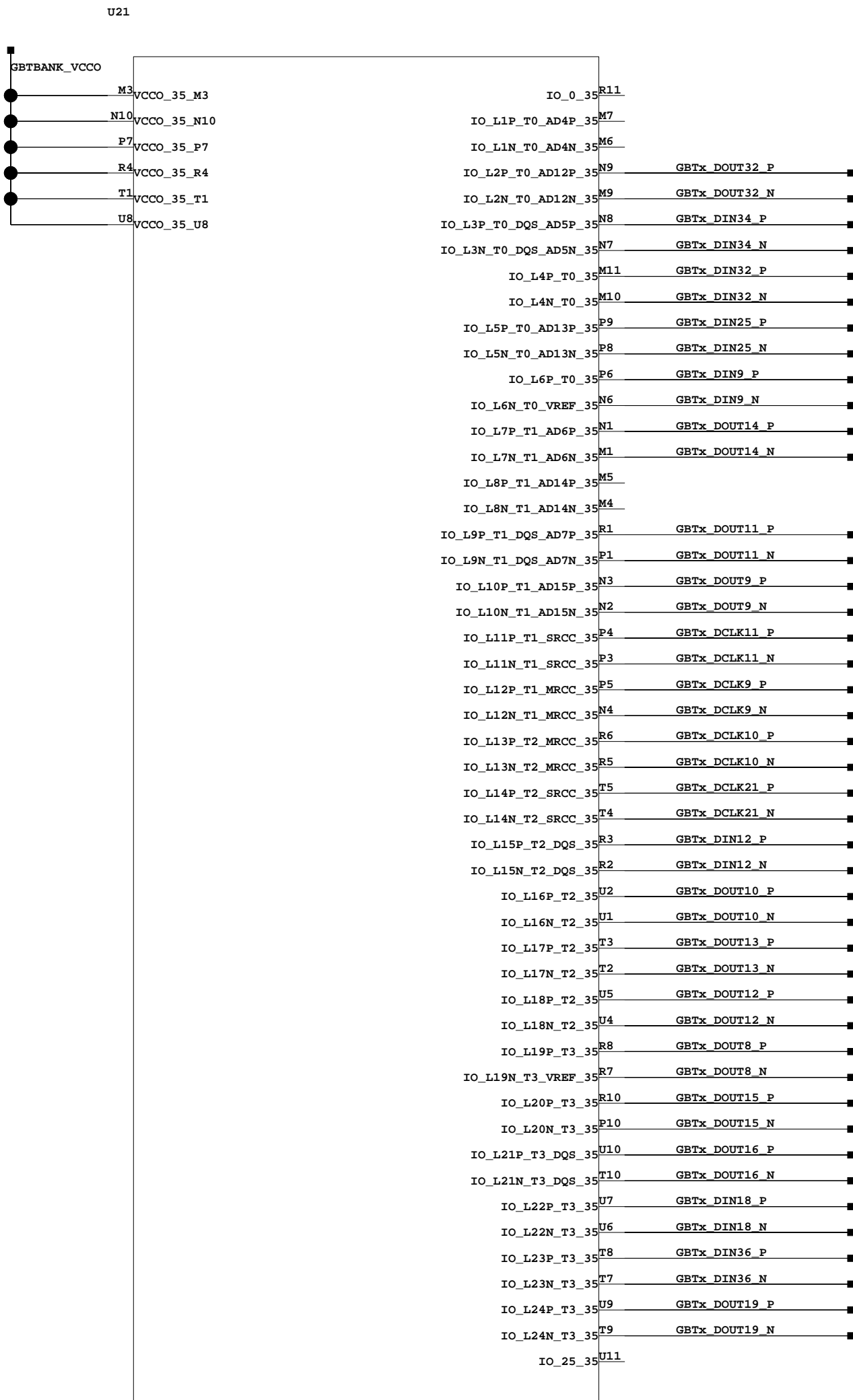


check package of sn65lvd122 again

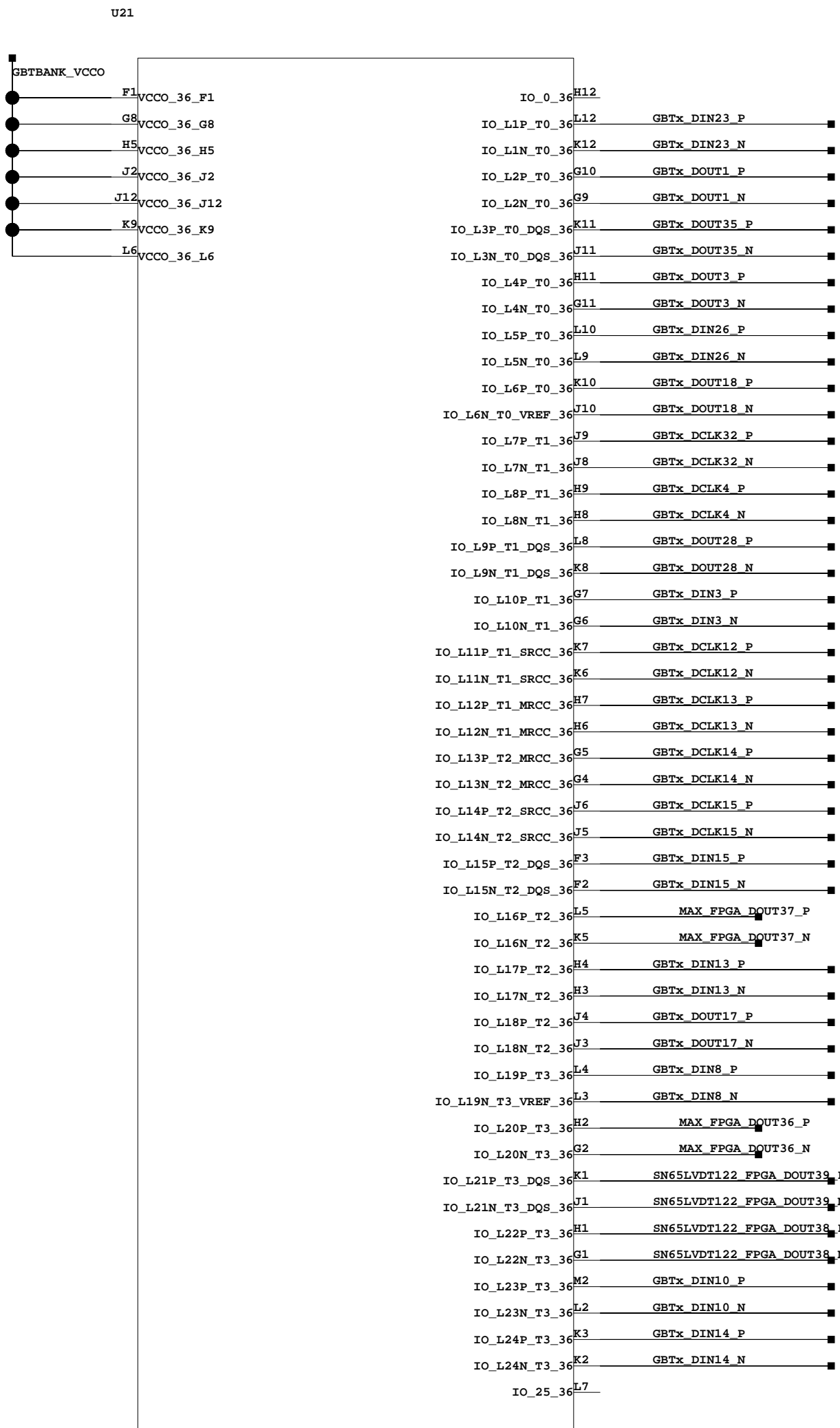


8	7	6	5	4	3	2	1
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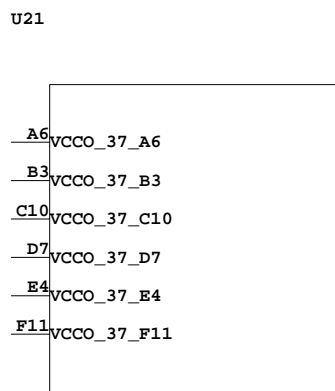
ADD some test points and leds here



GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND



GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND

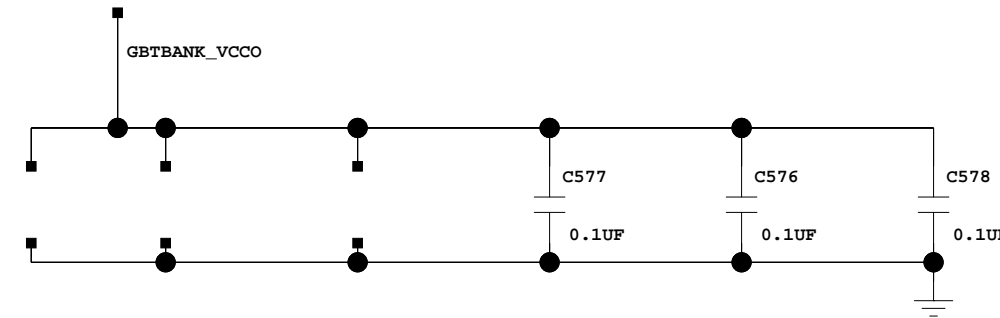
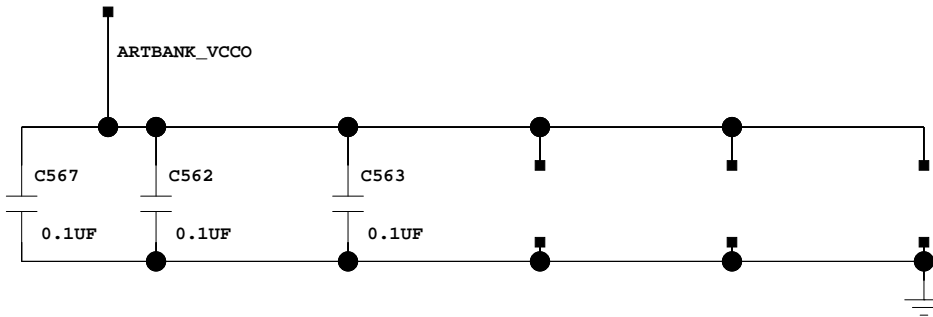
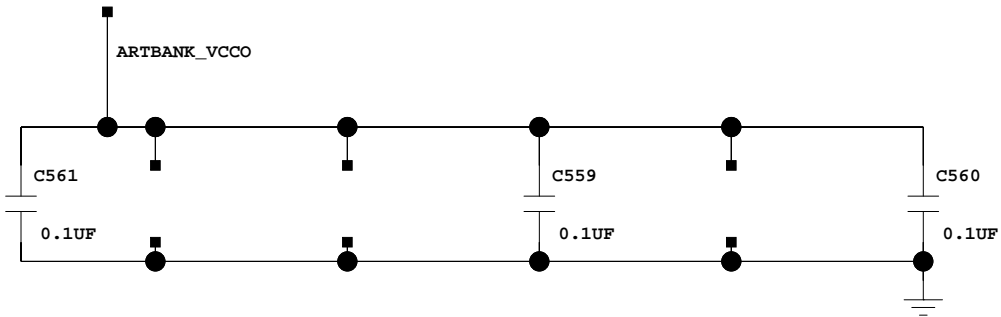
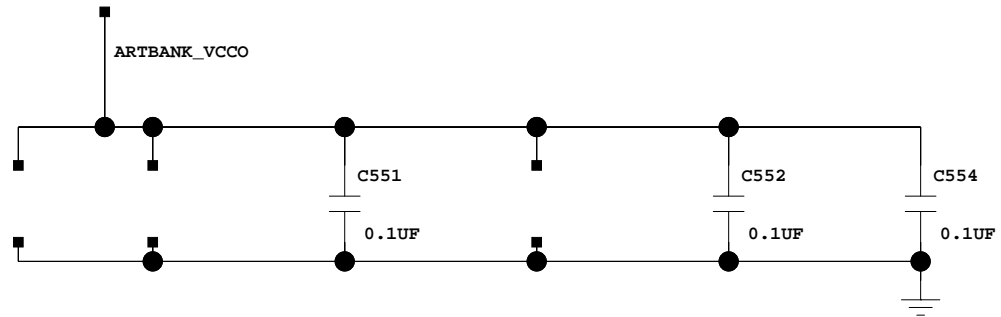


GEOMETRY: HEIGHT=114.17mil
XC7A200T-PPG1156-GND

COMPANY				
TITLE				
SIZE	D	REV	SHEET	PPGA 000K35_06_37
PSAAN			DATE	

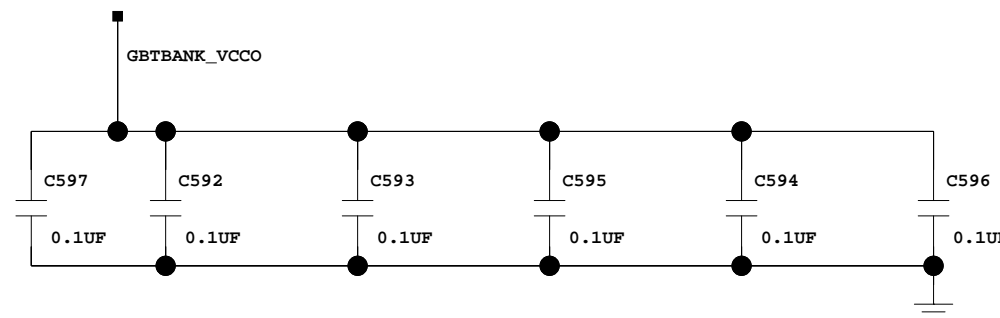
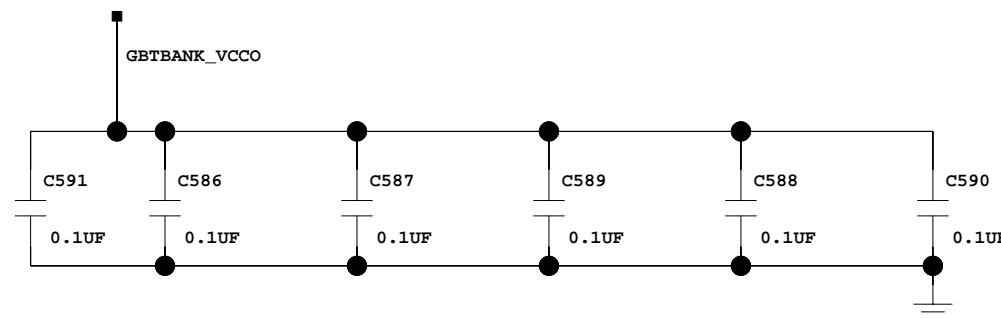
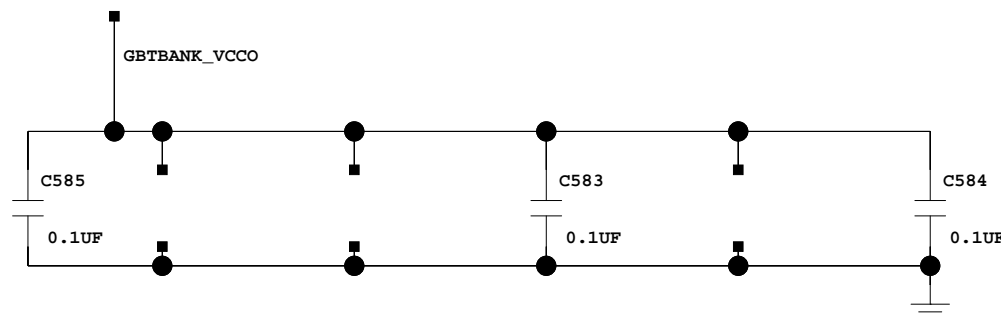
D

D



C

C



B

B

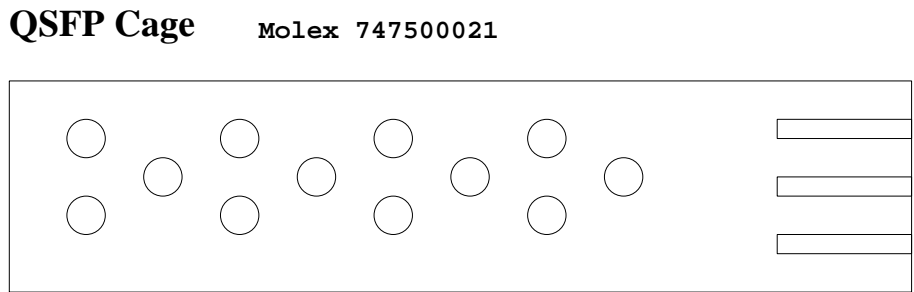
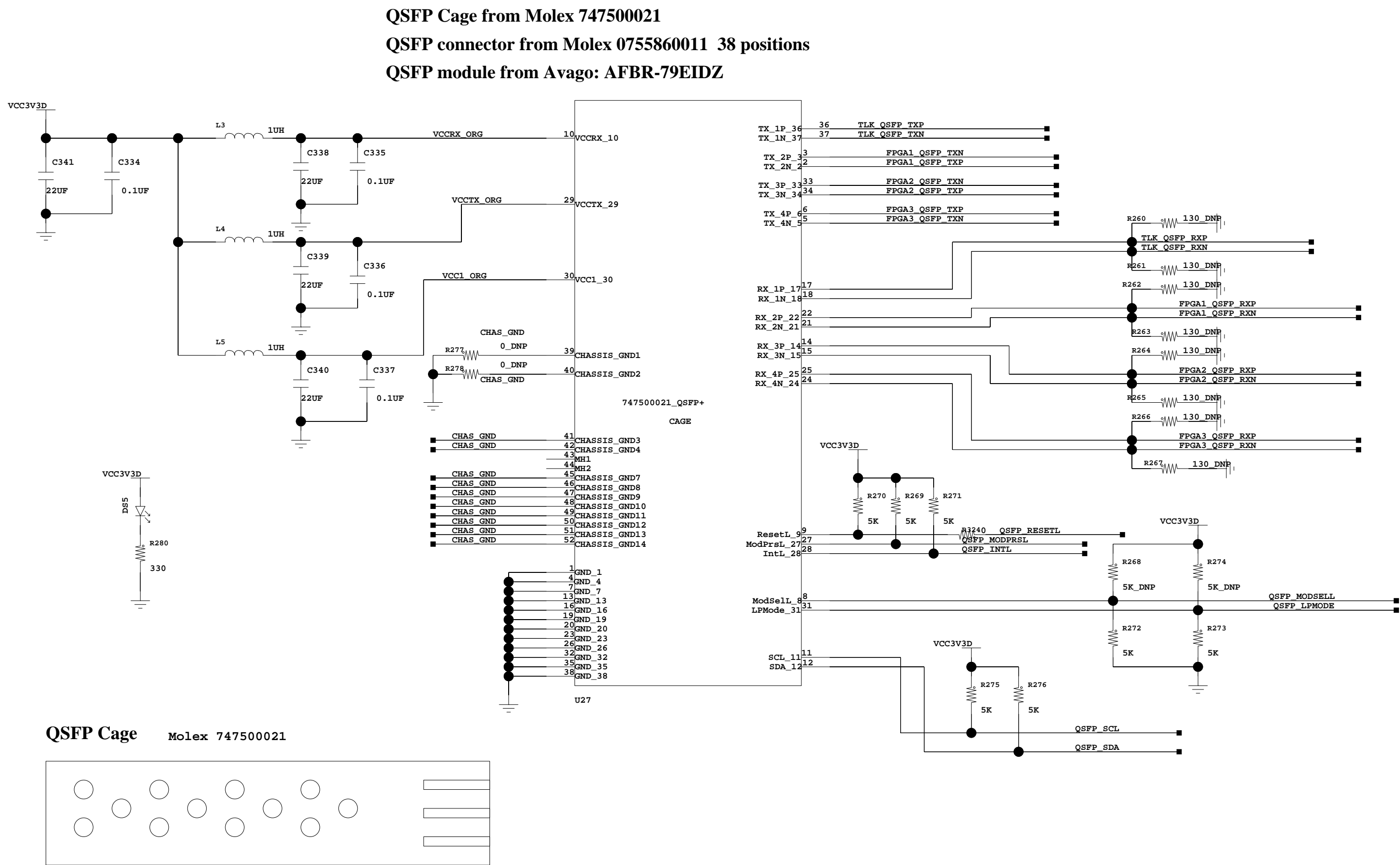
A

A

NOTE

COMPANY					
TITLE					
SIZE	D	REV	SHEET	FPGA_000KYO_MAP	
PSAAN			DATE		

REVISED, 3/31/2013

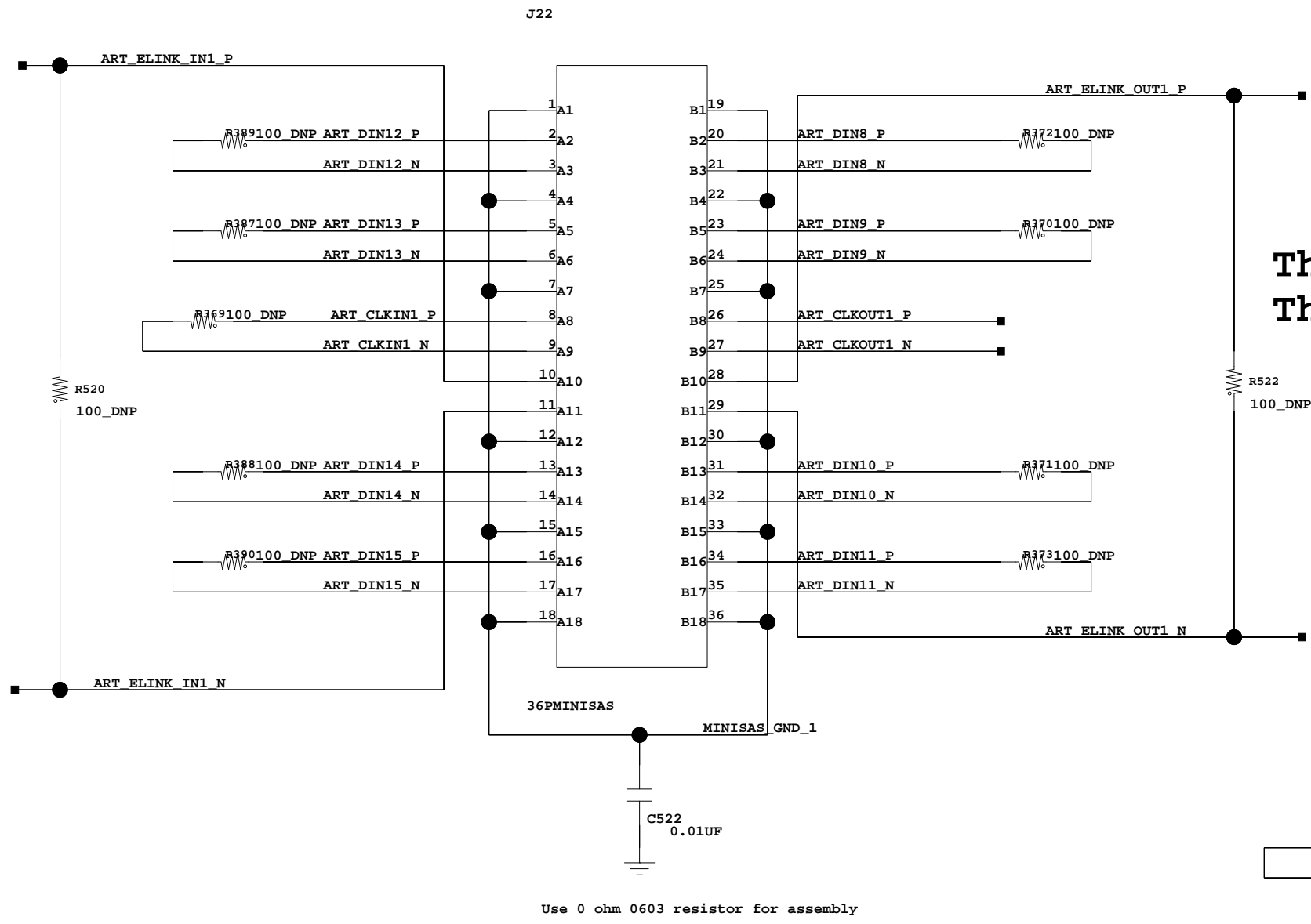
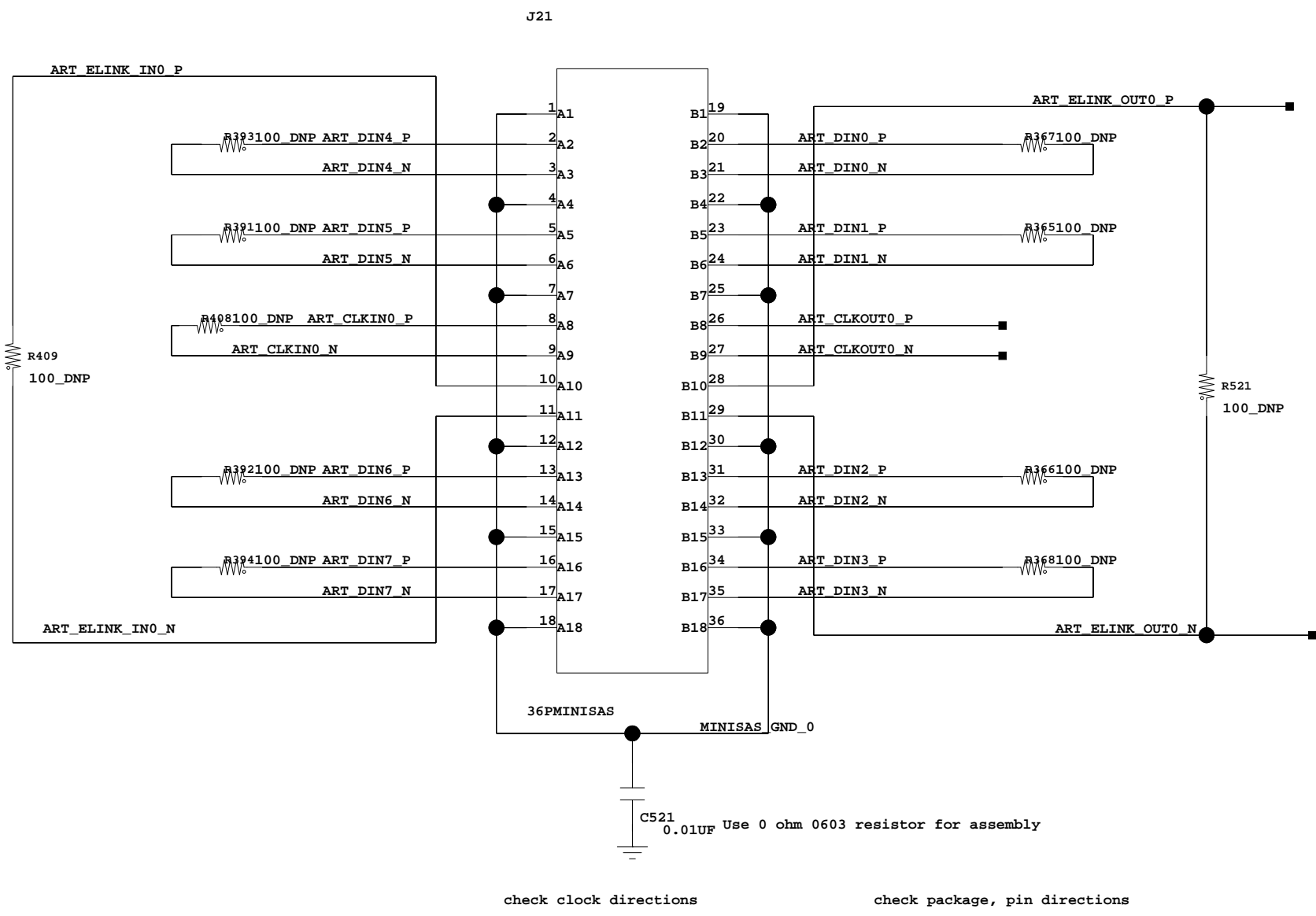


NOTE

COMPANY				
TITLE				
SIZE	D	REV	SUBST	QSFPE OF N
DRAWN			DATE	

D

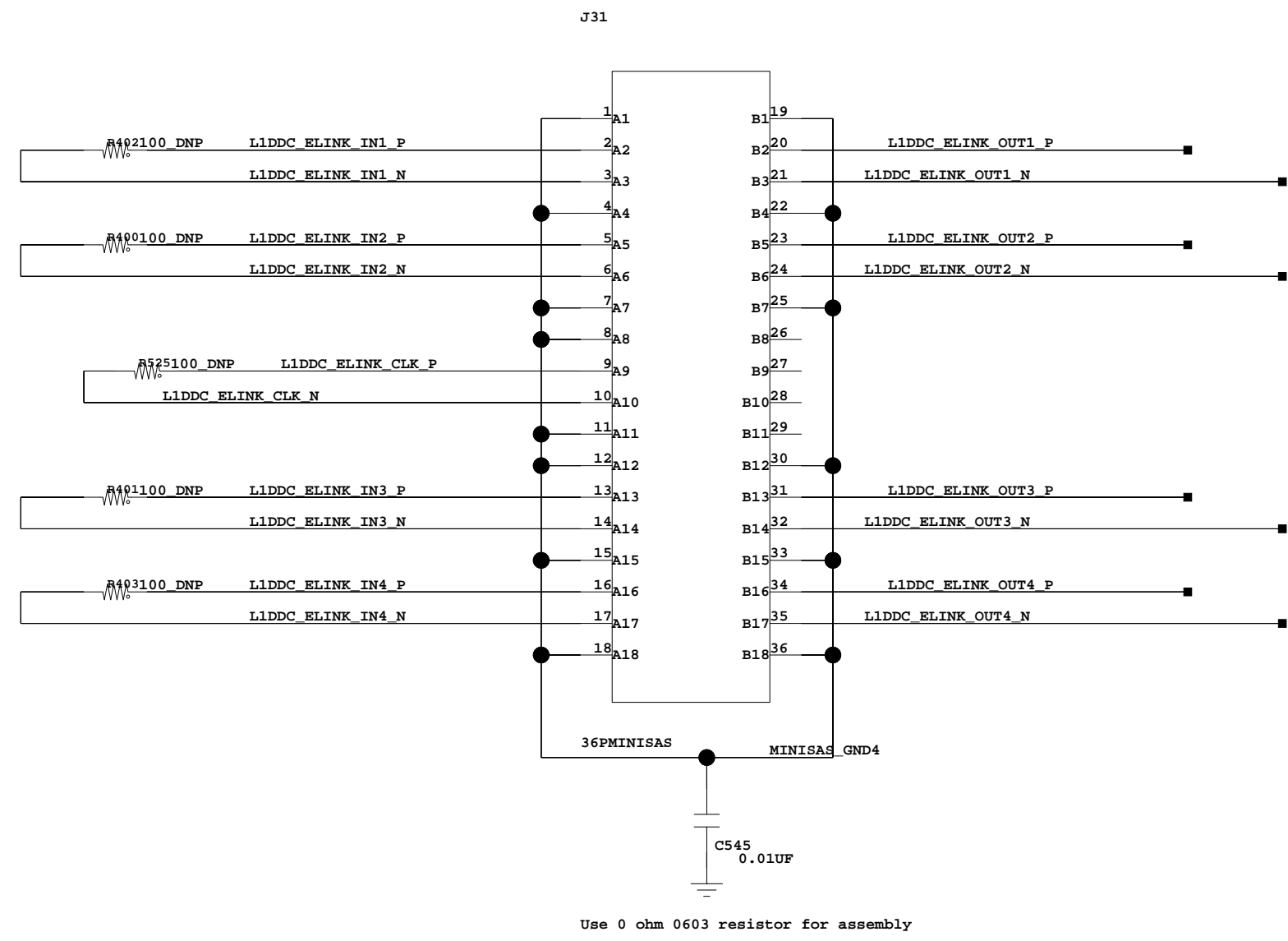
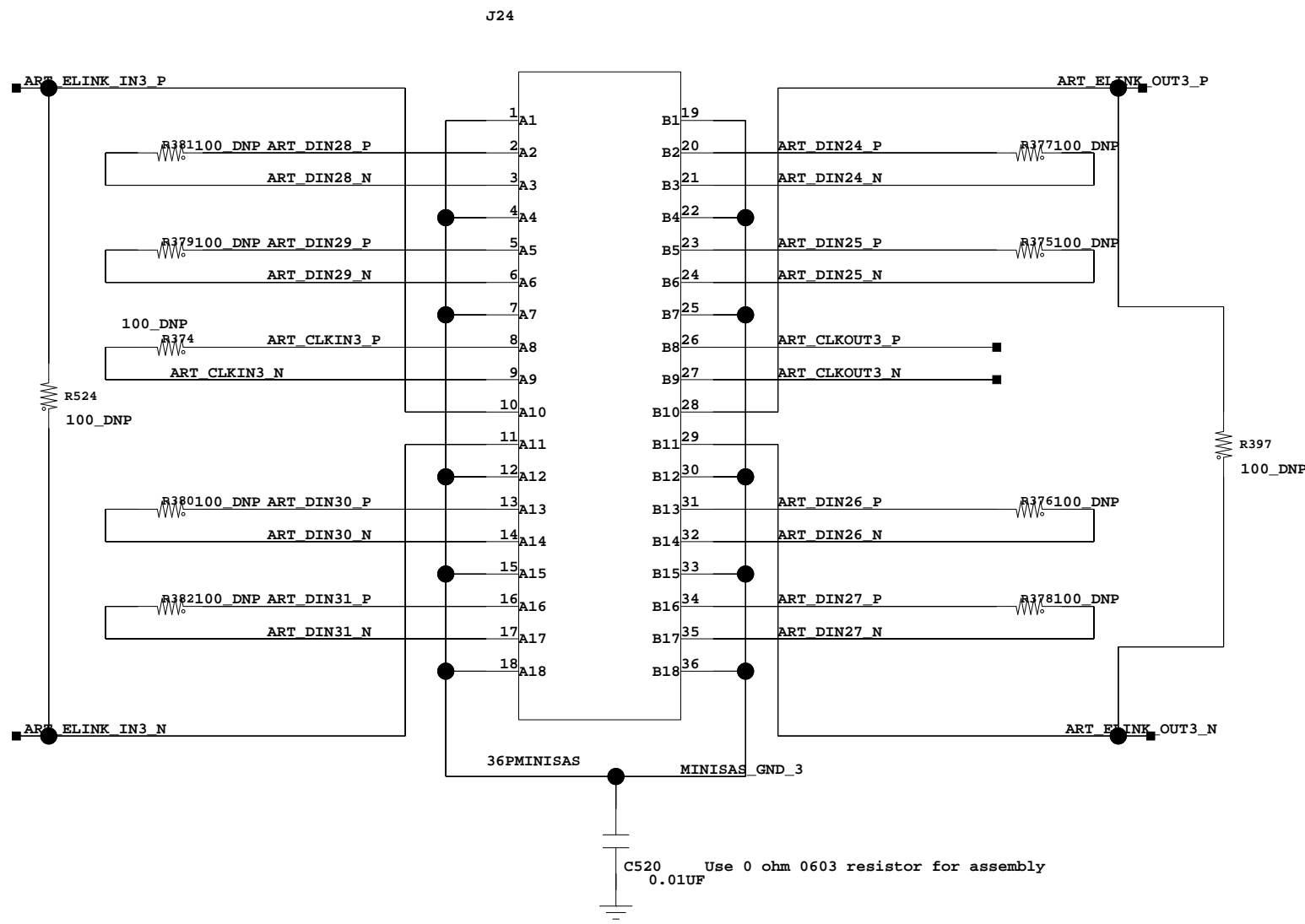
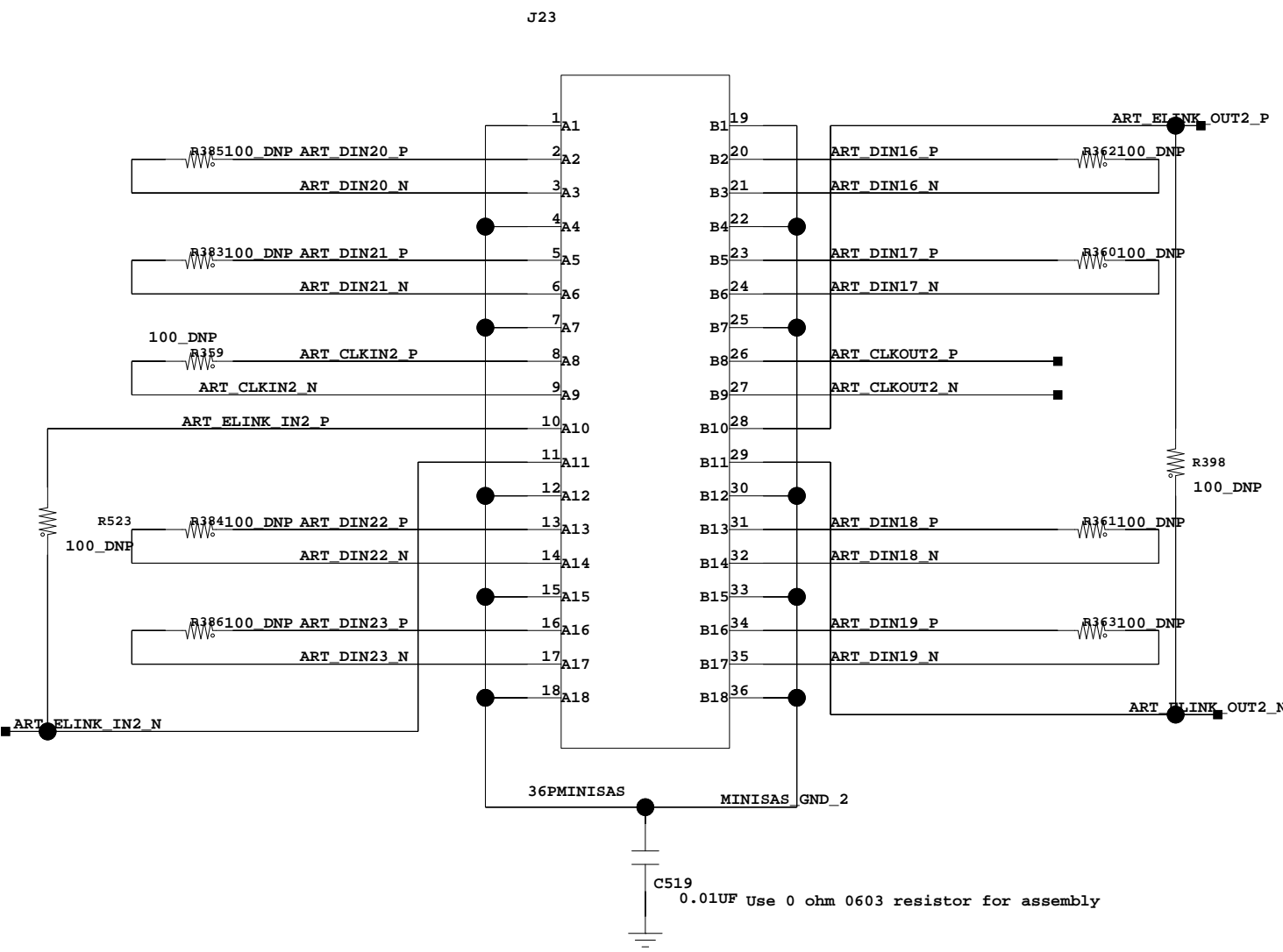
CLKOUT: FROM ADDC TO MMFE-8
CLKIN: FROM MMFE-8 TO ADDC



The e-link capacitors may chaged to 0R0
The termination resistors place near FPGA side

Connector: Molex 75783-0125

Cable: 8F36-AAA105-0.50, 50cm



B

A

D

C

B

A

NOTE

COMPANY				
TITLE				
SIZE	D	REV	SHEET	MINISAS_CONN
FRAMT			DATE	

Schematic Ends

Ref Pages BELOW

- Reminders:
1. ADD silkscreen for resistor selection
 2. Check the package drawn by my self...
 3. ADD Capacitors for OSCs and convertor chips
 4. CHECK THE cfg of FPGA again