

1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
 2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
 3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

N84 MLB ICE

LAST_MODIFICATION=Fri Aug 17 14:33:55 2018

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55	64	I/O: B2B Dock Filters	sync	06/07/2017

BOM APNs on Page 7; MCO APN on Page 4

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR	CRITICAL	BOM OPTION
051-03187	1	SCH_MLB_ICE_N84	SCH	CRITICAL	?
E20-01209	1	PCB_MLB_ICE_N84	PCB	CRITICAL	?

Sub Designs

SOURCE PROJECT	SUB-DESIGN NAME	VERSION	HARD SOFT	SYNC_DATE/TIME
N84	HIER_RADIO_ICE	0.151.0	s	2018_08_04_11:21:17
N84	HIER_NFC	0.23.0	s	2018_08_09_15:03:50

SCH,MLB,ICE,N84

8 7 6 5 4 3 2 1

PTH0401
2.30R1.60-NSP

O 1 PTH0401GND

MCO: 056-05555

AC Return Steering

SB0403
STDOFF-2.560D1.4ID.09H-SM

PTH0403
O 1 PTH0403GND

PTH0406
THSG 1

PTH0402
O 1

SB0401
O 1

SB0404
O 1

PTH0405
2.5R1.8-NSP
O 1 PTH0405GND

PTH0404
THSG 1

SB0402
O 1

BB PMU Shunt Caps

FIDUCIALS

CROSS

FD0412

FD0413

FD0414

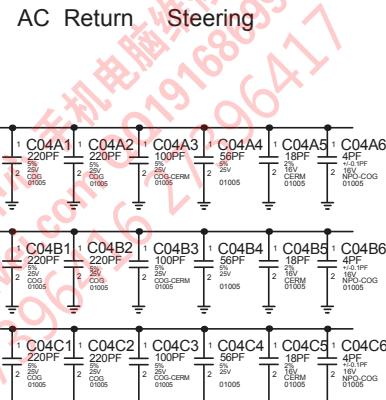
FD0415

SQUARE

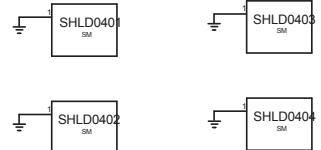
FD0408

FD0410

FD0411



SHIELDS



UNDERFILLDAM RESISTORS/CAPS

R0401
NC X 1.0Ω 2% 25V 0.1W
ROOM-SOC

PP_VDD_MAIN
1 C04E1
2.2Ω 2% 25V 0.1W
ROOM-SOC

AC STITCHING CAPS

PP_VDD_MAIN
QTY 10: 1 C0401 1 C0402 1 C0403 1 C0404 1 C0405 1 C0406 1 C0407 1 C0408 1 C0409 1 C0410
2.30R1.60-NSP 01005-1 01005-1 01005-1 01005-1 01005-1 01005-1 01005-1 01005-1 01005-1 01005-1

PP_VDD_MAIN
QTY 10: 1 C0411 1 C0412 1 C0413 1 C0414 1 C0415 1 C0165 1 C0417 1 C0418 1 C0419 1 C0420
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PP_VDD_MAIN
QTY 10: 1 C0421 1 C0422 1 C0423 1 C0424 1 C0425 1 C0426 1 C0427 1 C0428 1 C0429 1 C0430
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PP_VDD_MAIN
QTY 10: 1 C0431 1 C0432 1 C0433 1 C0434 1 C0435 1 C0436 1 C0437 1 C0438 1 C0439 1 C0440
2.30R1.60-NSP 01005 01005 01005 01005 01005 01005 01005 01005 01005 01005

PP_VDD_MAIN
QTY 4: 1 C0441 1 C0442 1 C0443 1 C0444
2.30R1.60-NSP 01005 01005 01005 01005

PP_VDD_MAIN
QTY 8: 1 C0451 1 C0452 1 C0453 1 C0454 1 C0455 1 C0456 1 C0457 1 C0458
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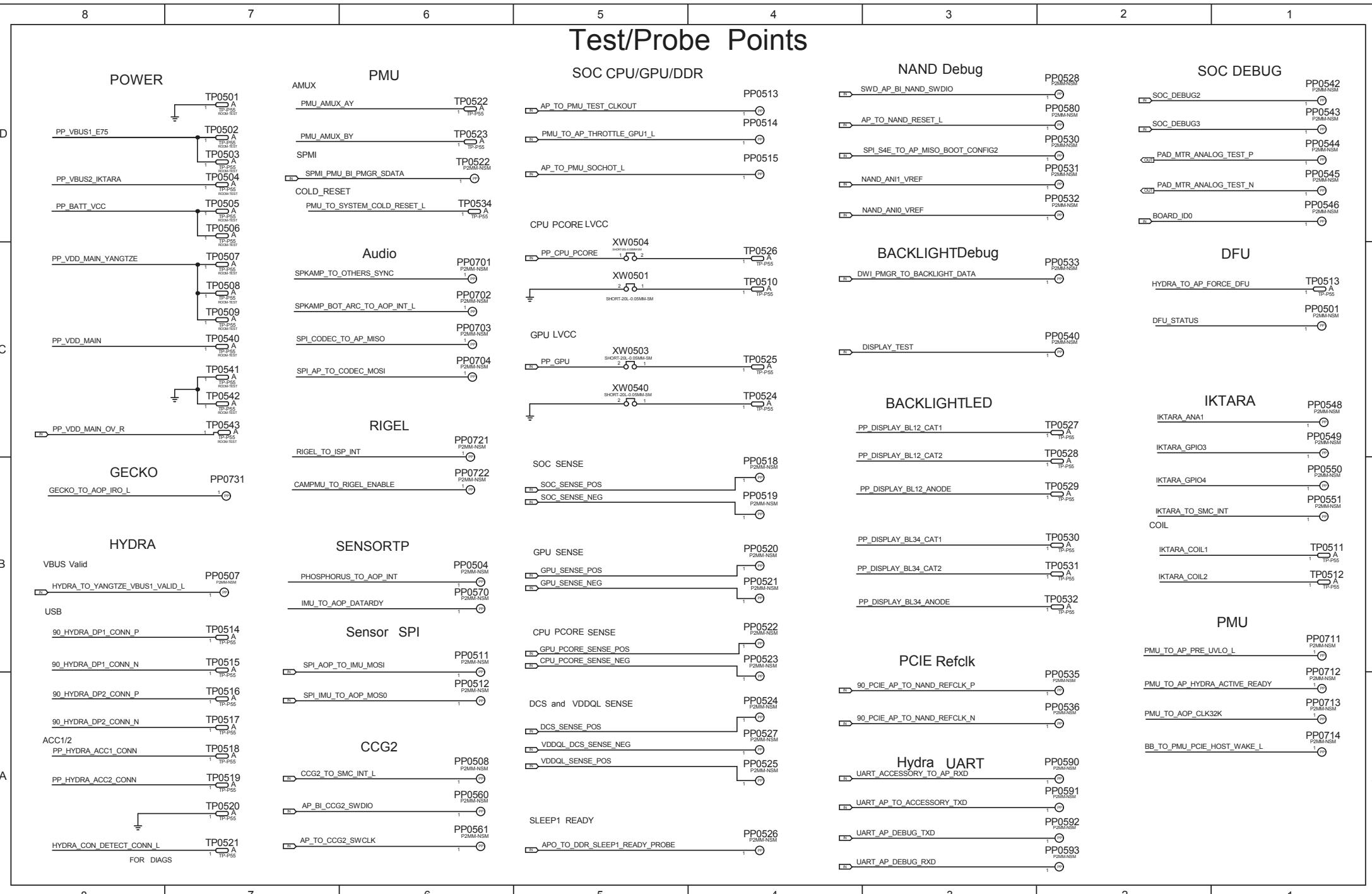
SB0402
O 1

PP_VDD_MAIN
1 C04D1 1 C04D2 1 C04D3 1 C04D4 1 C04D5
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4 3 2 1

8 7 6 5 4 3 2 1

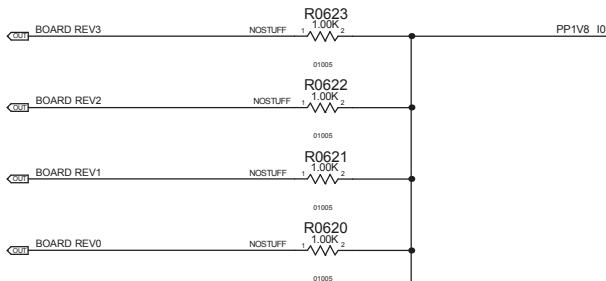
Test/Probe Points



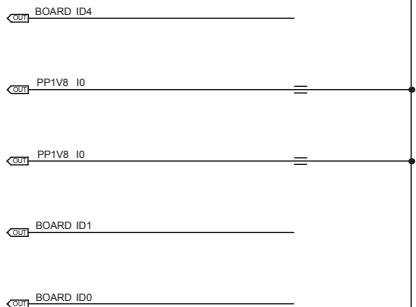
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BOOTSTRAPPING

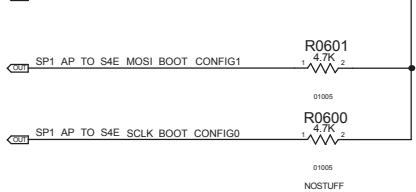
BOARD REV



BOARD ID

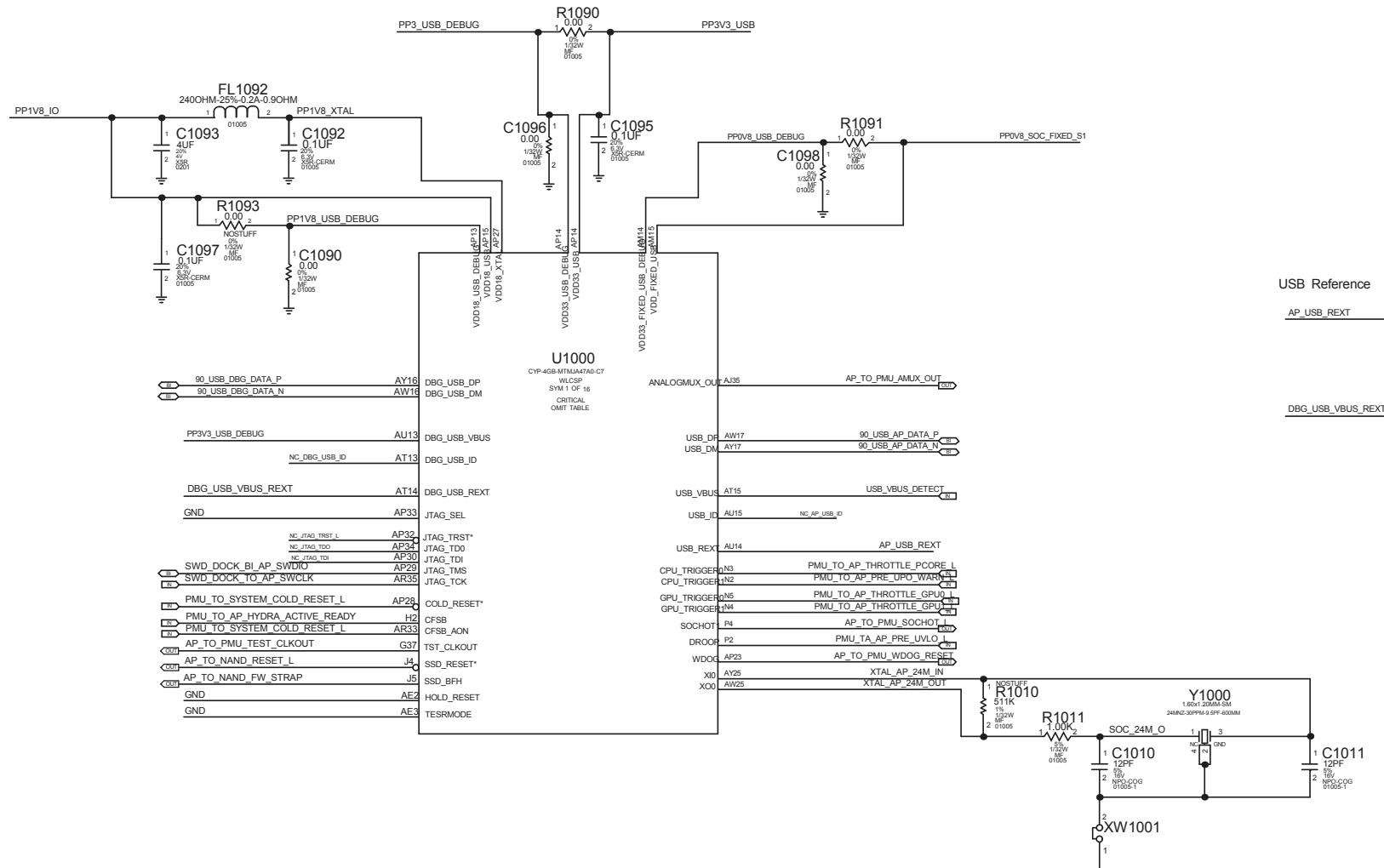


BOOT CONFIG

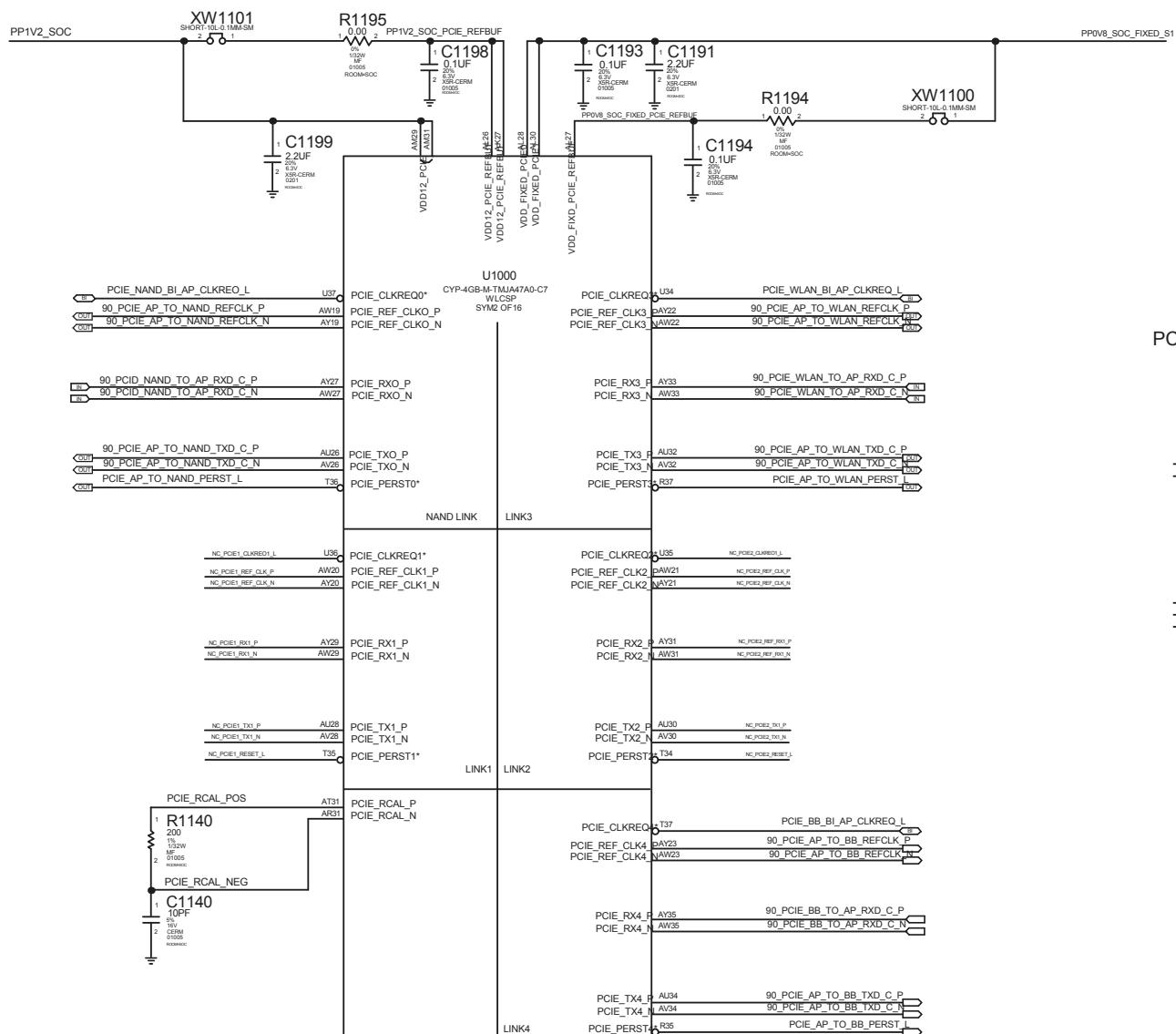


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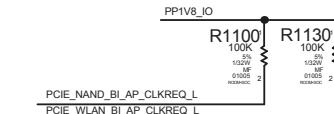
SOC - USB, JTAG, XTAL



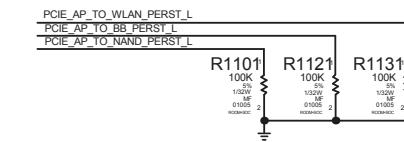
SOC-PCIE



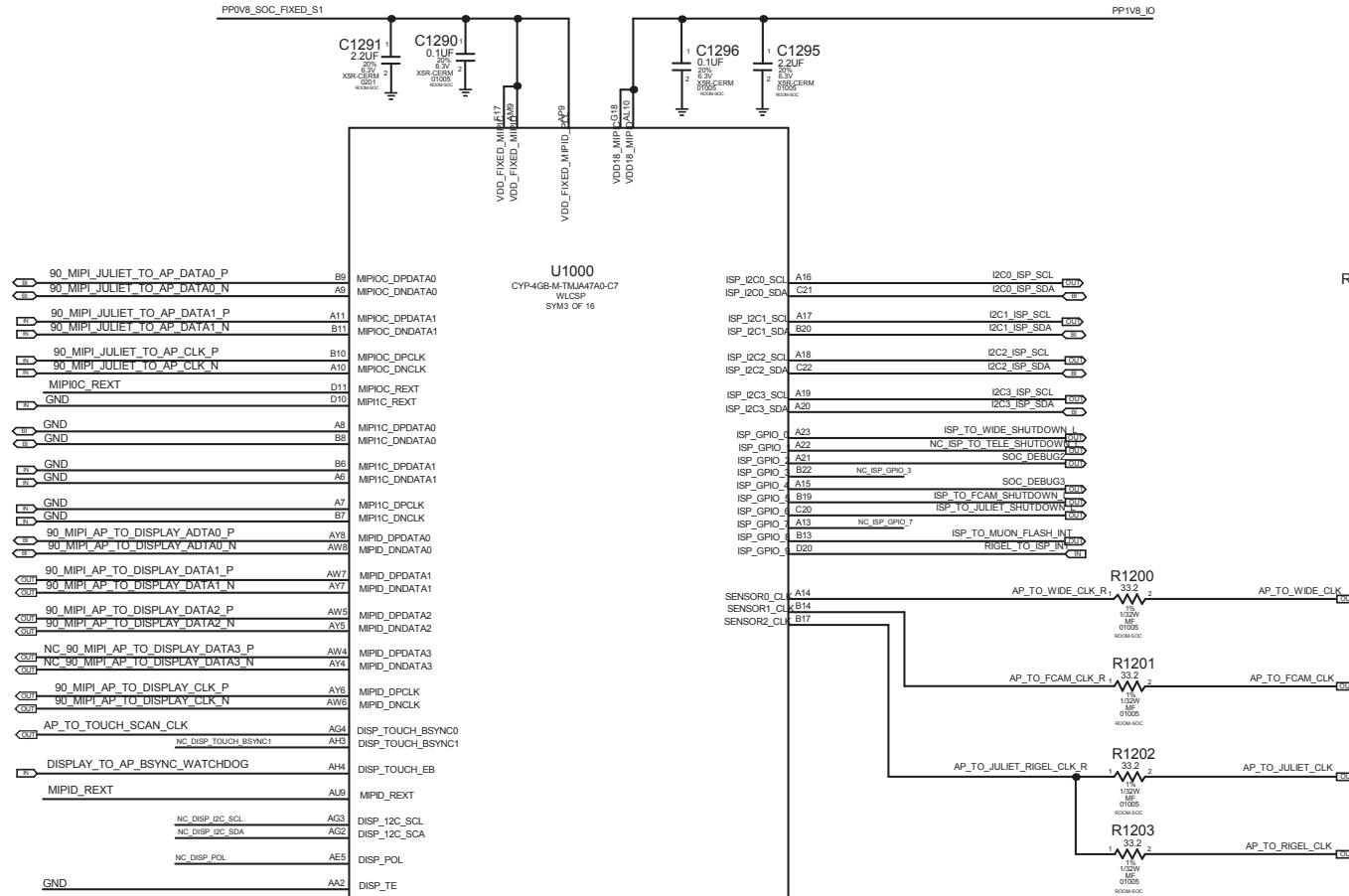
PCIe Clock Request Pull-Ups



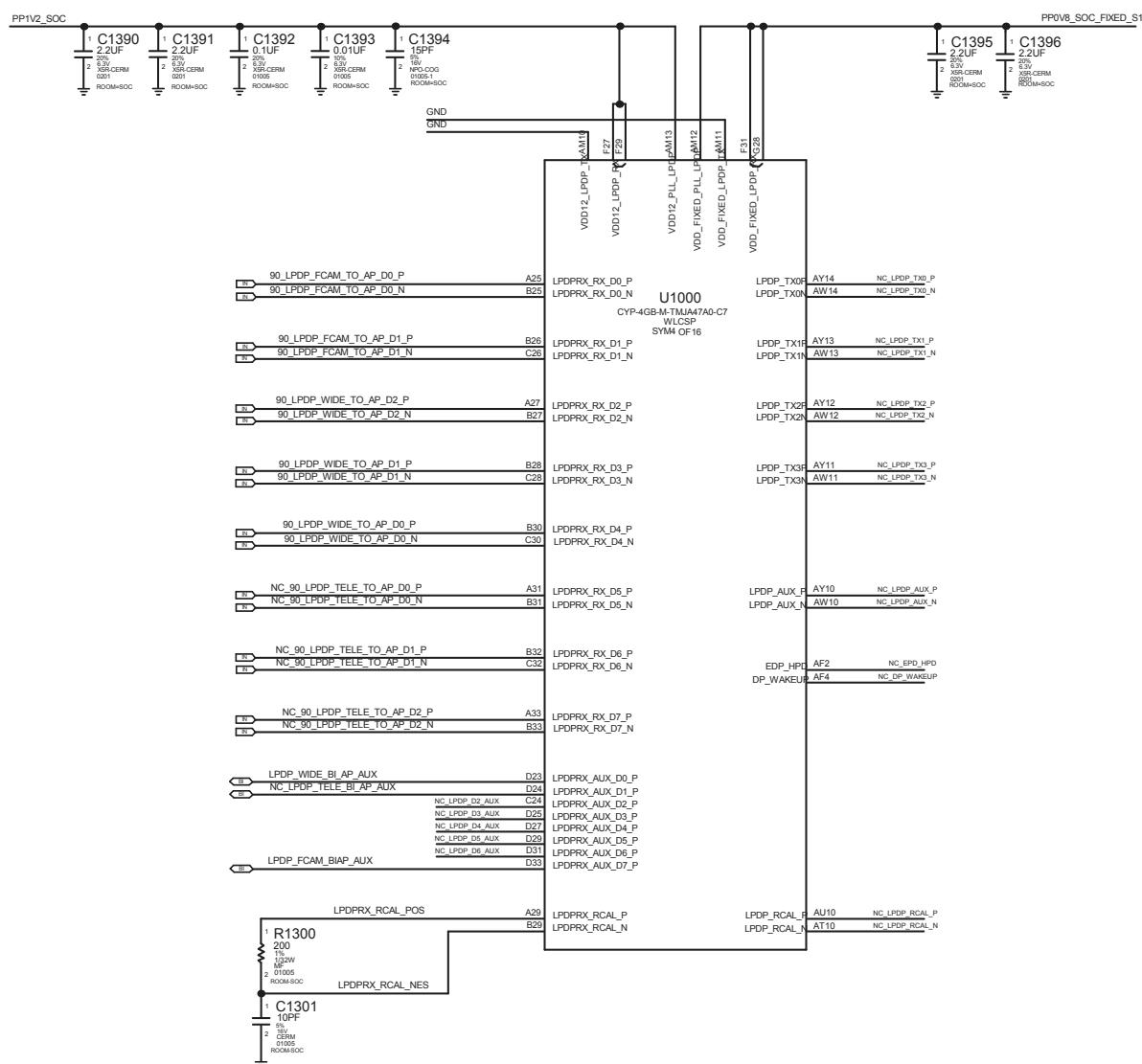
PCIe Reset Pull-Uowns



SOC-MIPI

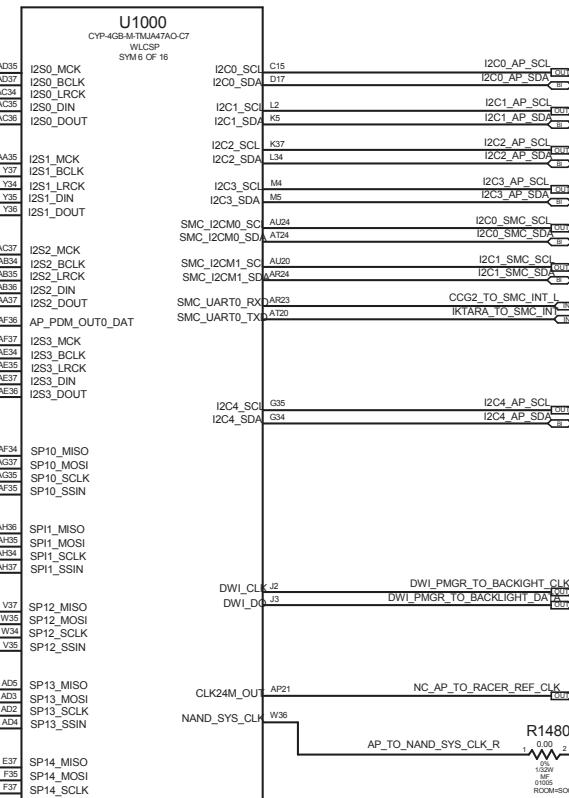
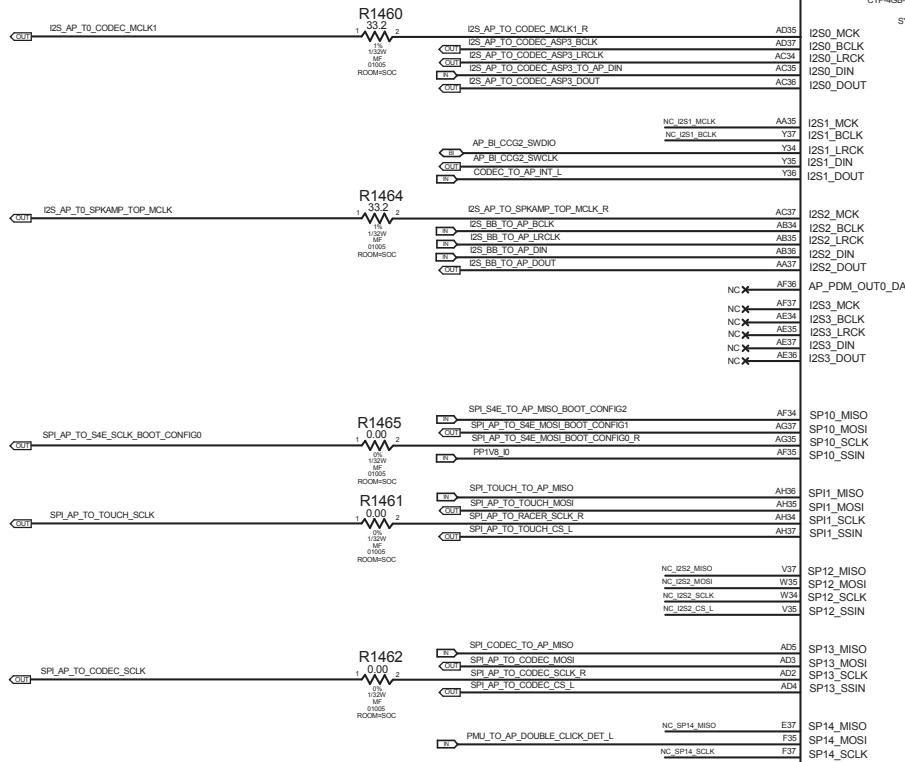


SOC-LPDP

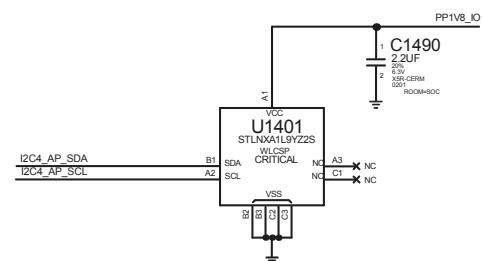


SOC-SERIAL INTERFACES

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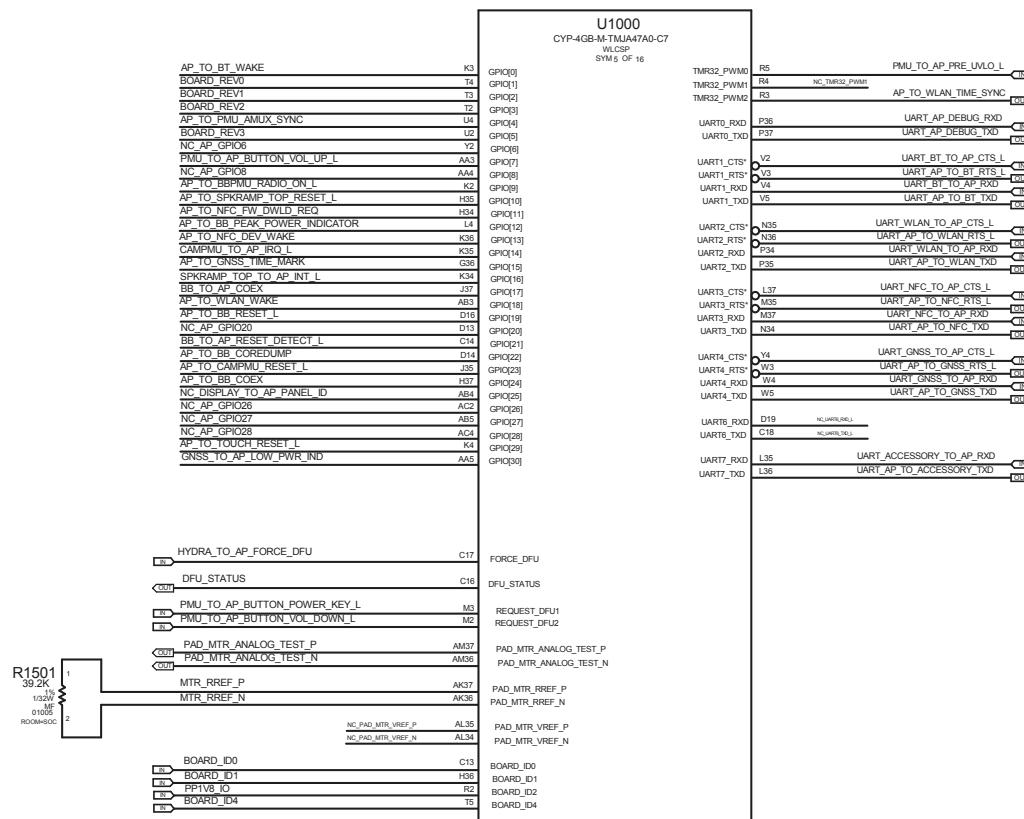


LYNX

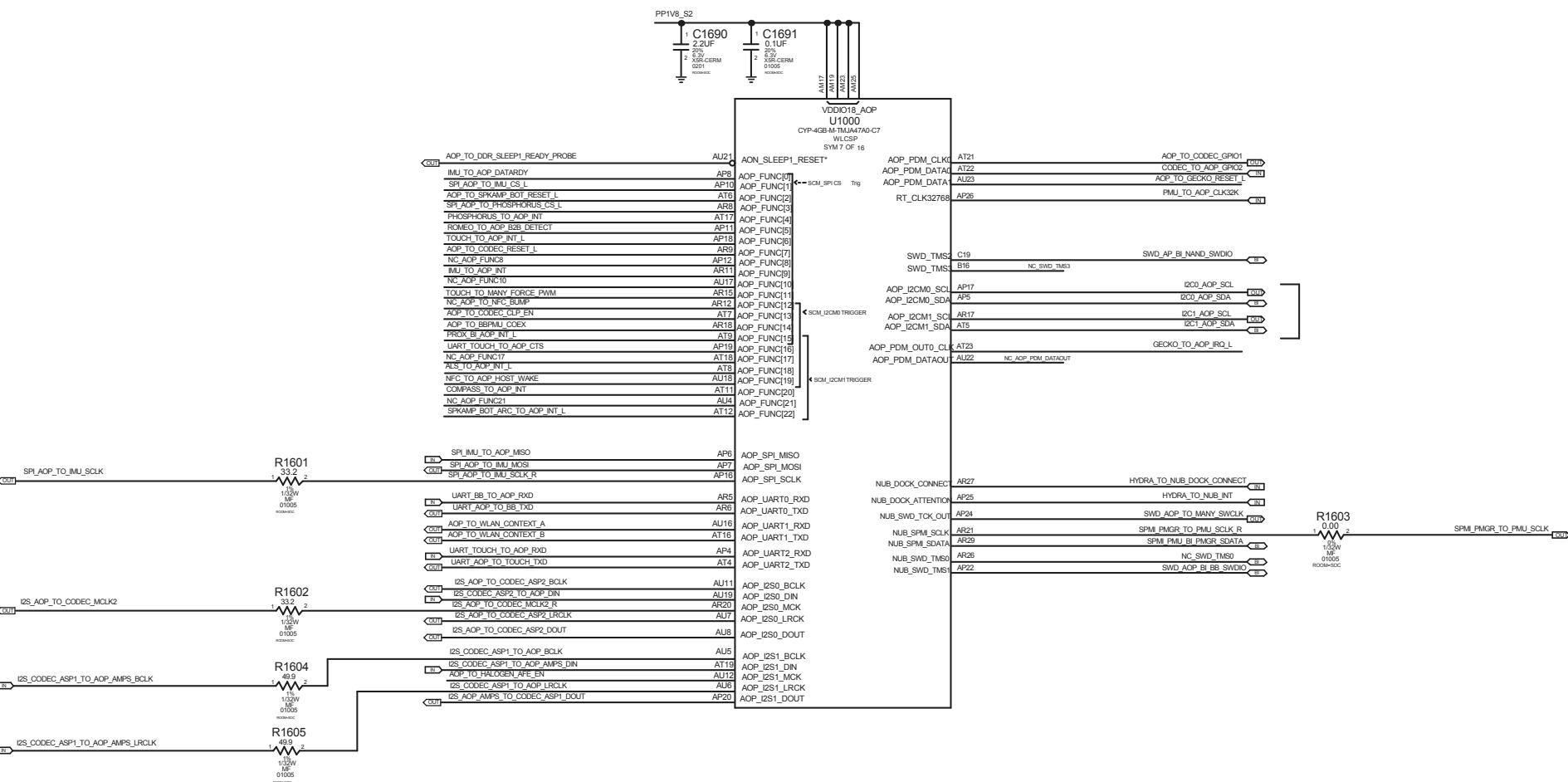


A

SOC-GPIO INTERFACES



SOC-AOP



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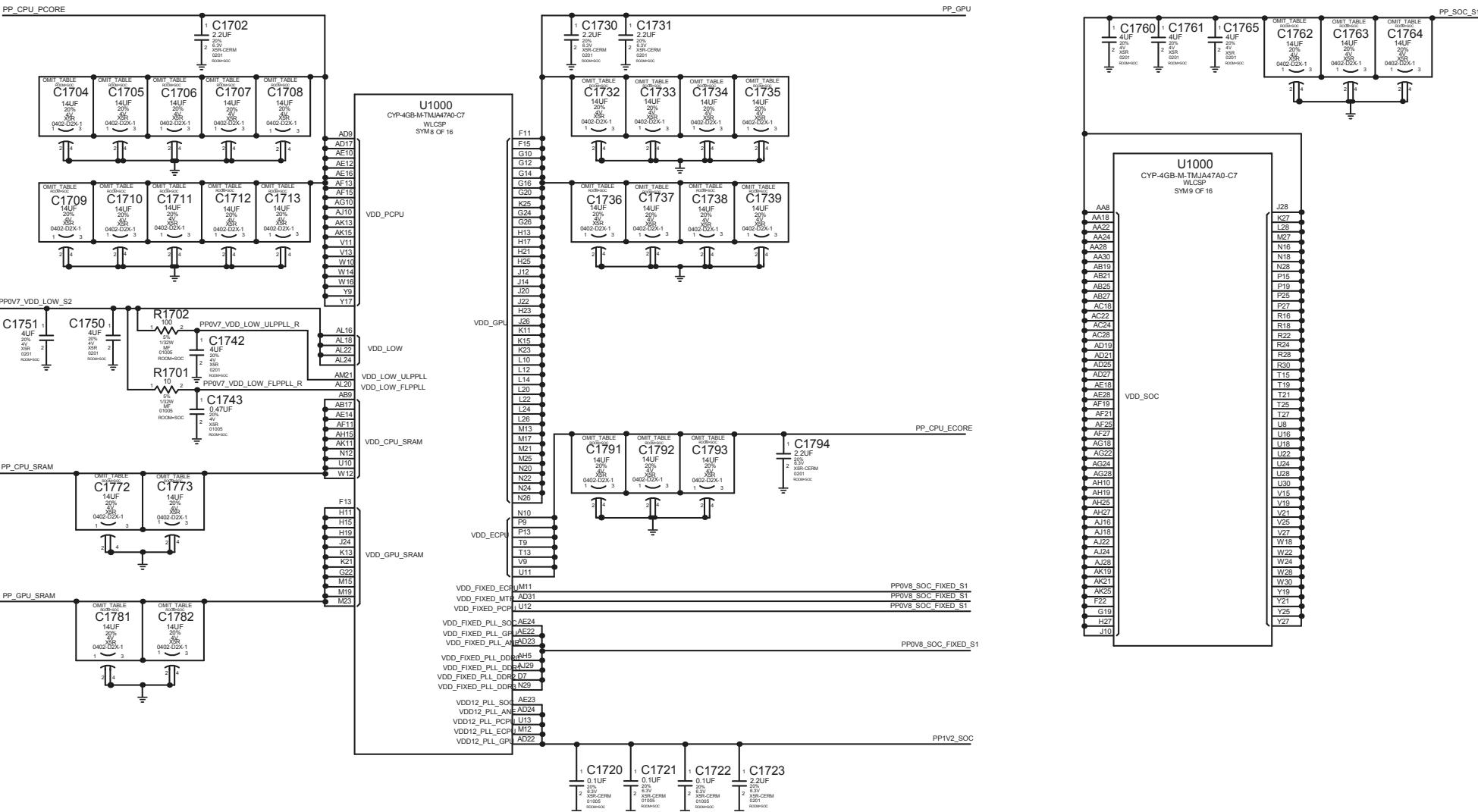
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SOC-CPU, GPU & SOC RAILS



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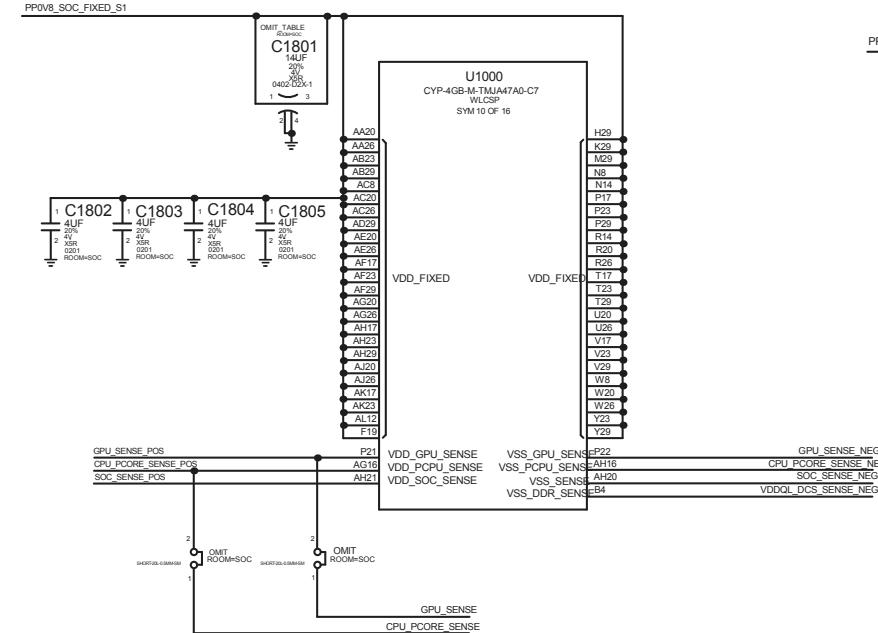
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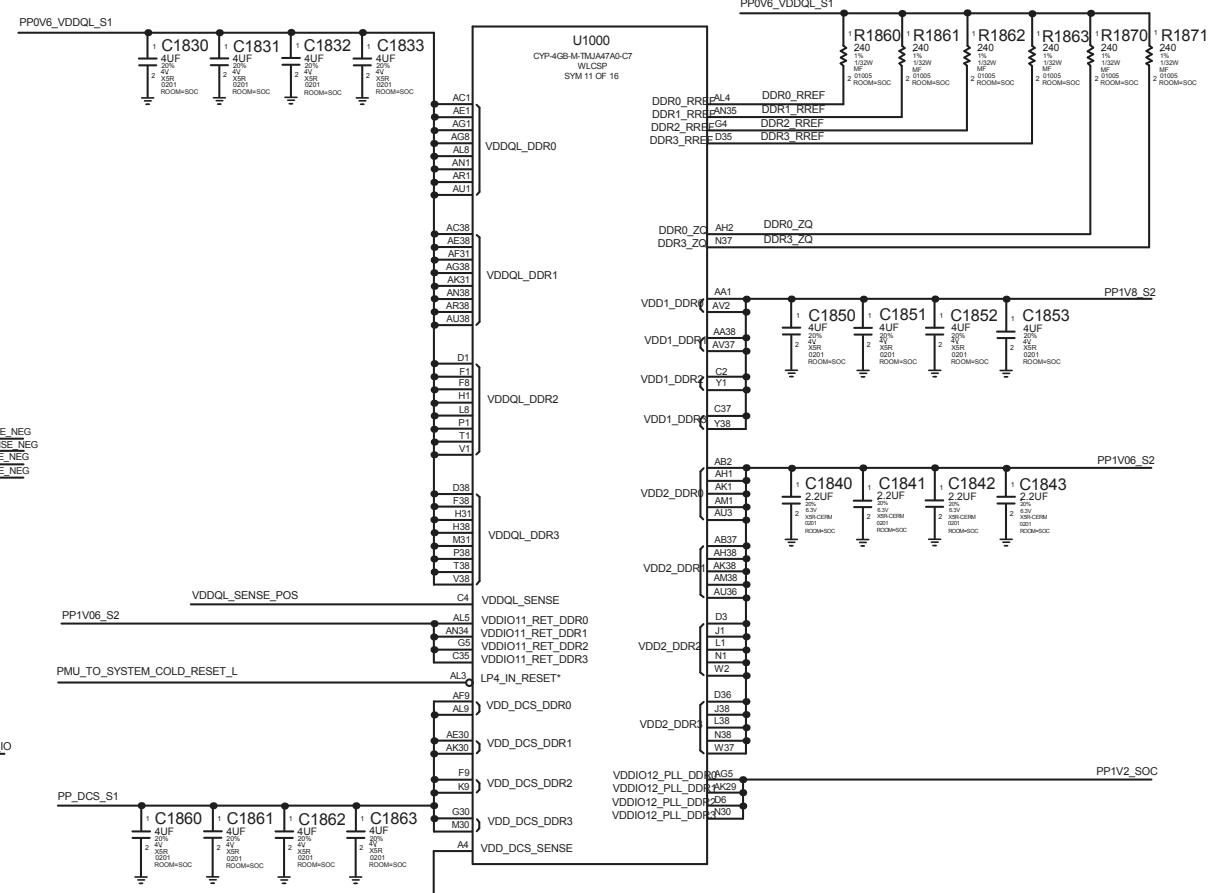
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SOC-CPU, GPU & SOC RAILS

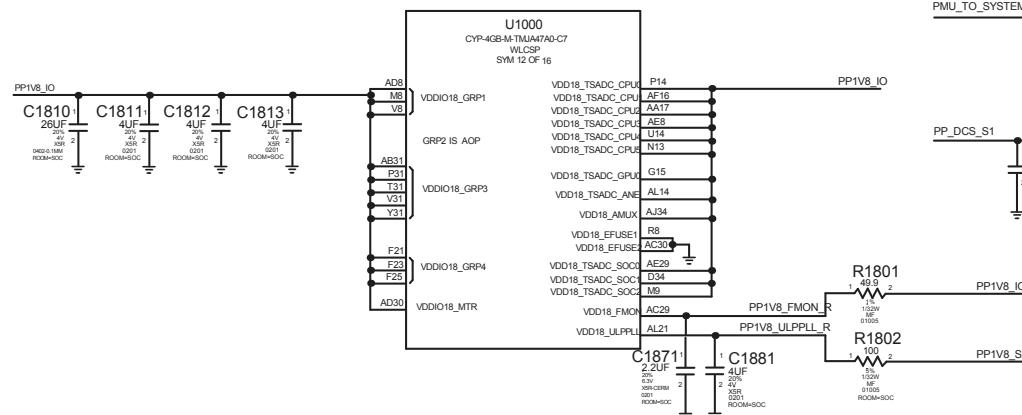
D



C



B



A

8 7 6 5 4 3 2 1

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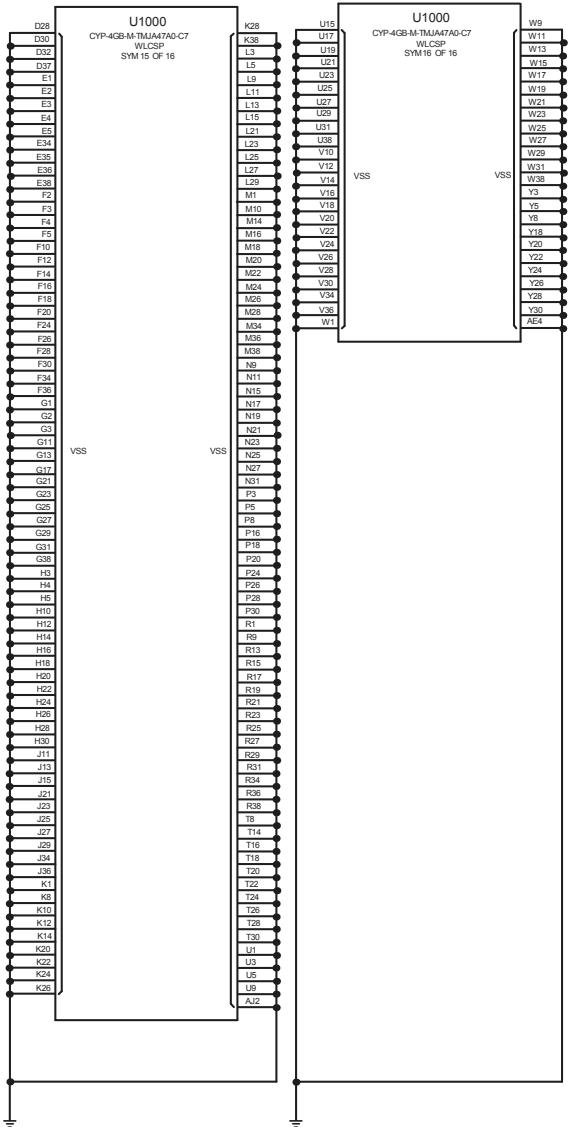
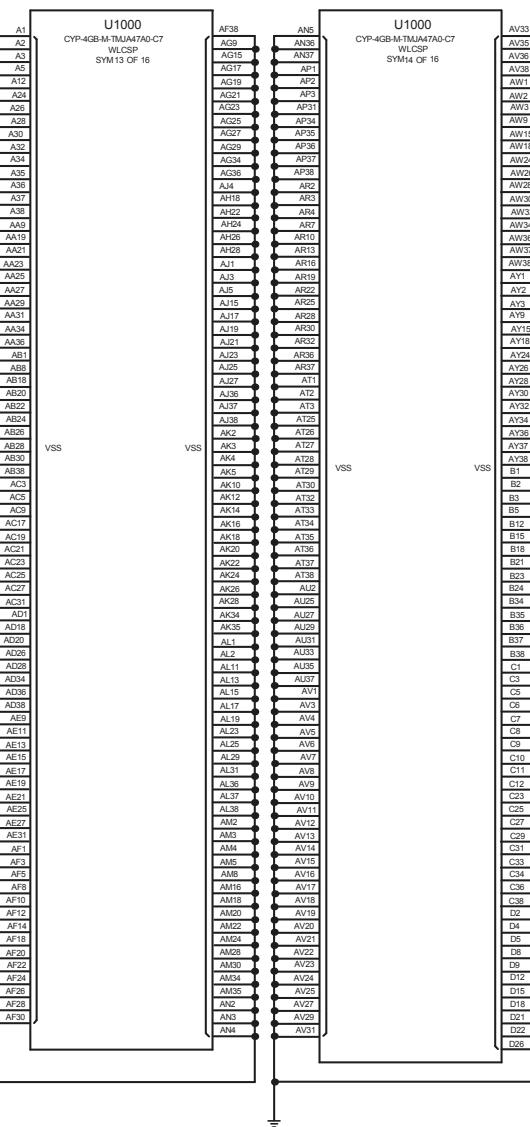
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SOC-POWER SUPPLIES

D



C

B

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D

C

B

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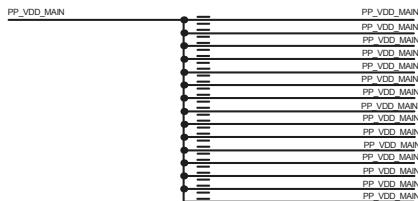
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8 7 6 5 4 3 2 1

ALIASES(1/2)

POWER

D Dev Board Compatibility (Medusa)



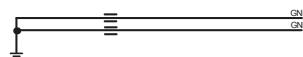
UNUSED LDOs



Inputs



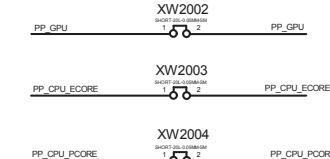
UNUSED LPDP VDD



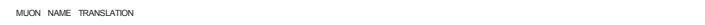
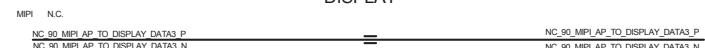
B Dev Board Compatibility (Power)



A Dev Board Compatibility (Power)



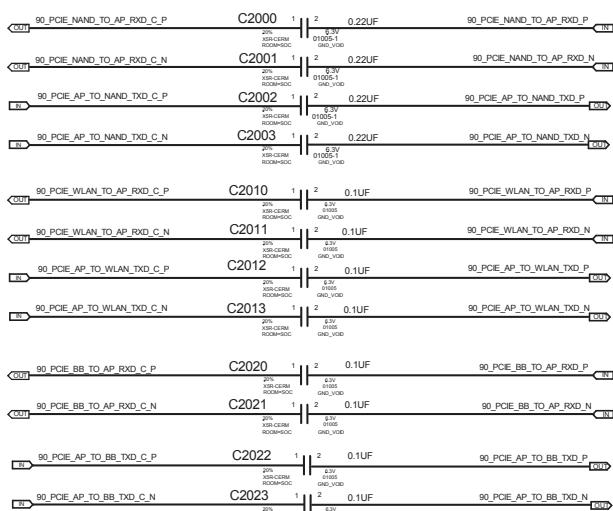
DISPLAY



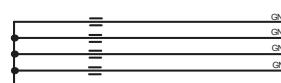
PMU



PCIE



MISC. SOC GROUNDS



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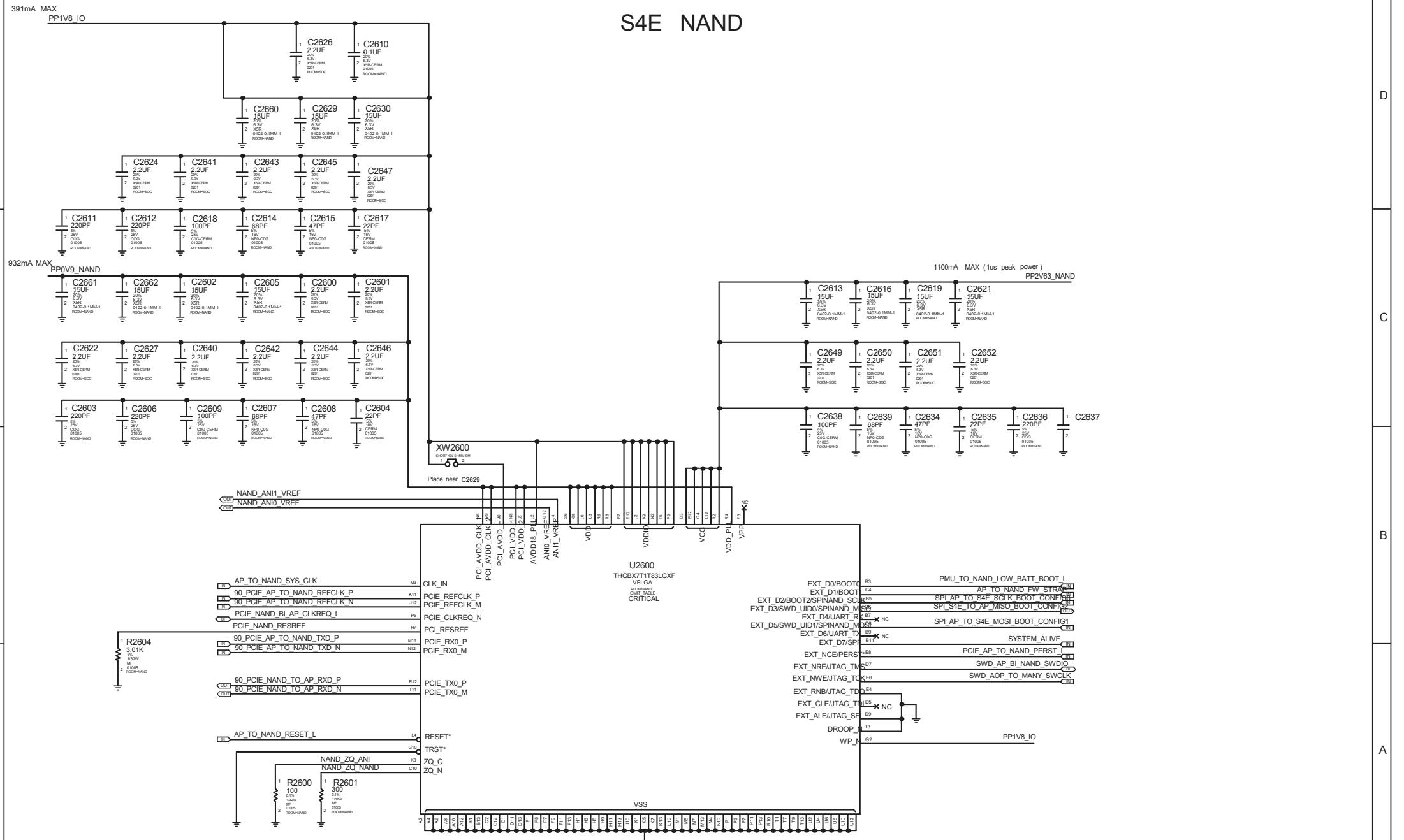
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S4E NAND



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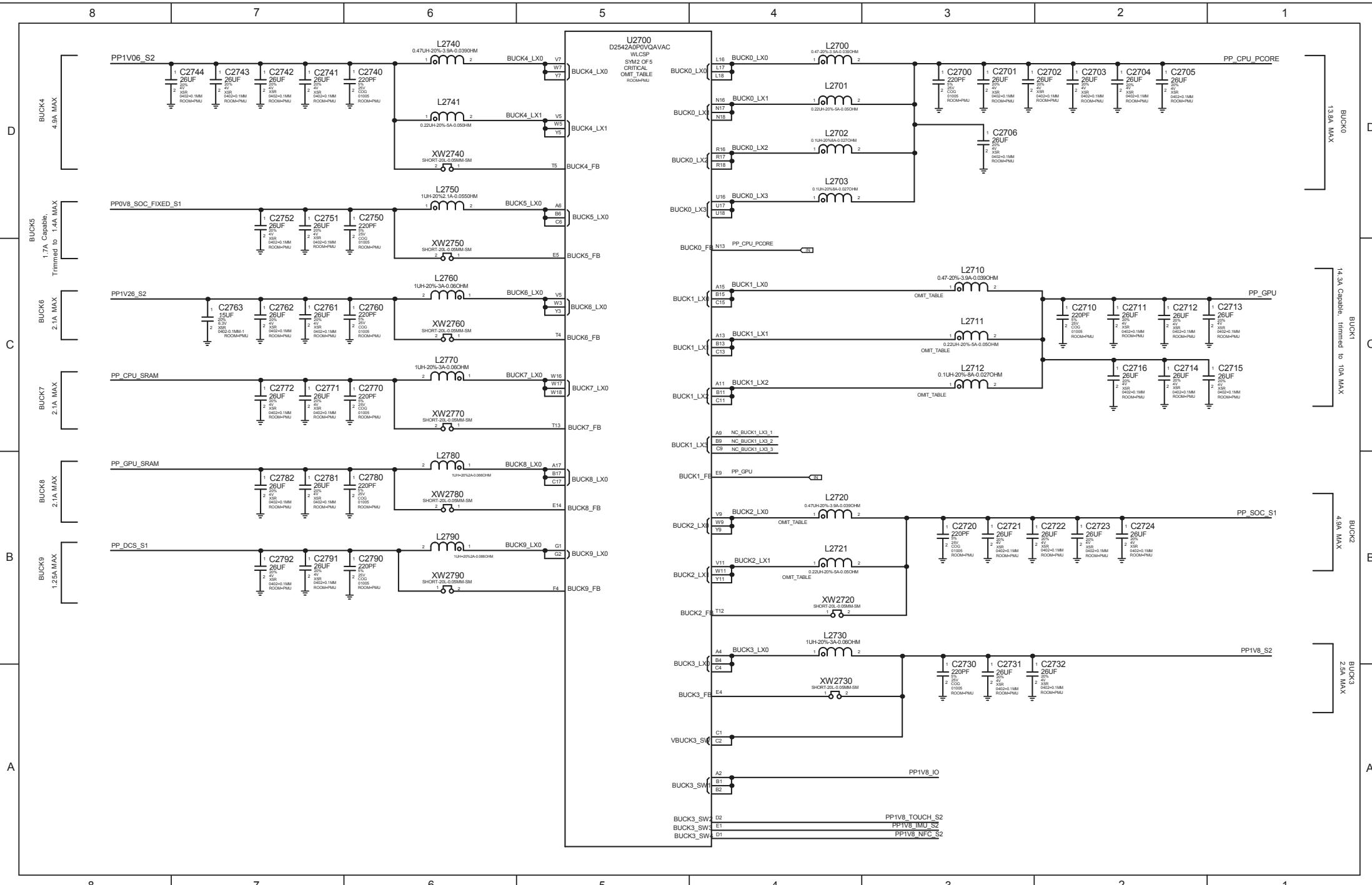
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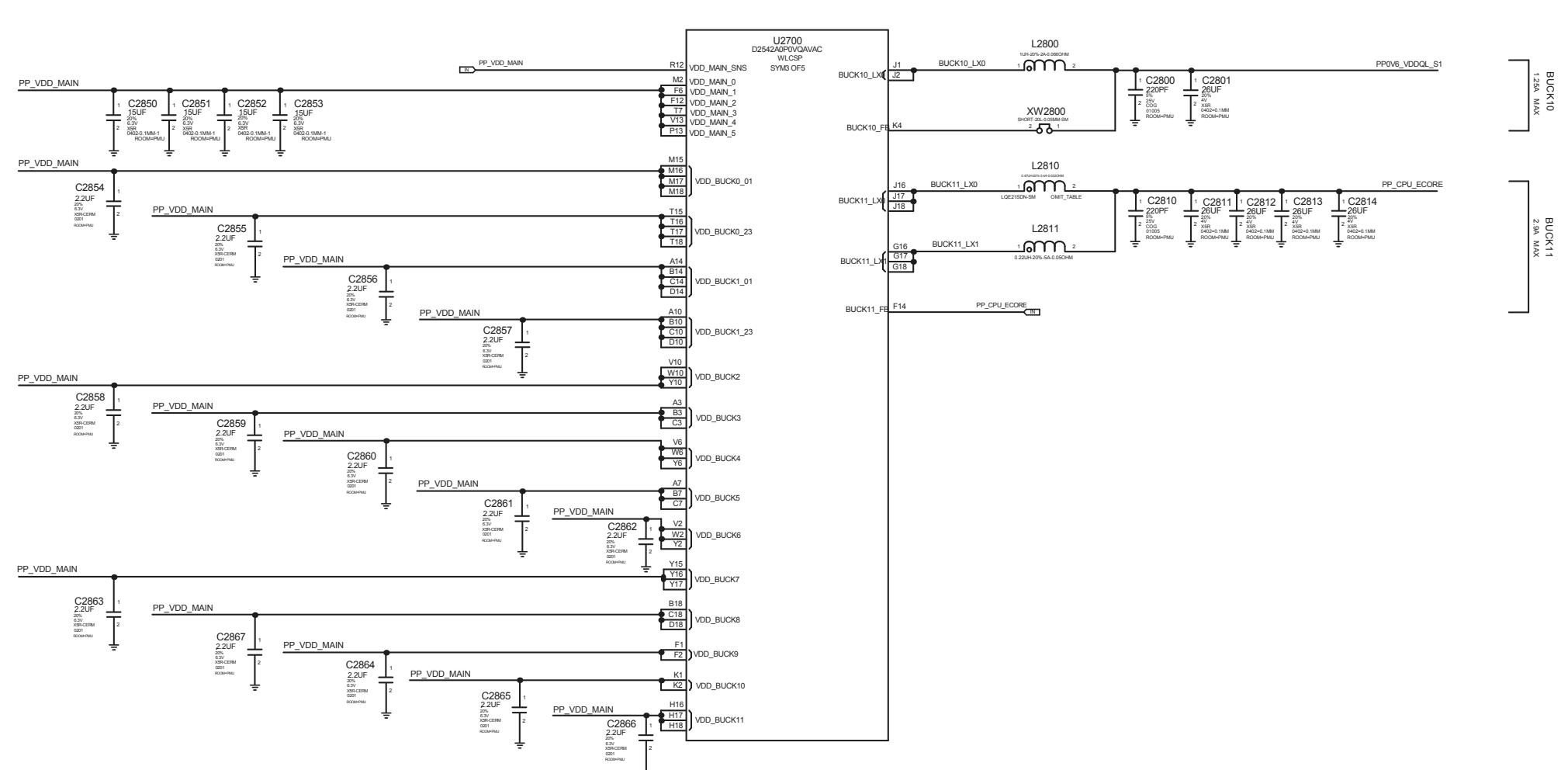
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PMU-BUCKS



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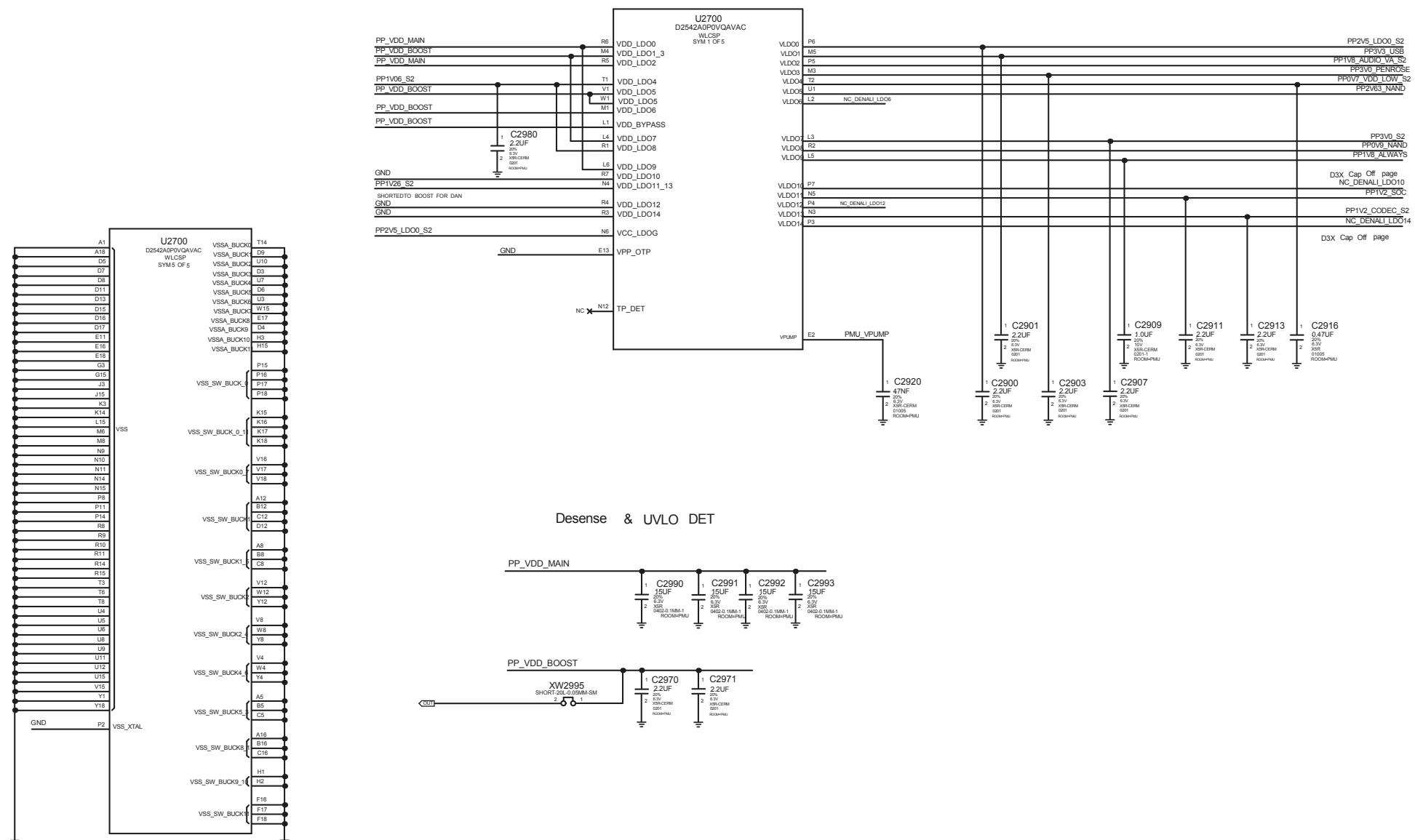
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PMU-LDOs



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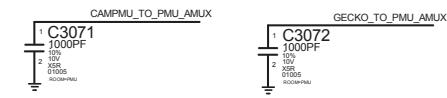
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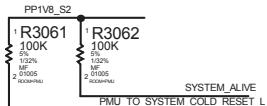
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PMU-GPIOS

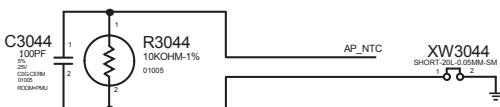
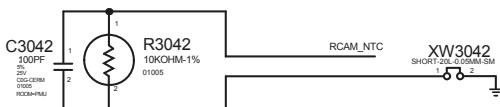
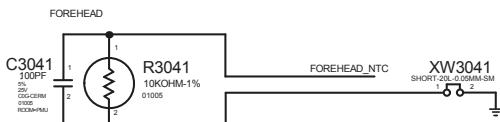
Ansel AMUXCaps



COLD_RESET & SYSTEM_ALIVE_P.U.

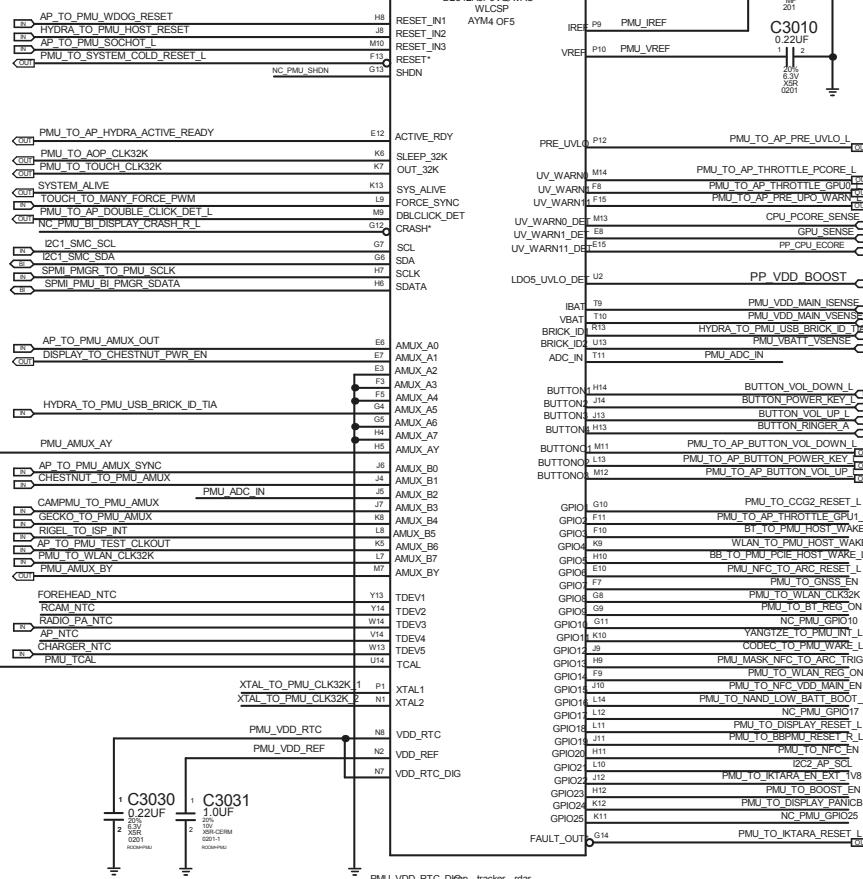
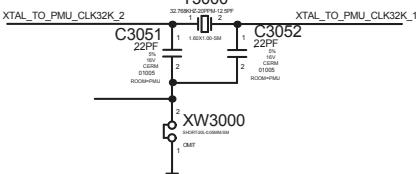


NTCs



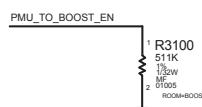
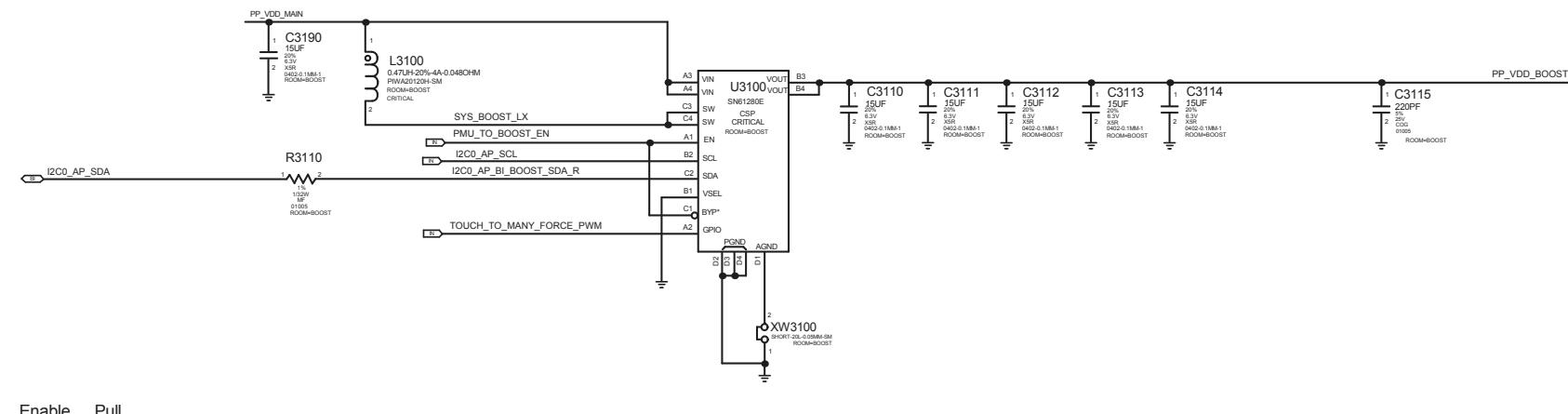
CHARGER NTC on Charger Page

PMU CRYSTAL



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BOOST



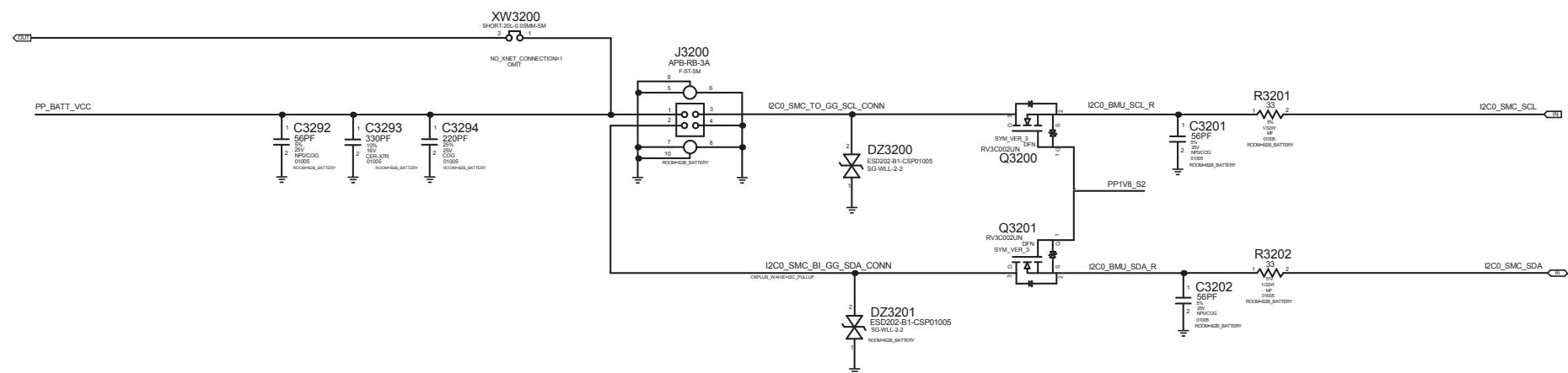
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8 7 6 5 4 3 2 1

D

D

BATTERYCONNECTOR



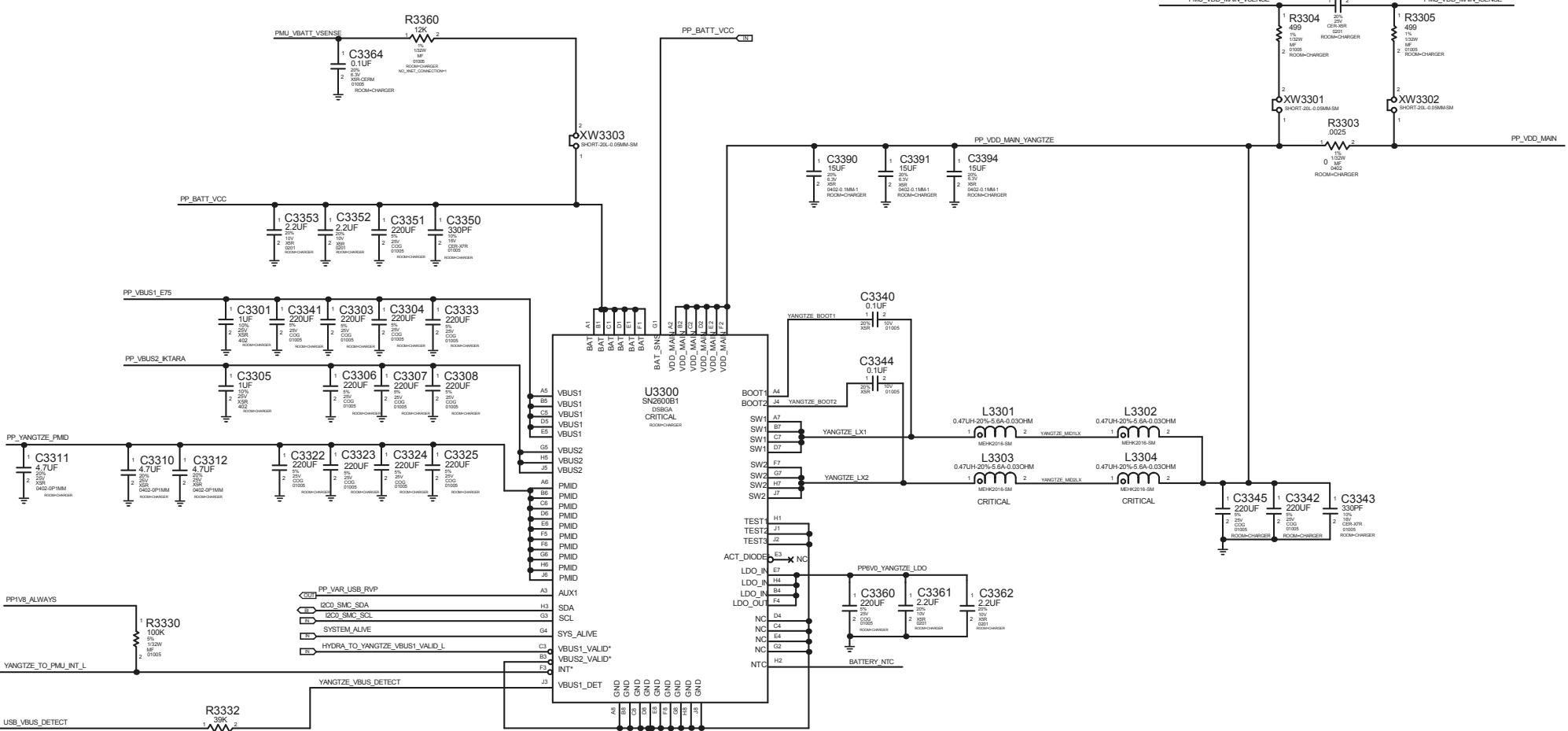
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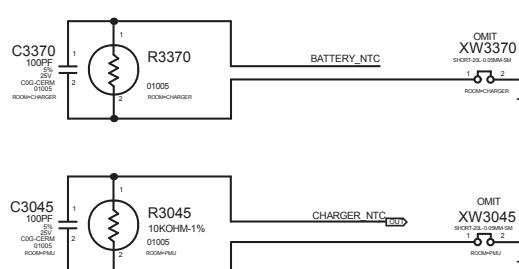
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8 7 6 5 4 3 2 1

YANGTZE CHARGER

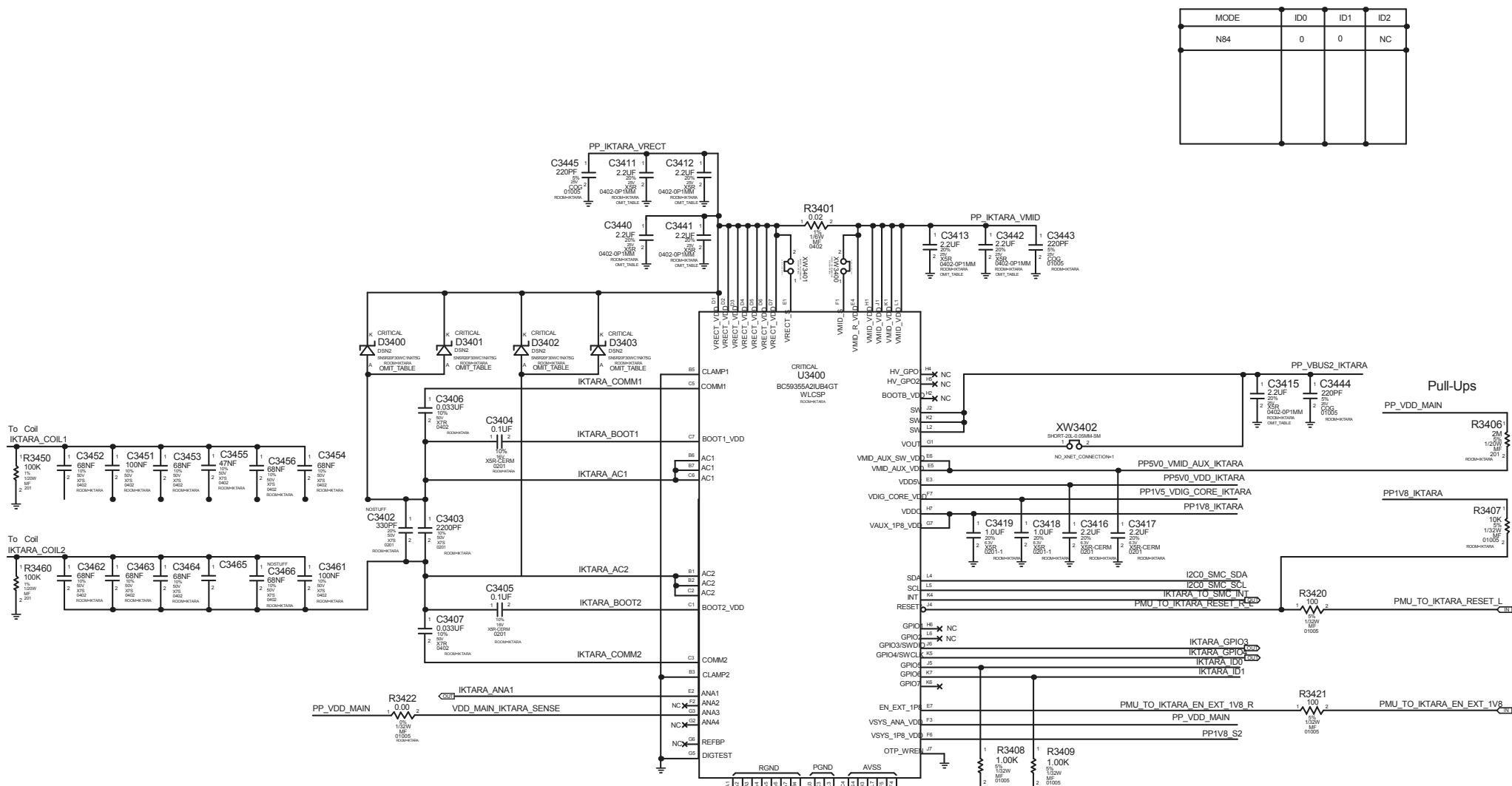


NTCs



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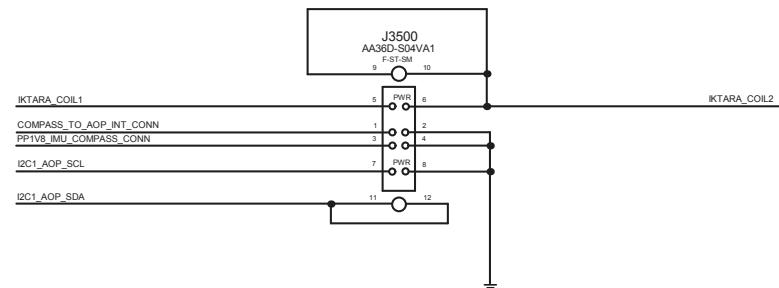
Iktara



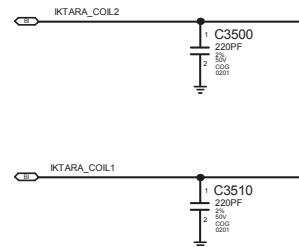
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B2B CYCLONE

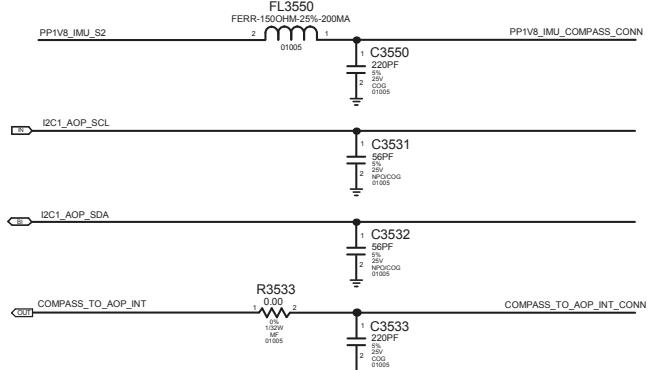
B2B Cyclone



COIL FILTER



COMPASS

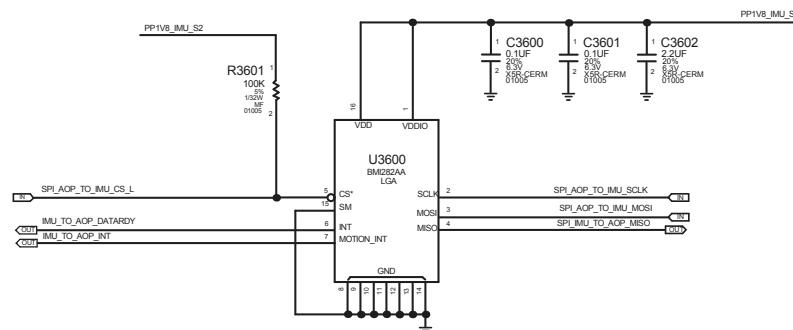


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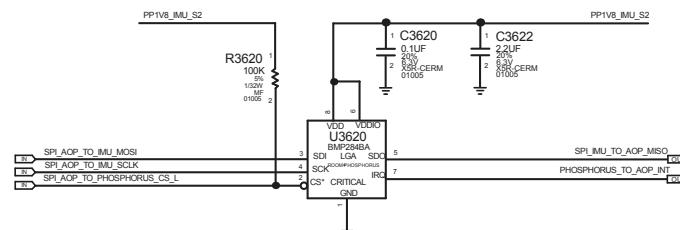
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Sensors - Accel/Gyro/Pressure

KOBOL-Accel&Gyro



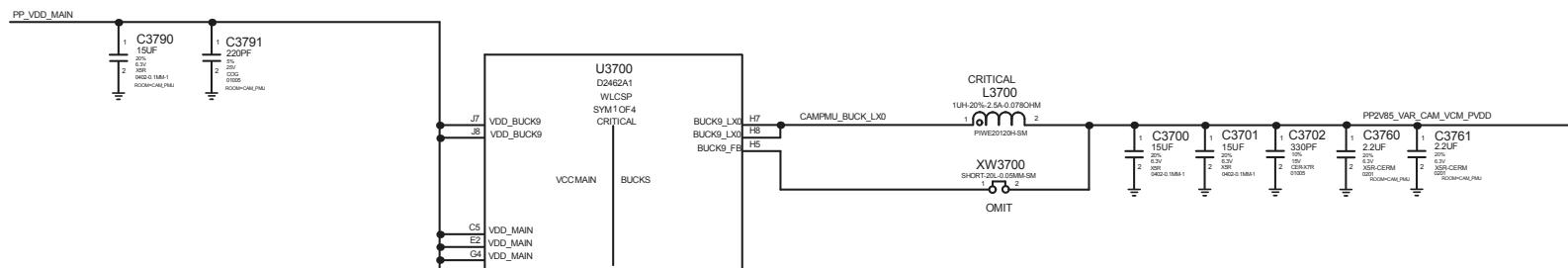
PHOSPHOROUS-Pressure



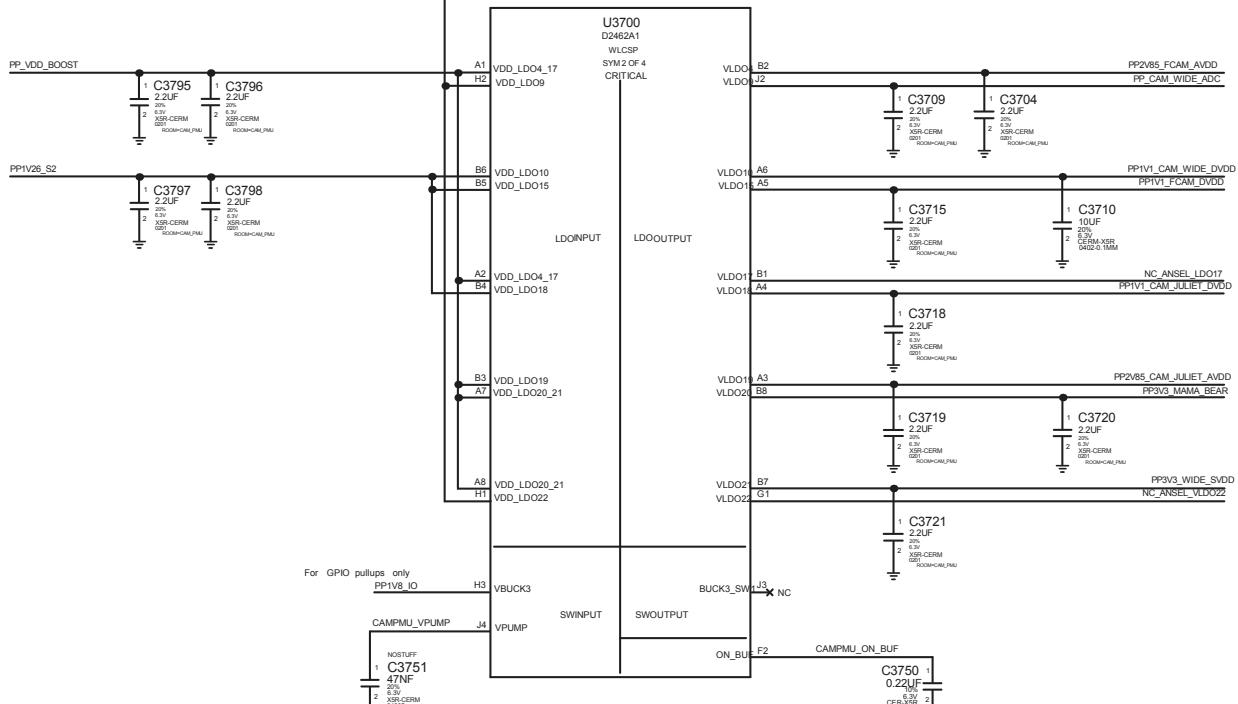
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Camera PMU-Ansel

D



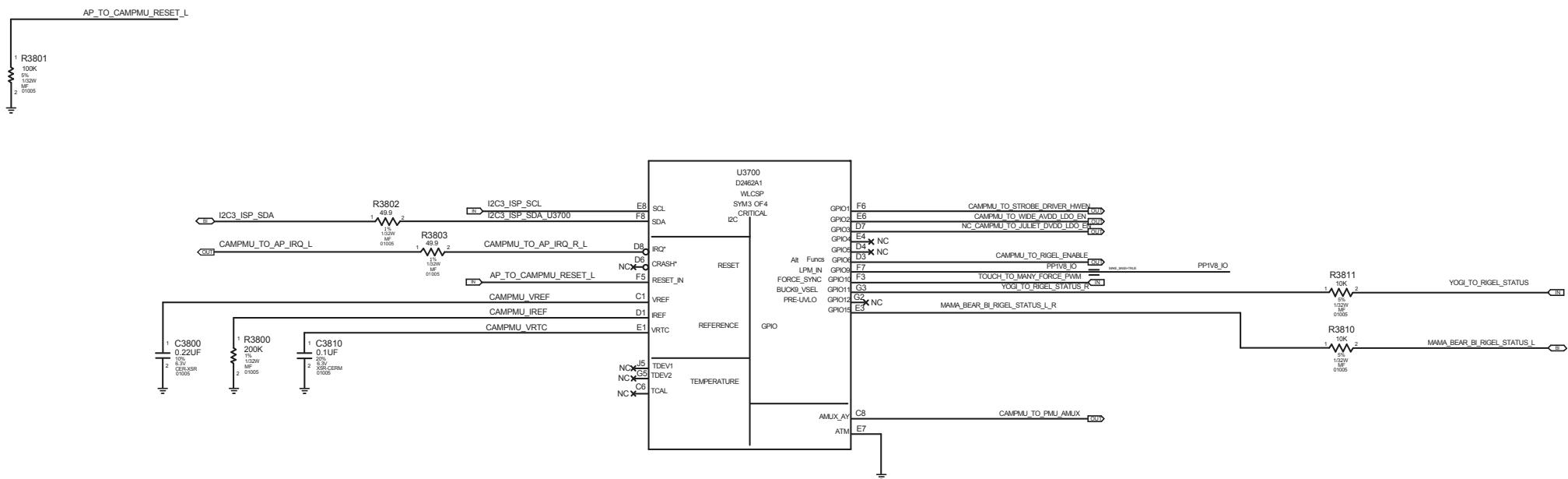
C



A

8	7	6	5	4	3	2	1
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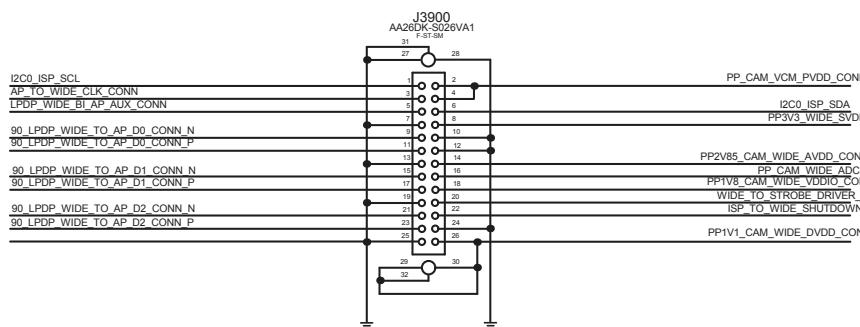
Pull Downs



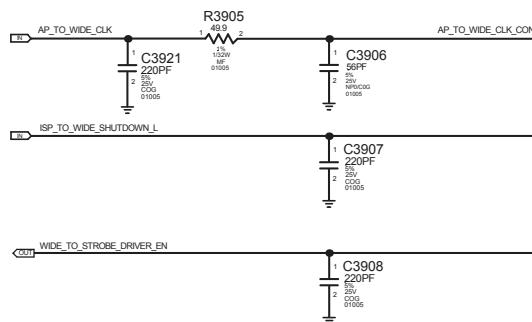
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8	7	6	5	4	3	2	1
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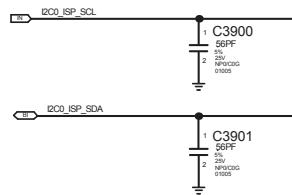
Wide Camera Connector



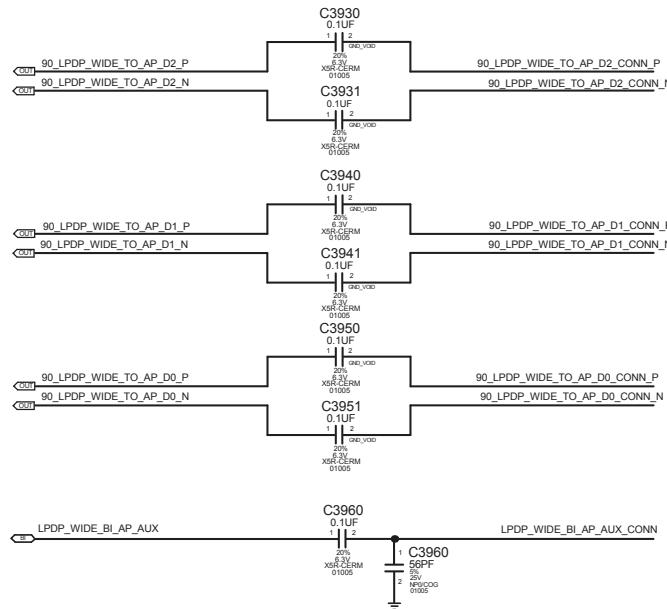
IO Filters



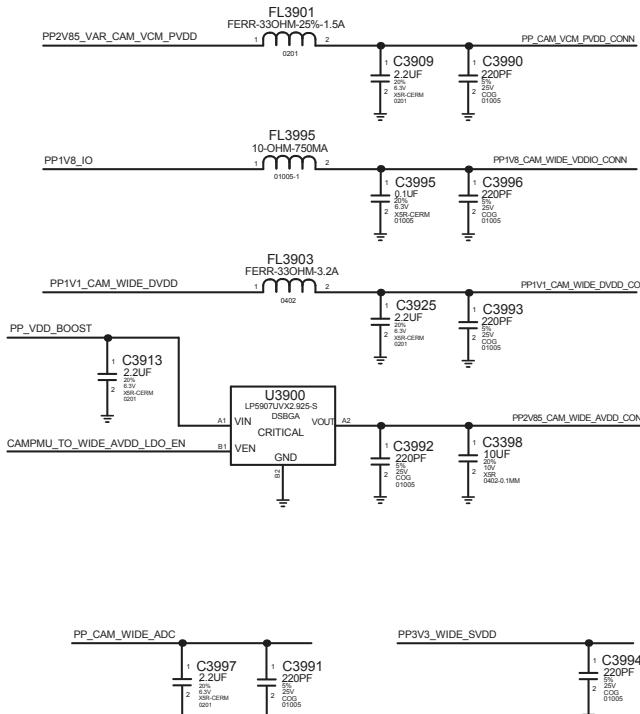
ISP I2C



LPDP Filters



Power Filtering

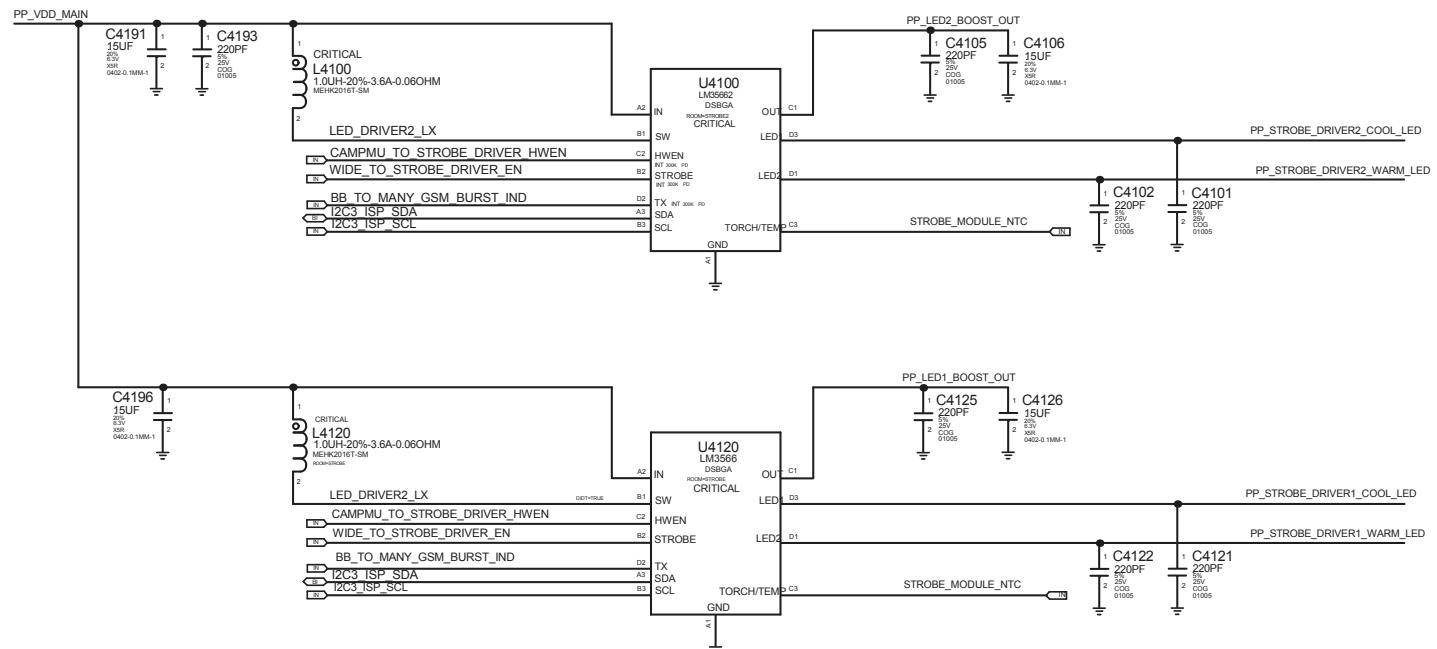


8	7	6	5	4	3	2	1
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D

D

LED STROBE DRIVERS (NEON)

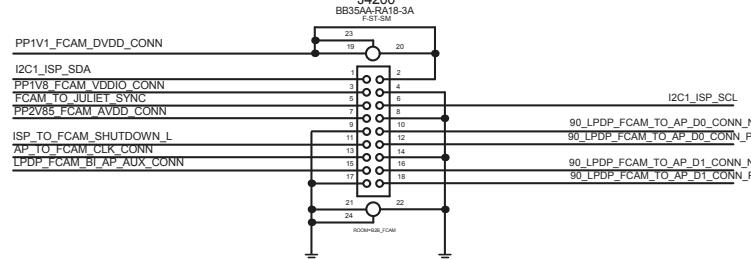


A

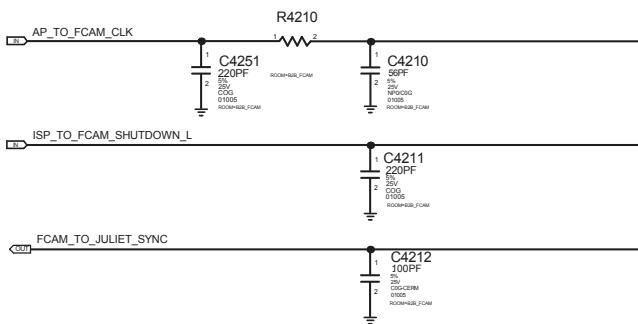
A

8	7	6	5	4	3	2	1
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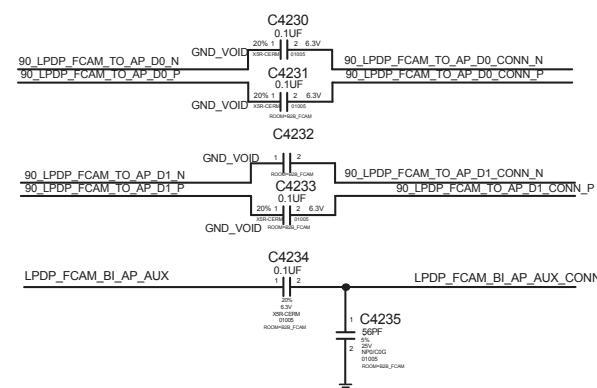
FCAM B2B



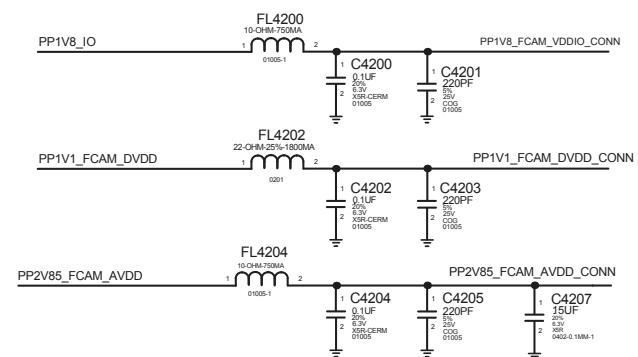
FCAM I/O



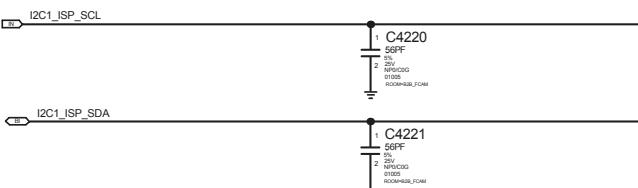
LPDP FILTERS



FCAM POWER



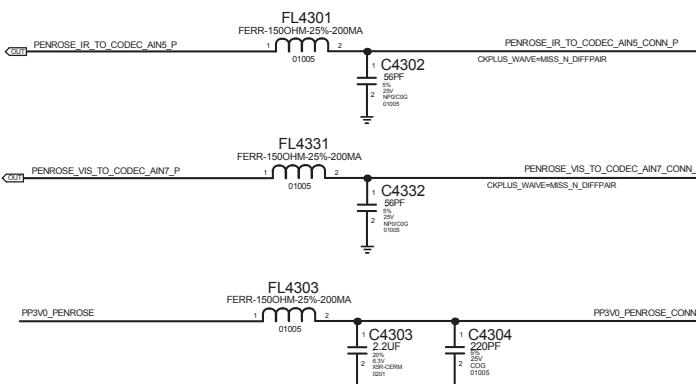
ISP I2C2



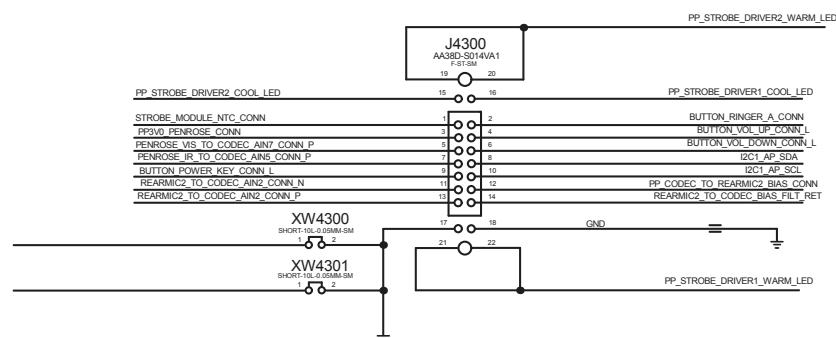
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8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

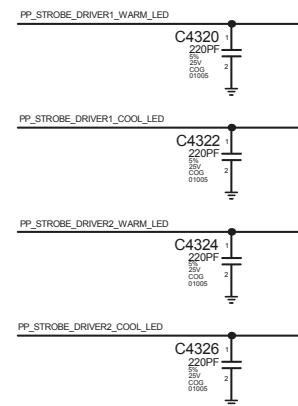
PENROSE CODEC



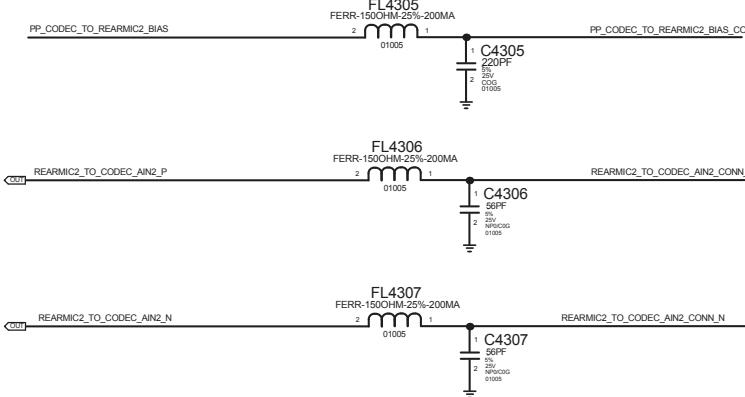
Strobe + Button Connector



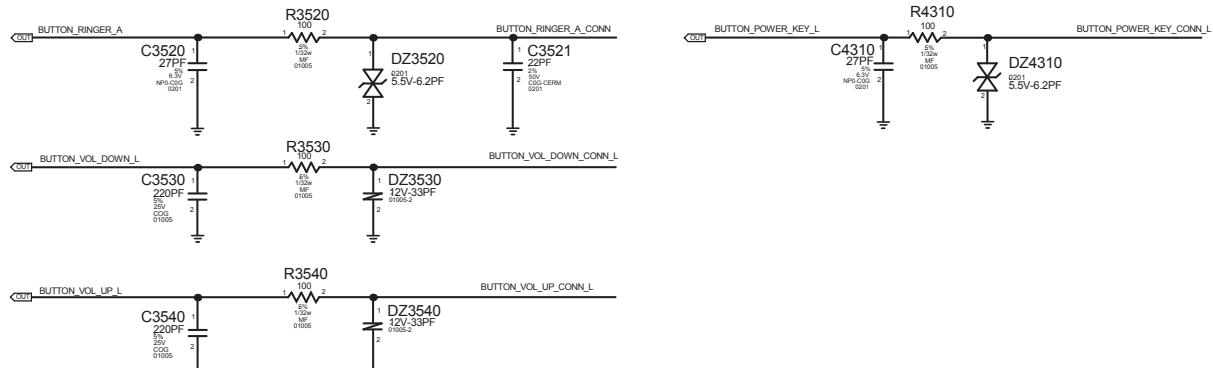
STROBE LED



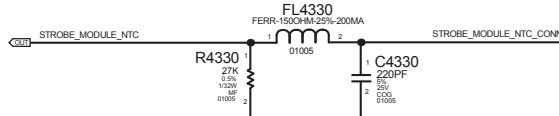
MIC2 (ANC REF)



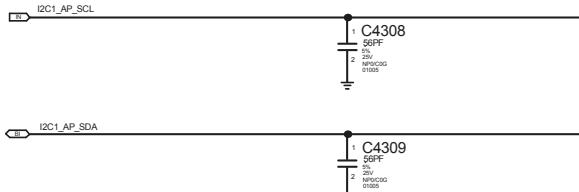
BUTTONS



STROBE NTC



MIC2 (I2C)



8	7	6	5	4	3	2	1
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8 7 6 5 4 3 2 1

Rigel Driver

D

C

B

A

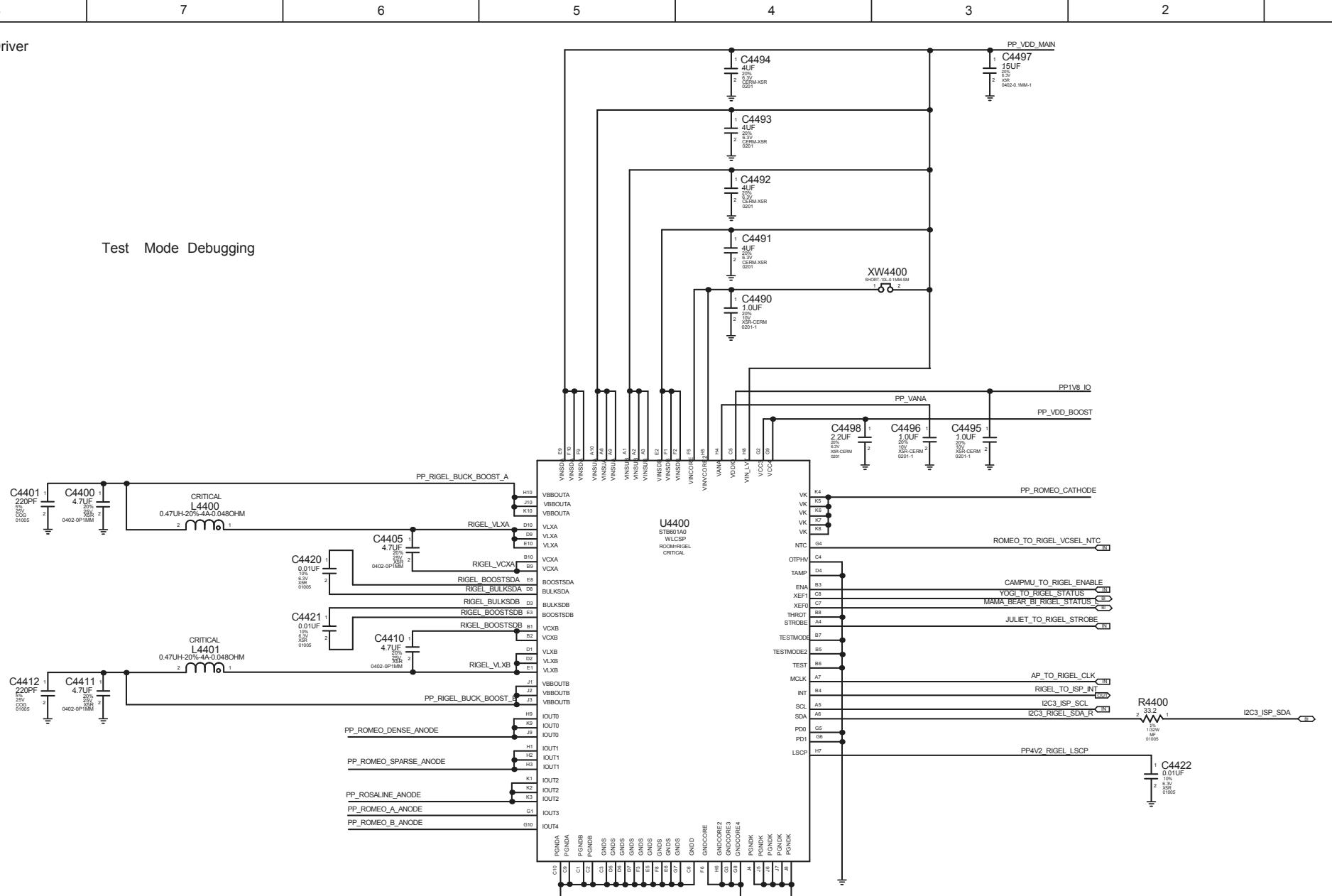
D

C

B

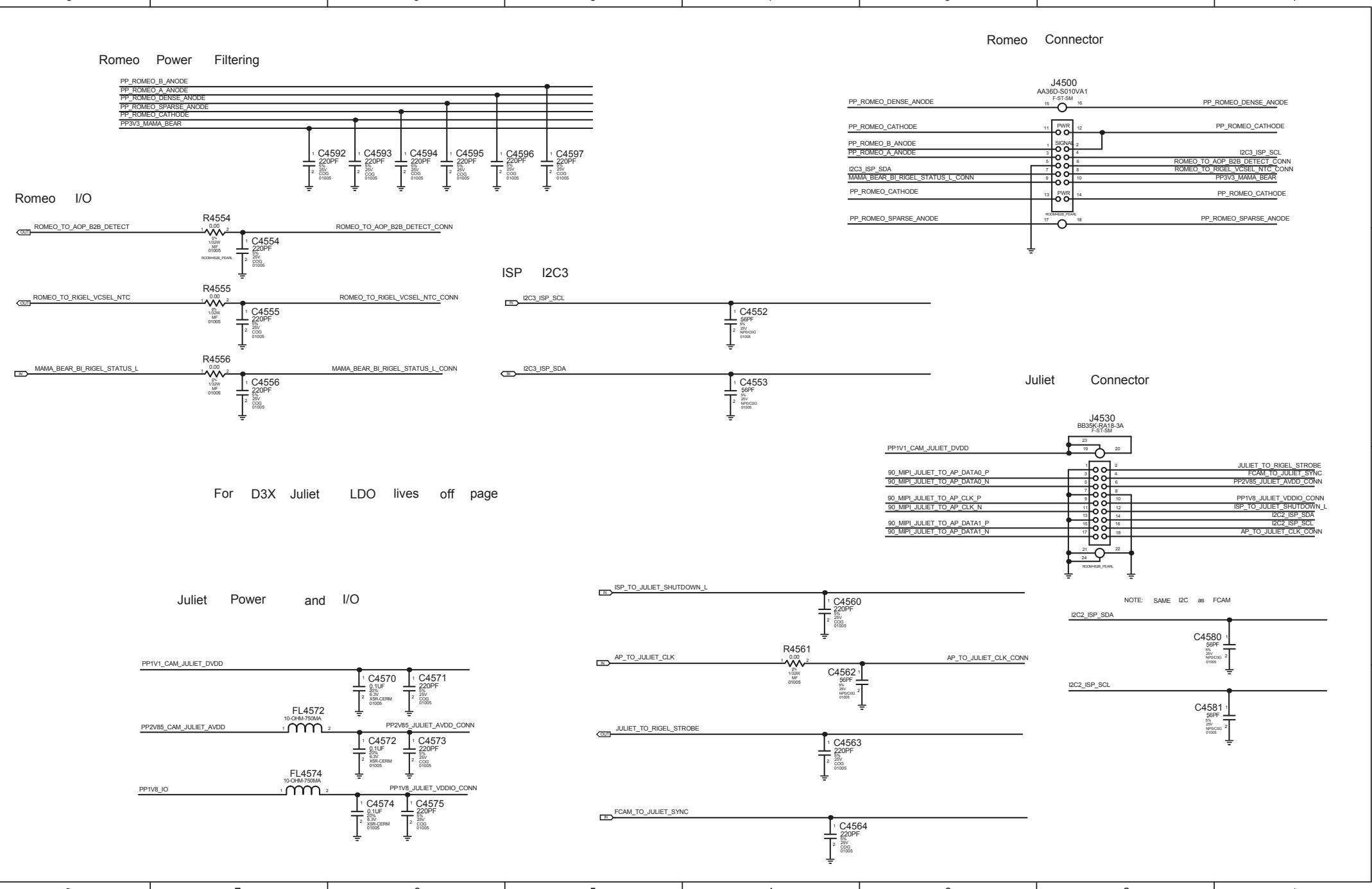
A

Test Mode Debugging



8 7 6 5 4 3 2 1

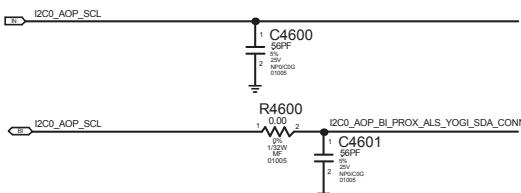
8 7 6 5 4 3 2 1



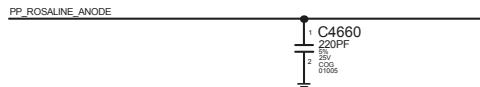
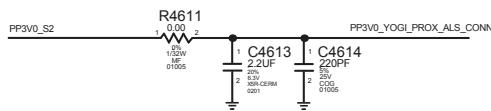
8 7 6 5 4 3 2 1

8	7	6	5	4	3	2	1
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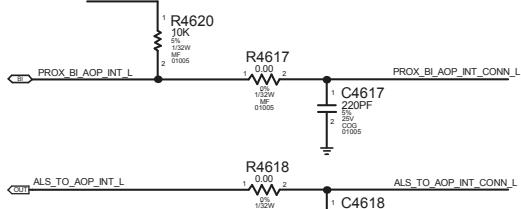
AOP I2C



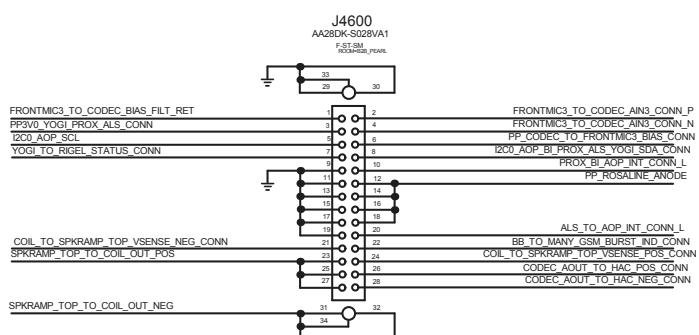
POWER



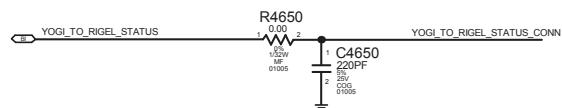
PROX/ALS I/O



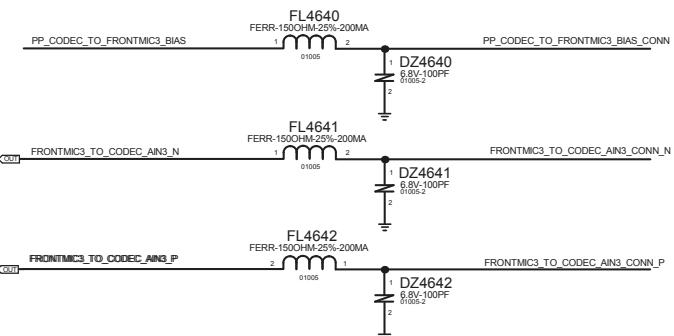
ROSALINE AND SENSORB2B



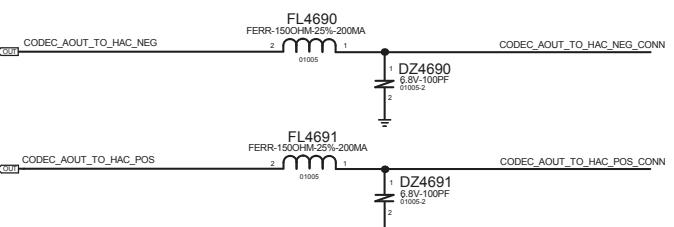
YOGI STATUS



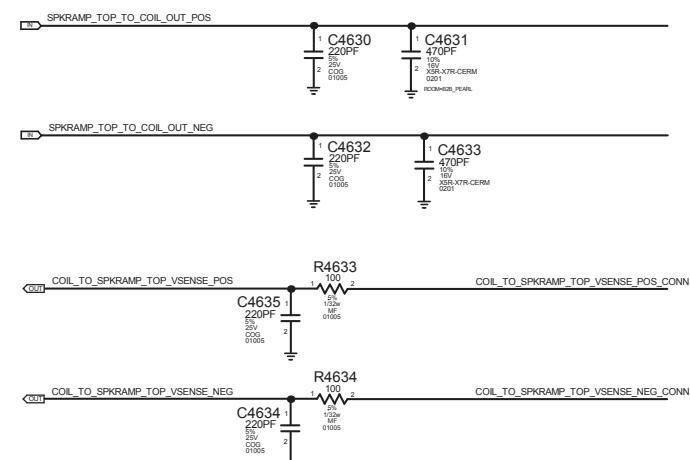
MIC3



CODEC



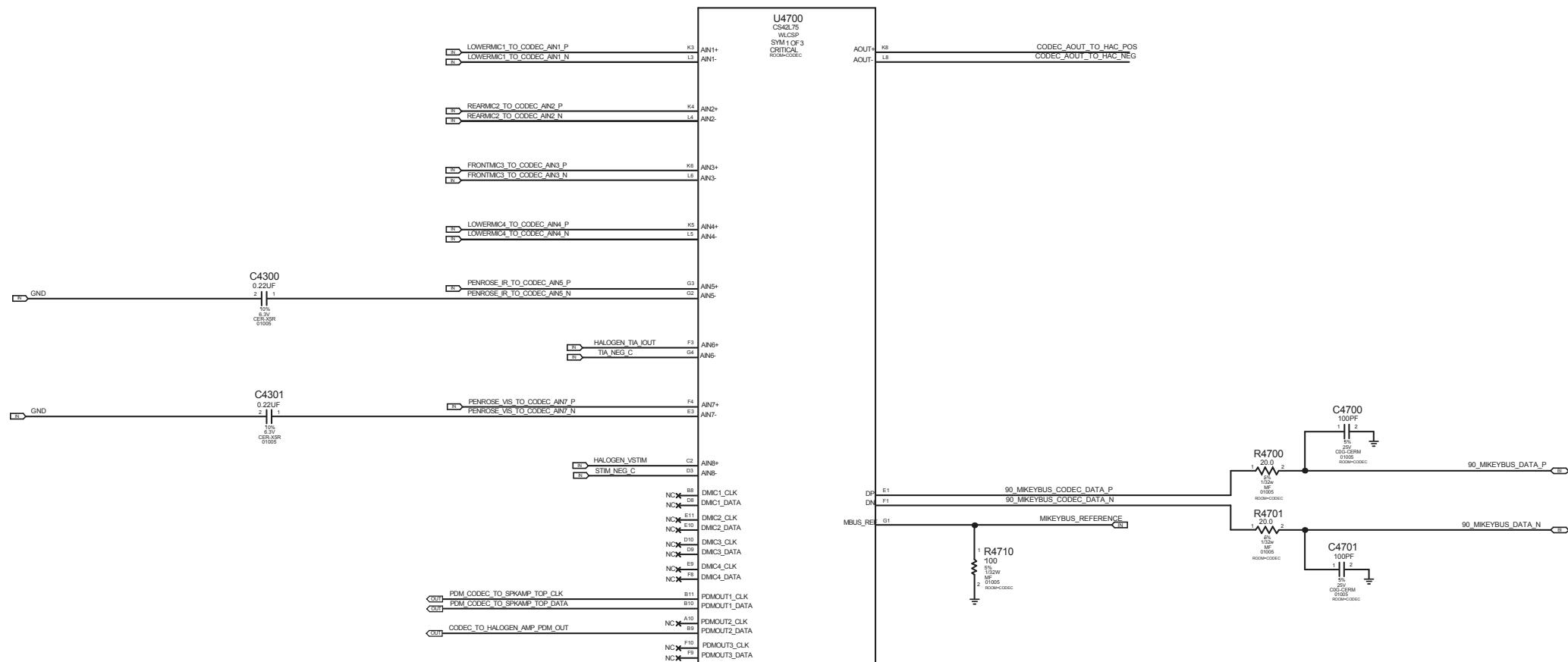
SPEAKERTOP



8	7	6	5	4	3	2	1
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8	7	6	5	4	3	2	1
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CALLAN AUDIO CODEC (ANALOG INPUTS & OUTPUTS)

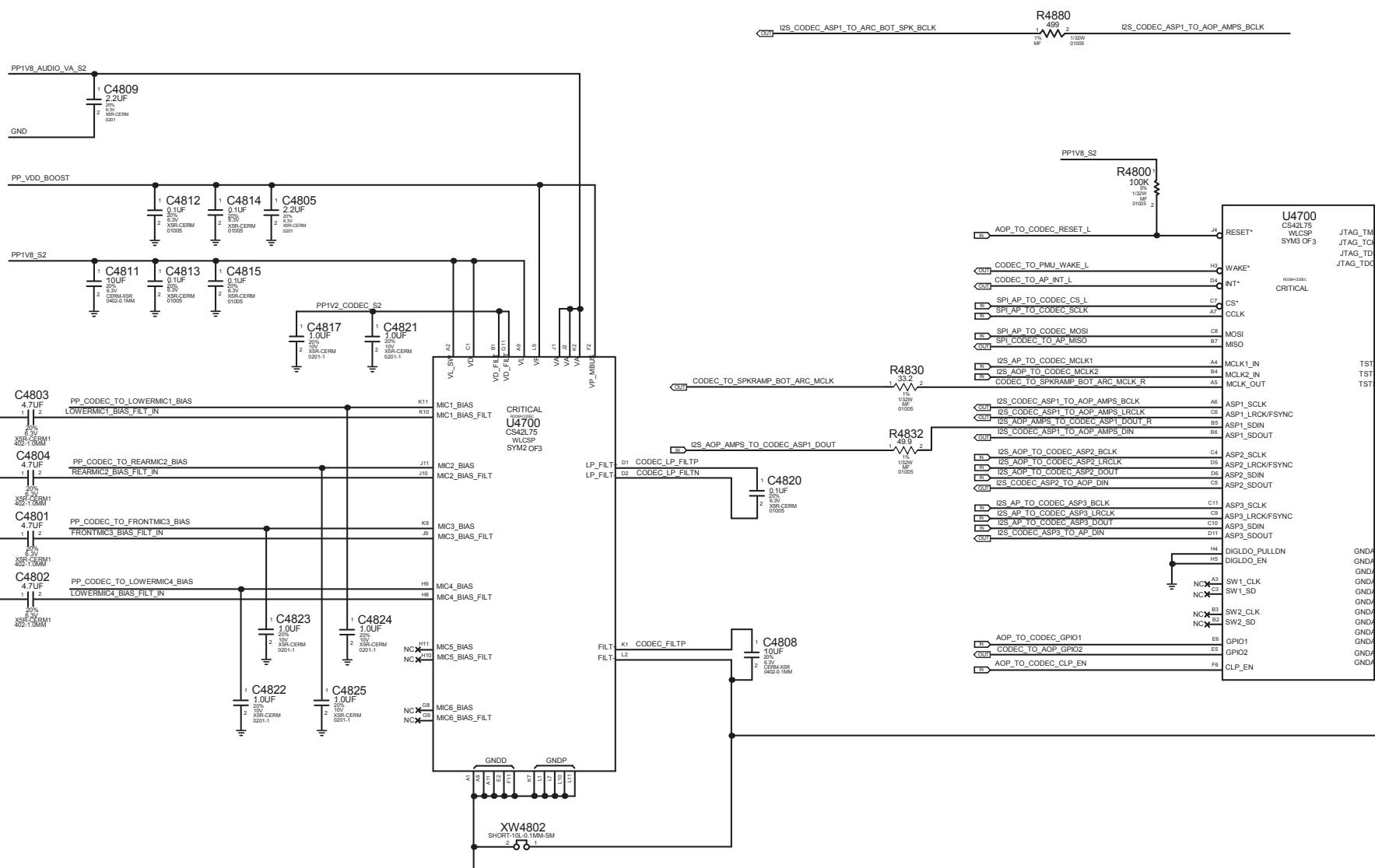


8	7	6	5	4	3	2	1
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8 7 6 5 4 3 2 1

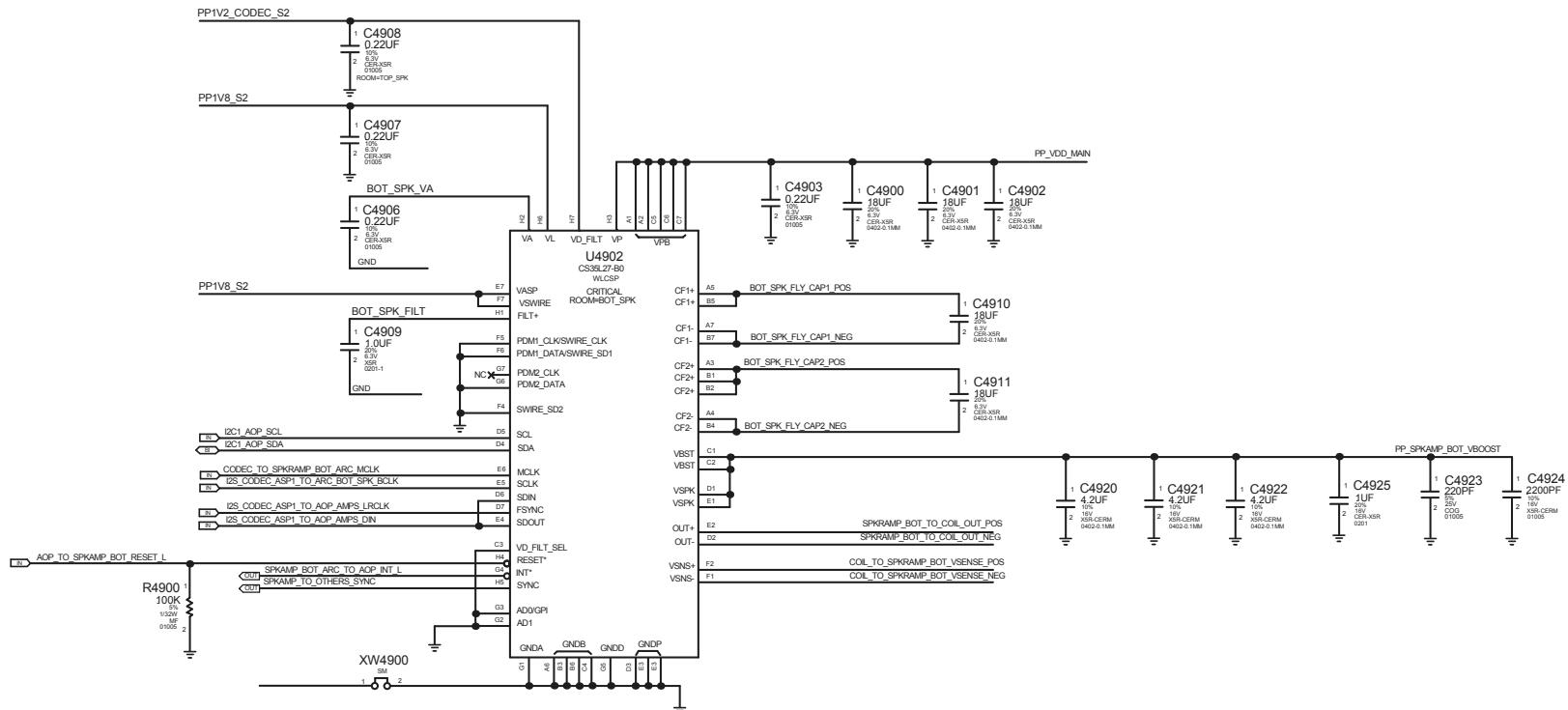
CALLAN AUDIO CODEC (POWER & I/O)

Series R for BCLKdesense - To ARC Amp and BOTSPK Amp



8 7 6 5 4 3 2 1

Bottom Speaker Amp



Audio Amplifier Addressing

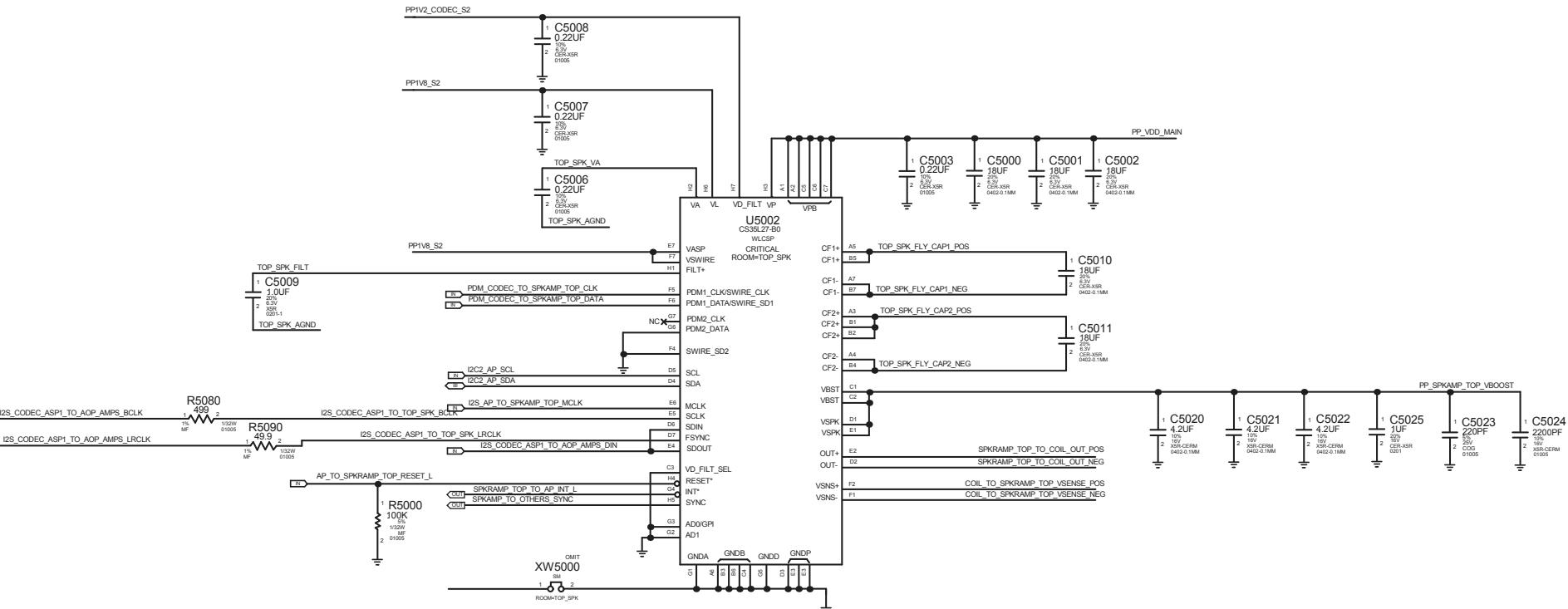
	AMP	AD0	AD1
TOP	0	0	
BOT	0	0	
ARC	0	1	

SELECTED->

AP I2C2
AOP I2C1

8	7	6	5	4	3	2	1
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D



C

B

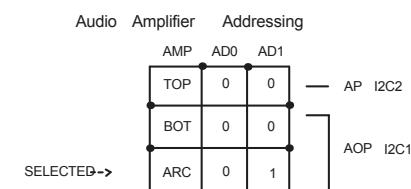
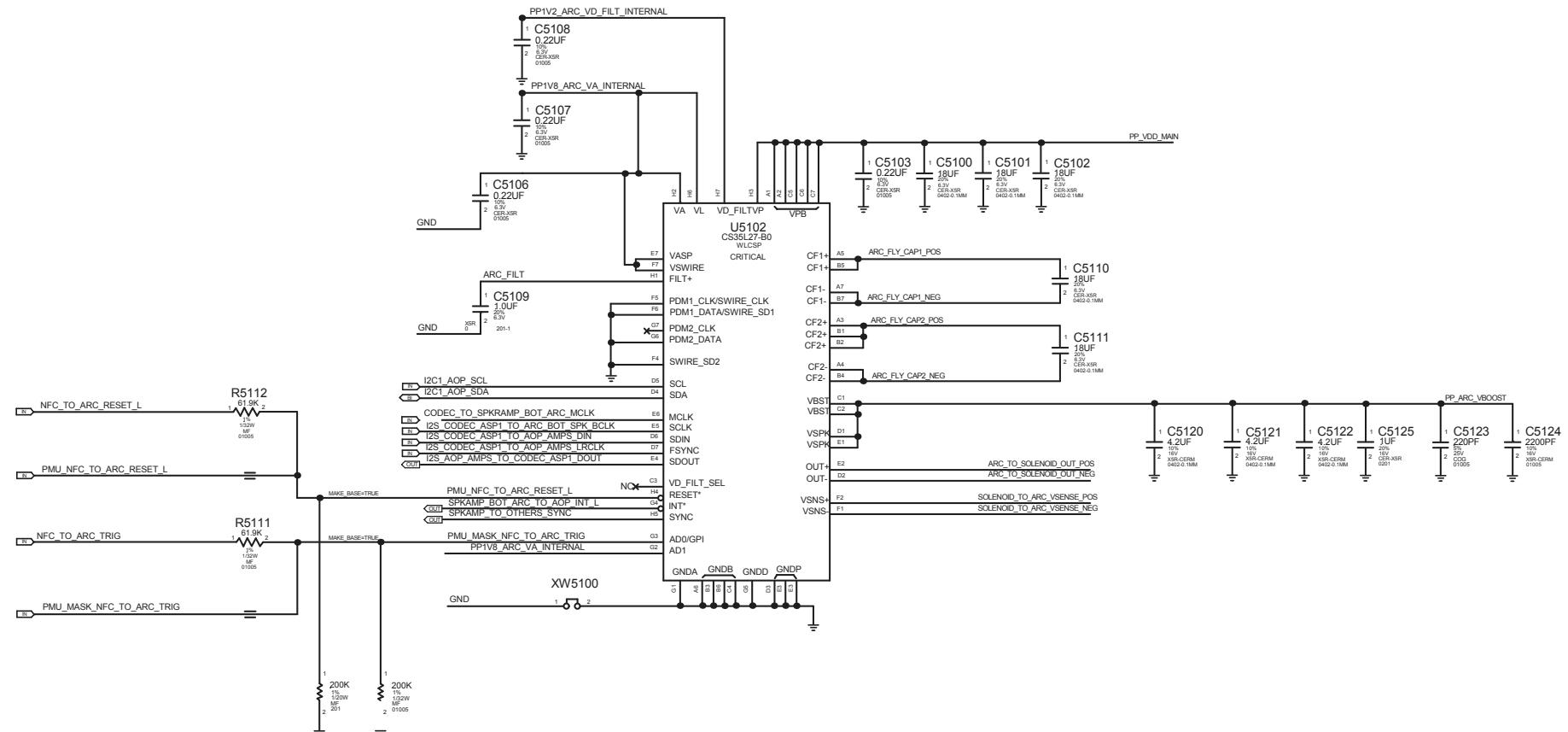
A

Audio Amplifier Addressing



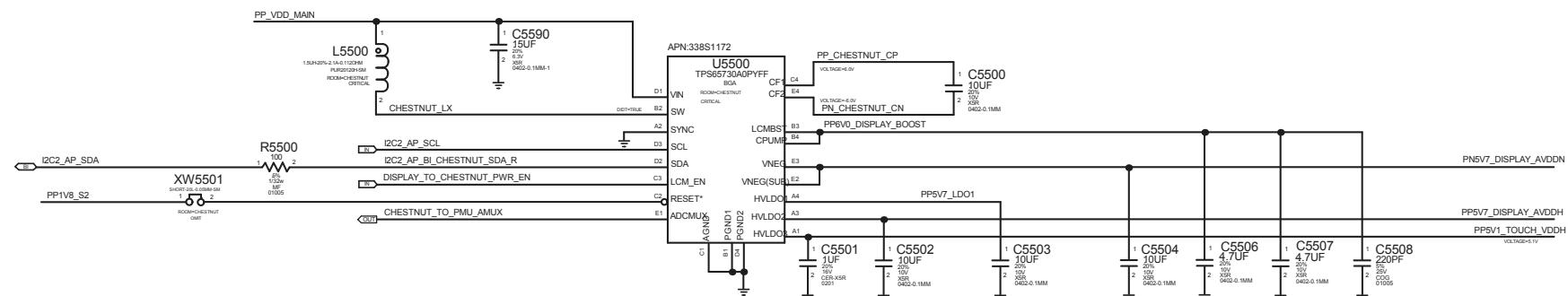
8	7	6	5	4	3	2	1
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ARC Speaker Amp



8	7	6	5	4	3	2	1
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CHESTNUT DISPLAY PMU

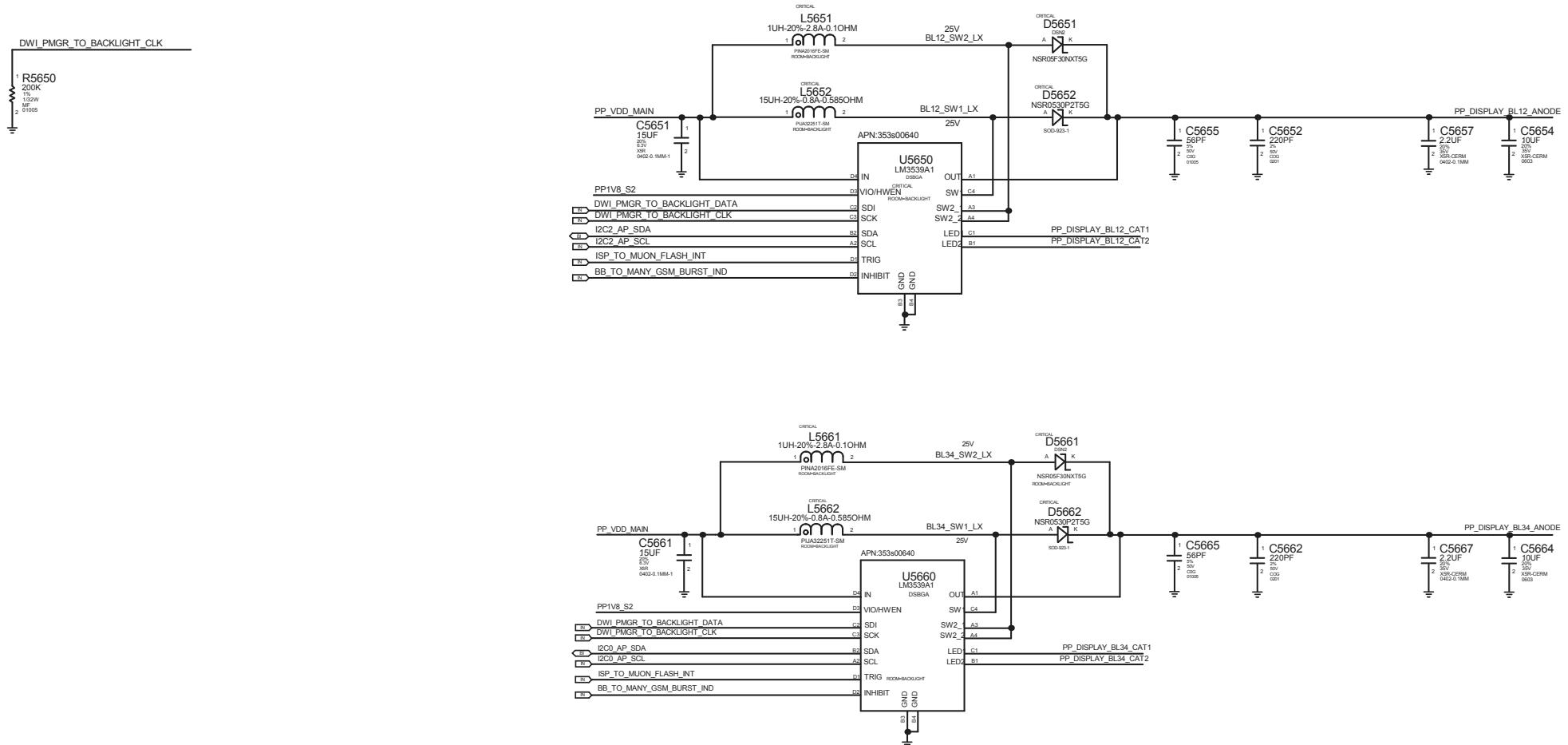


8	7	6	5	4	3	2	1
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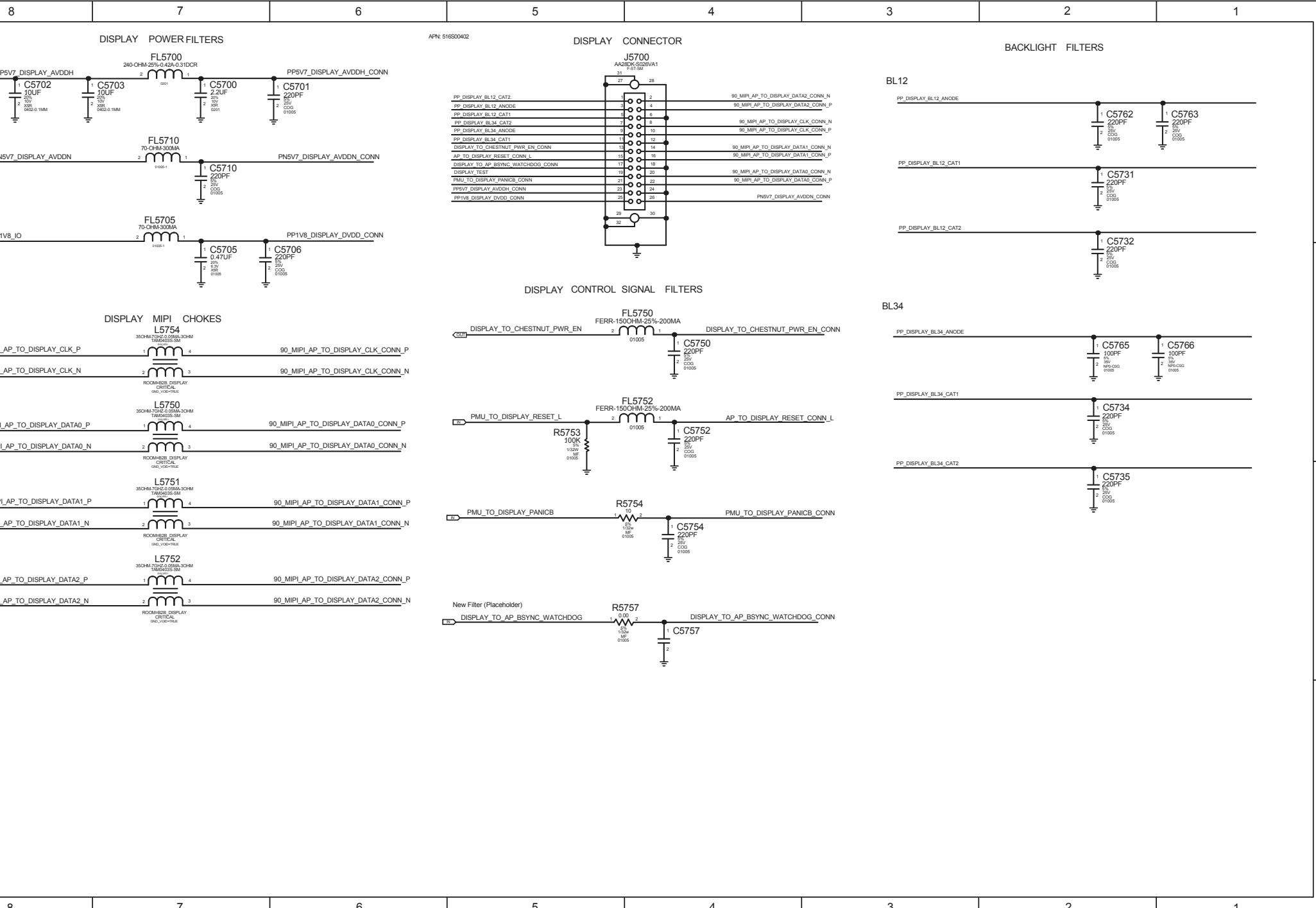
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MUON- LED BACKLIGHT DRIVERS

DWI Clock Pull



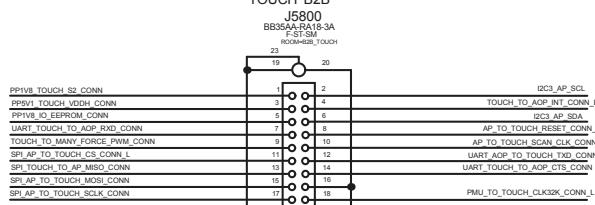
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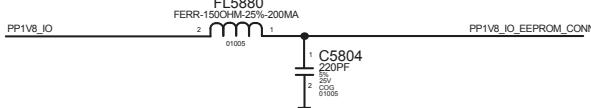
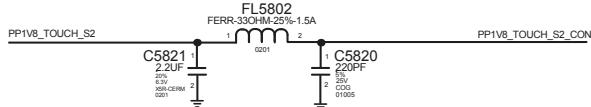
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APN: 516S00395

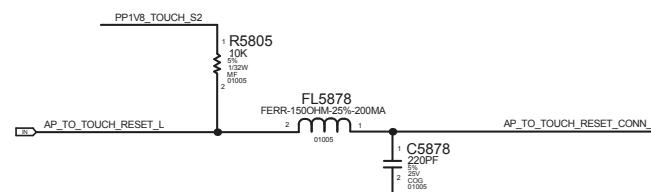
TOUCH B2B



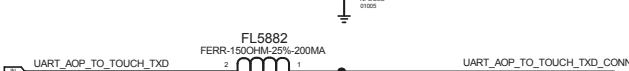
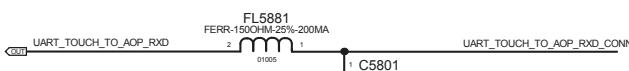
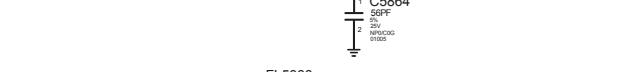
TOUCH POWER



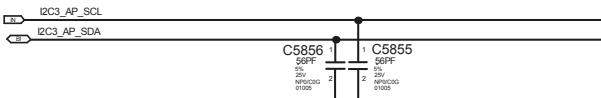
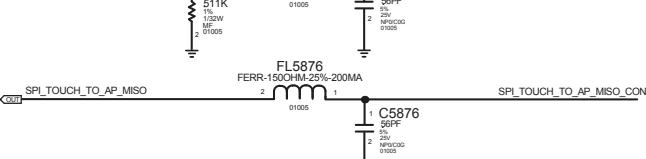
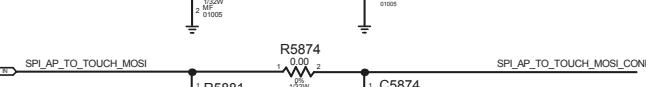
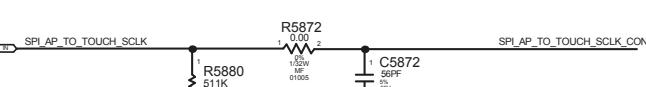
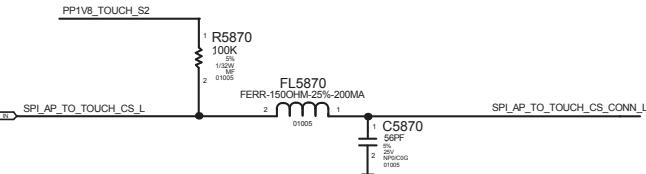
TOUCH RESET



AOP/TOUCH INTERFACE



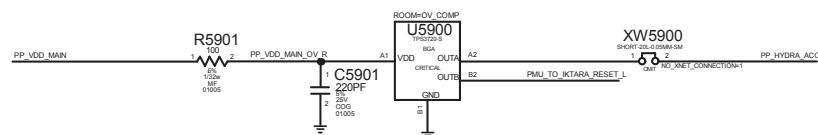
AP/TOUCH INTERFACE



8	7	6	5	4	3	2	1
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8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

VDD_MAIN OV CUT-OFF CIRCUIT



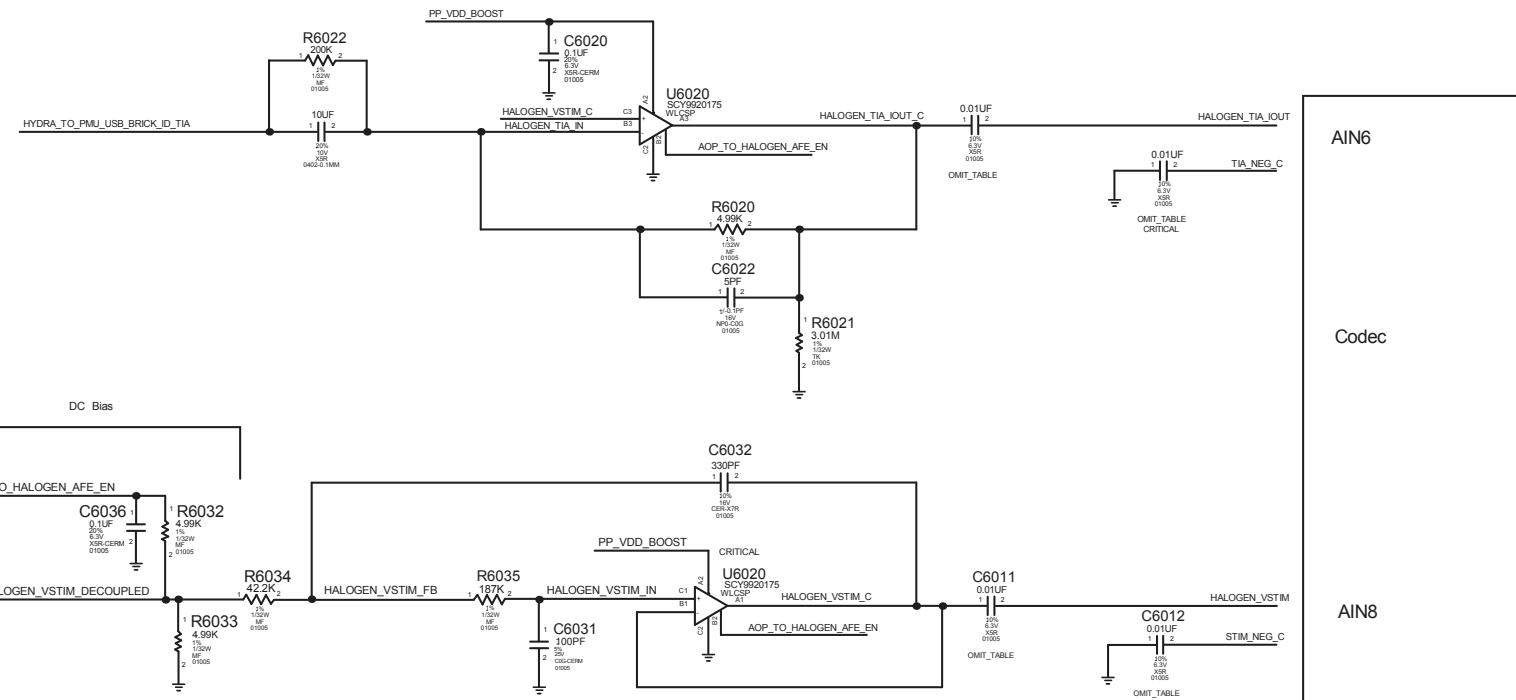
8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

8	7	6	5	4	3	2	1
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D

D

LDCM

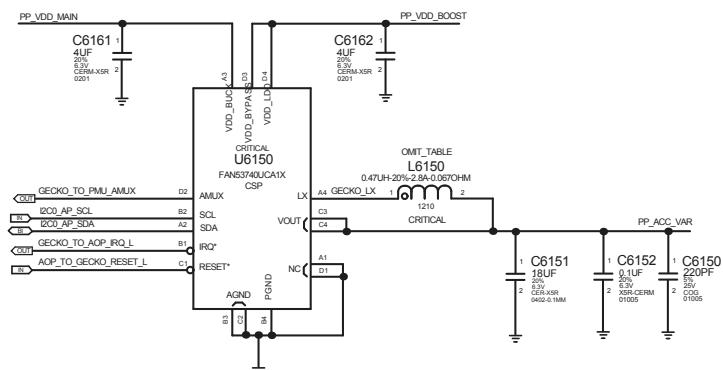
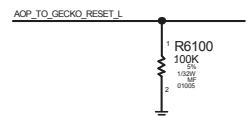


8	7	6	5	4	3	2	1
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8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

Gecko

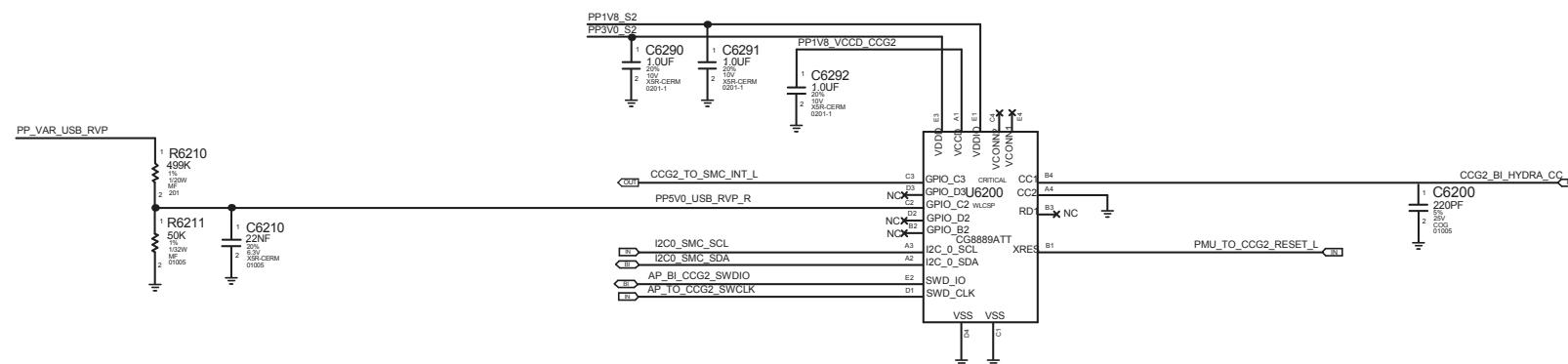
GECKO Reset Pull Down



8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

8	7	6	5	4	3	2	1
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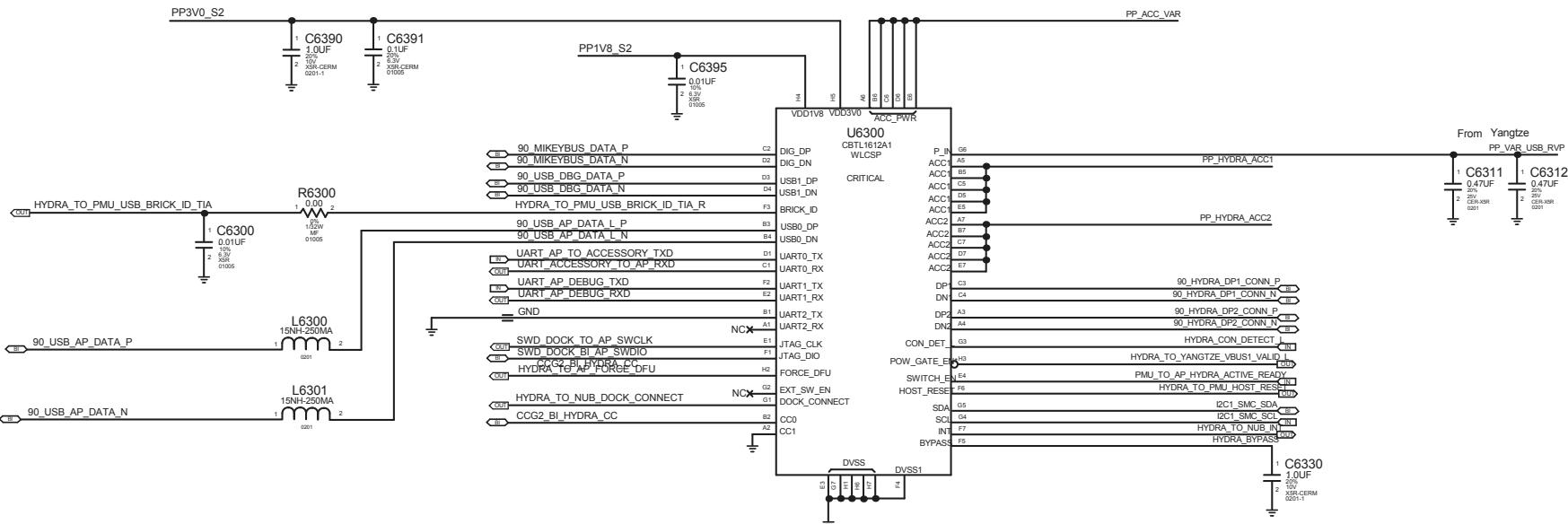
USB-PD



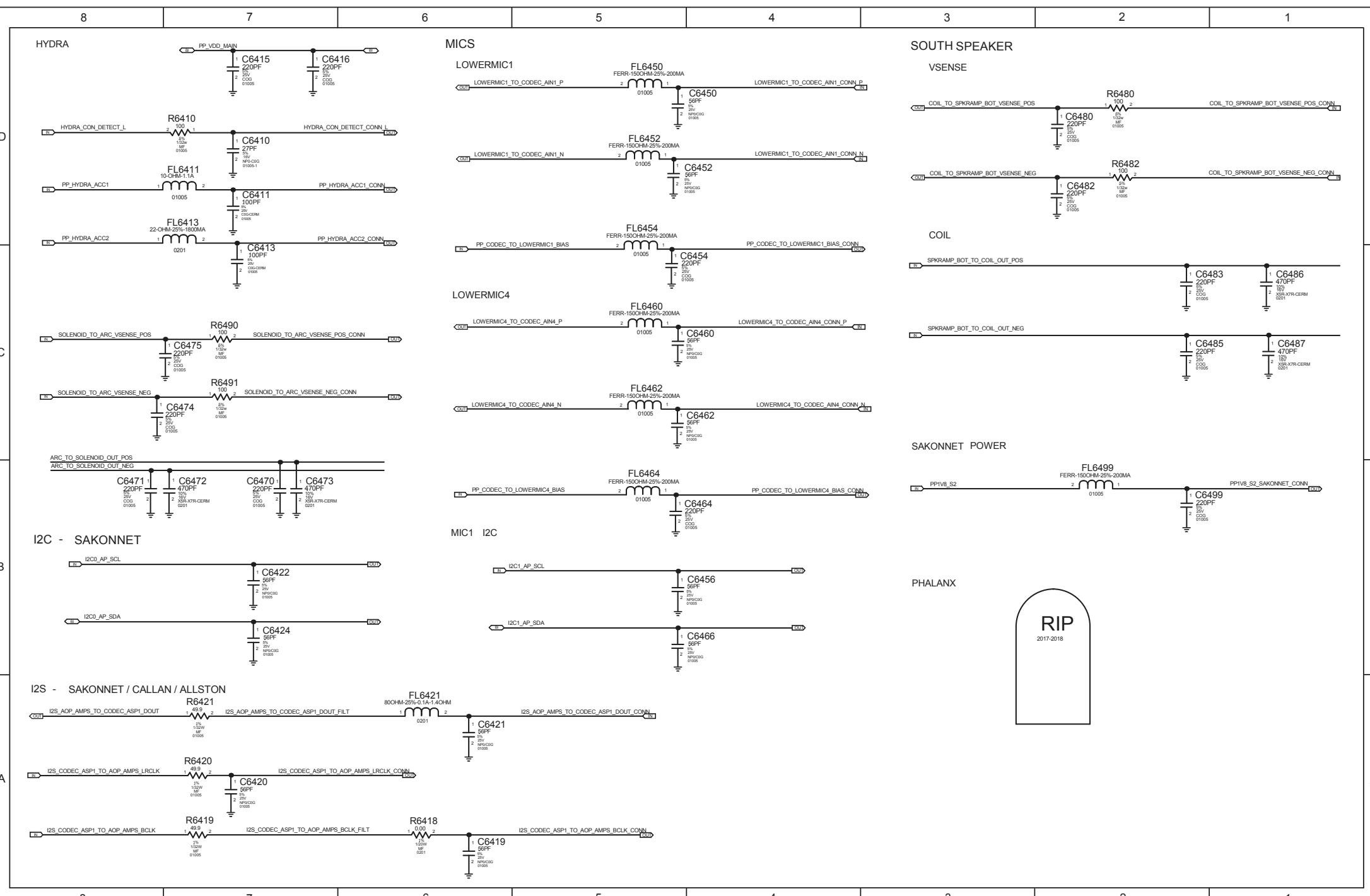
8	7	6	5	4	3	2	1
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8 7 6 5 4 3 2 1

Hydra



8 7 6 5 4 3 2 1

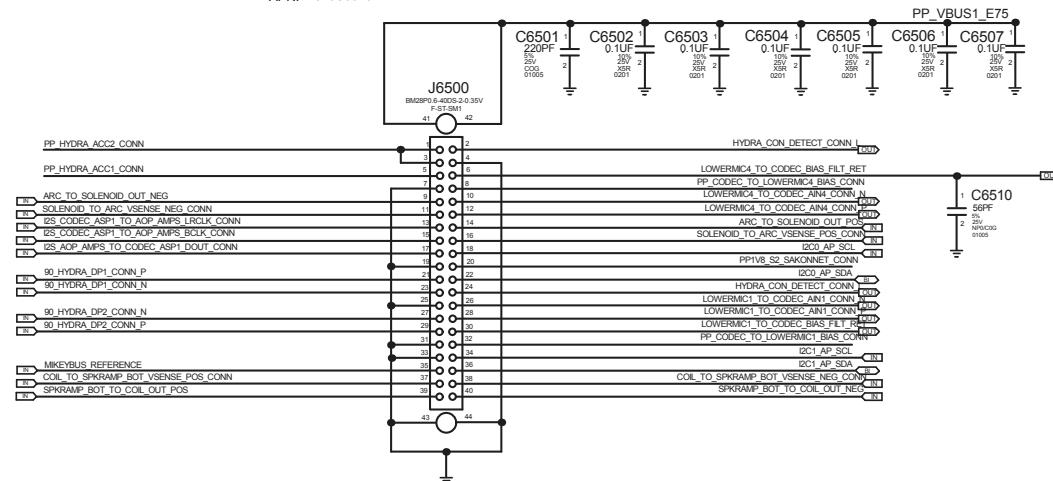


D

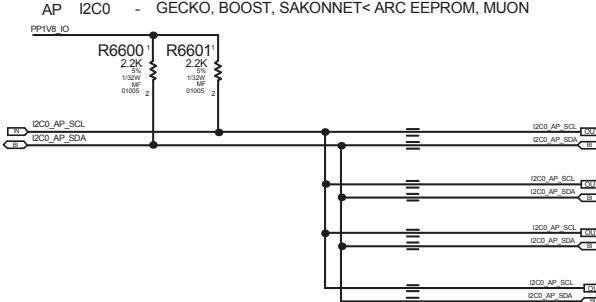
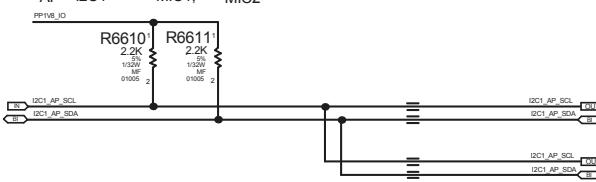
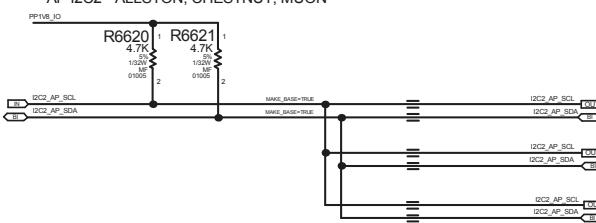
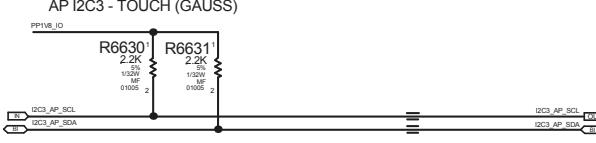
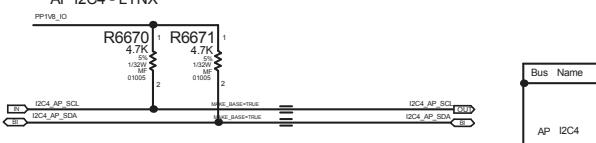
D

DOCK CONNECTOR

APN: 516S00404



AP I2C

	8	7	6	5	4	3	2	1		
D										
	AP I2C0 - GECKO, BOOST, SAKONNET< ARC EEPROM, MUON									
										
	PP1V8_IO									
	R6600 2.2K 1/2W MF 0105 2	R6601 2.2K 1/2W MF 0105 2								
	I2C0_AP_SCL	I2C0_AP_SDA								
C										
	AP I2C1 - MIC1, MIC2									
										
	PP1V8_IO									
	R6610 2.2K 1/2W MF 0105 2	R6611 2.2K 1/2W MF 0105 2								
	I2C1_AP_SCL	I2C1_AP_SDA								
B										
	AP I2C2 - ALLSTON, CHESTNUT, MUON									
										
	PP1V8_IO									
	R6620 4.7K 1/2W MF 0105 2	R6621 4.7K 1/2W MF 0105 2								
	I2C2_AP_SCL	I2C2_AP_SDA								
A										
	AP I2C3 - TOUCH (GAUSS)									
										
	PP1V8_IO									
	R6630 2.2K 1/2W MF 0105 2	R6631 2.2K 1/2W MF 0105 2								
	I2C3_AP_SCL	I2C3_AP_SDA								
	I2C4_AP_SCL	I2C4_AP_SDA								
	AP I2C4 - LYNX									
										
	PP1V8_IO									
	R6670 4.7K 1/2W MF 0105 2	R6671 4.7K 1/2W MF 0105 2								
	I2C4_AP_SCL	I2C4_AP_SDA								
	I2C4_AP_SCL	I2C4_AP_SDA								
	Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr	Min Speed	Max Speed	Location
	AP I2C0	PP1V8_IO	400 kHz	GECKO	0x52	1010 010X	0xA4, 0xA5	-	1 MHz	MLB
				BOOST	0x75	1110 101X	0xA4, 0xEB	-	400 kHz	MLB
				SAKONNET	0x08	0001 000X	0x10, 0x11	-	1 MHz	B2B - Dock
				ARC EEPROM	0x50	1010 000X	0xA0, 0xA1	-	400 kHz	B2B - Dock
				MUON (1)	0x62	1100 010X	0xC4, 0xC5	1 MHz	-	MLB
	Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr	Min Speed	Max Speed	Location
	AP I2C1	PP1V8_IO	100 kHz	MIC1-SABERTOOTH	0x54	1010 100X	0xAB, 0xA9	-	400 kHz	B2B - Dock
				MIC2-WOLVERINE	0x56	1010 100X	0xAC, 0xAD	-	400 kHz	B2B - Strobe
	Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr	Min Speed	Max Speed	Location
	AP I2C2	PP1V8_IO	400 kHz	ALLSTON	0x40	1000 000X	0xB0, 0xB1	-	1 MHz	MLB
				CHESTNUT	0x27	0100 111X	0xE4, 0xEF	-	400 kHz	MLB
				MUON (2)	0x62	1100 010X	0xC4, 0xC5	1 MHz	-	MLB
	Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr	Min Speed	Max Speed	Location
	AP I2C3	PP1V8_IO	400 kHz	TOUCH - GAUSS	0x51	1010 001X	0xA2, 0xA3	-	400 kHz	B2B - TOUCH
	Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr	Min Speed	Max Speed	Location
	AP I2C4	PP1V8_IO	400 kHz	LYNX	0x71	1110 001X	0xE2, 0xE3	-	1 MHz	MLB

8 7 6 5 4 3 2 1

ISP I2C

ISP I2C0 - RCAM (TX)



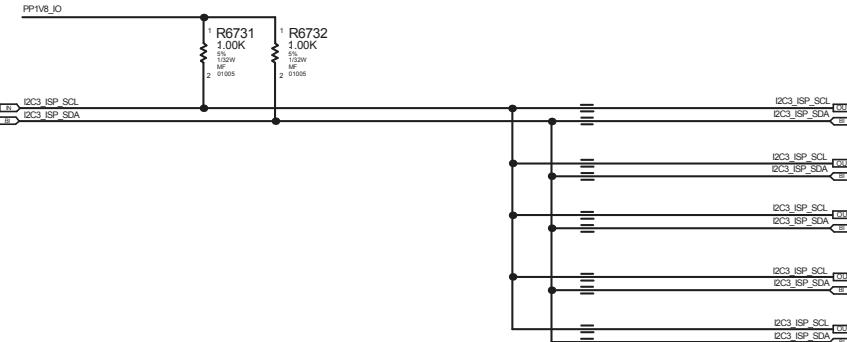
ISP I2C1 - FCAM (LI)



ISP I2C2 - JULIET



ISP I2C3 - ANSEL, NEON(2), RIGEL, MAMABEAR



Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
ISP I2C0	PP1V8_IO	1 MHz	TEXAS (Wide)	0x10	0010 000X	0x20, 0x21	-	1 MHz	B2B - RCAM
			RAMAN	0x3C	0111 100X	0x78, 0x29	-	1 MHz	B2B - RCAM

Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
ISP I2C1	PP1V8_IO	1 MHz	Yonkers (LI)	0x10	0010 000X	0x20, 0x21	-	1 MHz	B2B - FCAM
			-	-	-	-	-	-	-

Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
ISP I2C2	PP1V8_IO	1 MHz	JULIET (SAVAGE)	0x18	0011 000X	0x30, 0x31	-	1 MHz	B2B - Juliet
			-	-	-	-	-	-	-

Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
ISP I2C3	PP1V8_IO	1 MHz	ANSEL	0x40	1000 000X	0x80, 0x81	-	1 MHz	MLB
			NEON (1)	0x63	1100 011X	0xC6, 0xC7	-	1 MHz	MLB
			NEON (2)	0x67	1100 111X	0xCE, 0xCF	-	1 MHz	MLB
			RIGEL	0x55	1010 101X	0xAA, 0xAB	-	1 MHz	MLB
			MAMA BEAR	0x50	1010 000X	0xA0, 0xA1	-	1 MHz	B2B - ROMEO

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

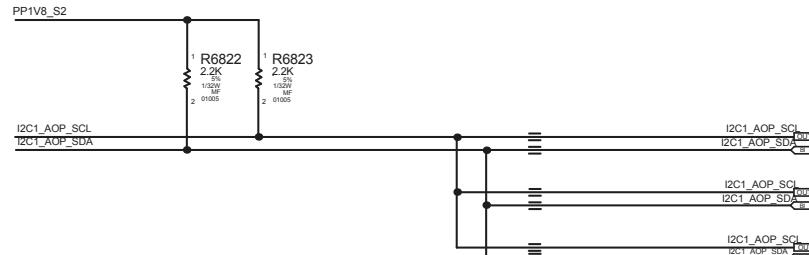
AOP/SMC I2C

AOP I2C0 - DOPPLER,BLACKBIRD, YOGI



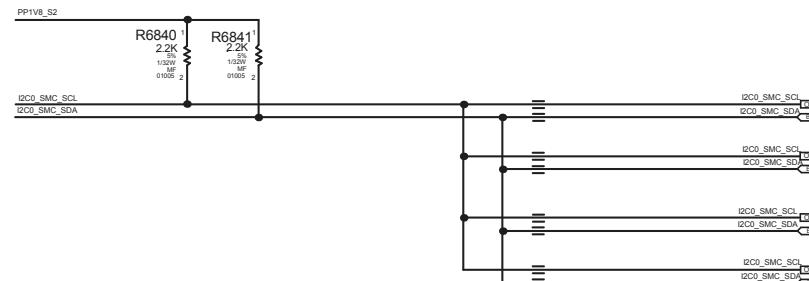
Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
AOP I2C0	PP1V8_S2	1 MHz	DOPPLER(Prox)	0x58	1011 000X	0xB0, 0xB1	-	1 MHz	B2B - Sensor
			BLACKBIRD(ALS)	0x29	0101 001X	0x52, 0x53	-	1 MHz	B2B - Sensor
			YOGI	0x33	0110 011X	0x66, 0x67	-	1 MHz	B2B - Sensor

AOP I2C1 - ARC, ALLSTON, COMPASS



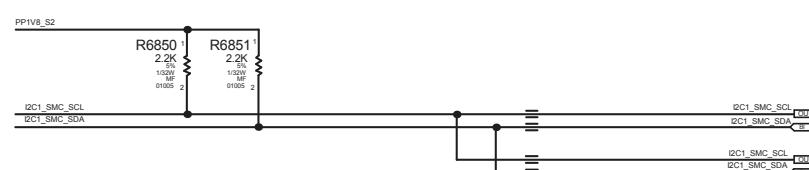
Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
AOP I2C1	PP1V8_S2	400 kHz	ARC	0x42	1000 001X	0x84, 0x85	-	1 MHz	MLB
			ALLSTON	0x40	1000 000X	0x80, 0x81	-	1 MHz	MLB
			COMPASS	0x0E	0001 110X	0x1C, 0x1D	-	1 MHz	B2B - Cyclone

SMC I2C0 - BMU, YANGTZE, USB-PD, IKTARA, ROSWELL



Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
SMC I2C0	PP1V8_S2	400 kHz	GAS GAUGE	0x55	1010 101X	0xA, 0xAB	-	400 kHz	B2B - Battery
			YANGTZE	0x71	1110 001X	0xE2, 0xE3	-	400 kHz	MLB
			USB-PD	0x12	0010 010X	0x24, 0x25	-	1 MHz	MLB
			IKTARA	0x39	0111 001X	0x72, 0x73	-	400 kHz	MLB
			ROSWELL	0x20	0100 000X	0x40, 0x41	-	400 kHz	B2B - Battery

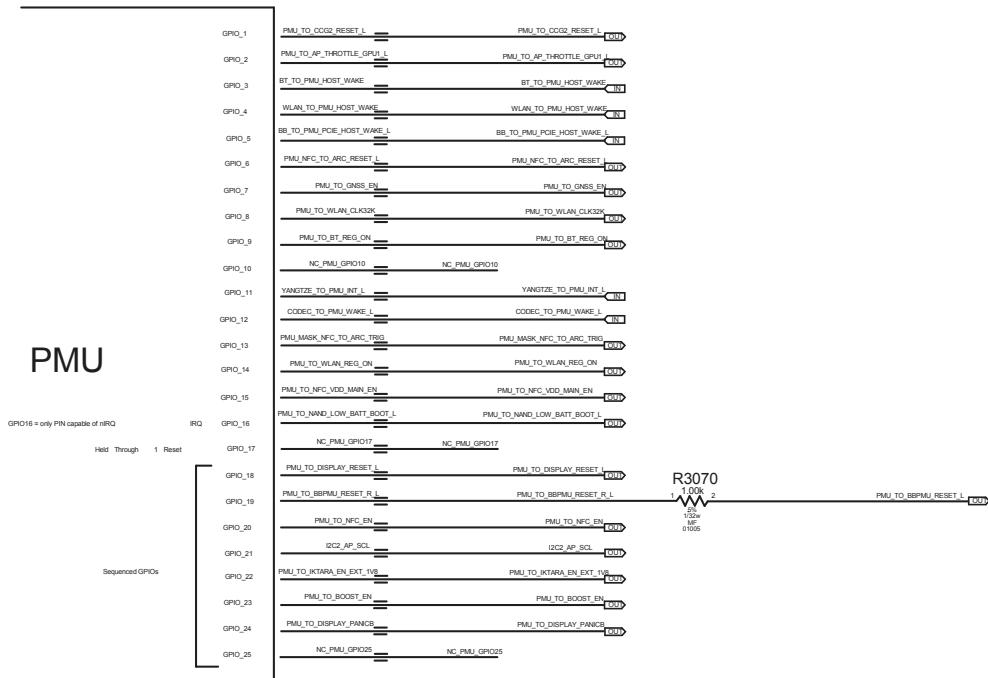
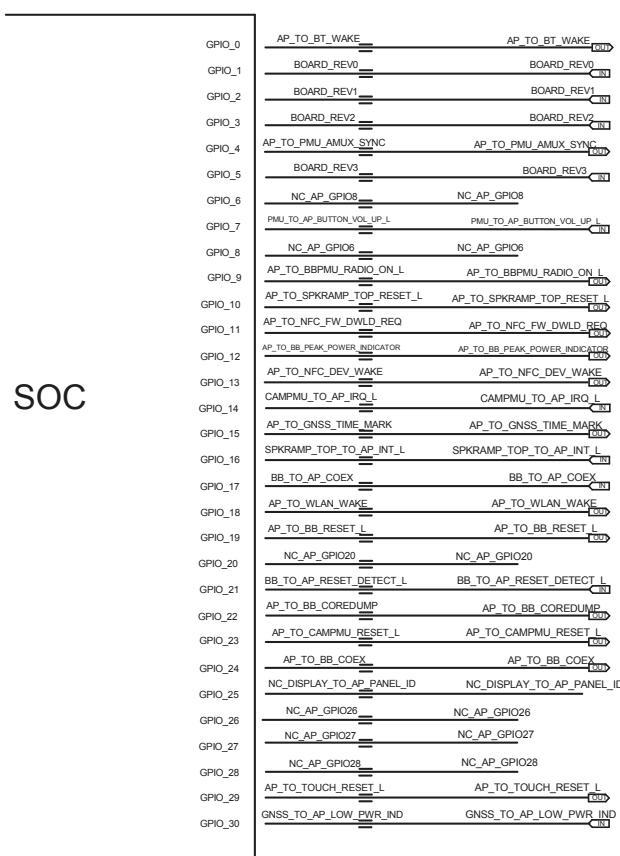
SMC I2C1 - HYDRA, DENALI



Bus Name	Bus Voltage	Bus Speed	Device	7-Bit Addr.	Binary	8-Bit Addr.	Min Speed	Max Speed	Location
SMC I2C1	PP1V8_S2	400 kHz	HYDRA	0x1A	0110 100X	0x34, 0x35	-	400 kHz	MLB
			DENALI	0x24	1110 100X	0xE8, 0xE9	-	400 kHz	MLB

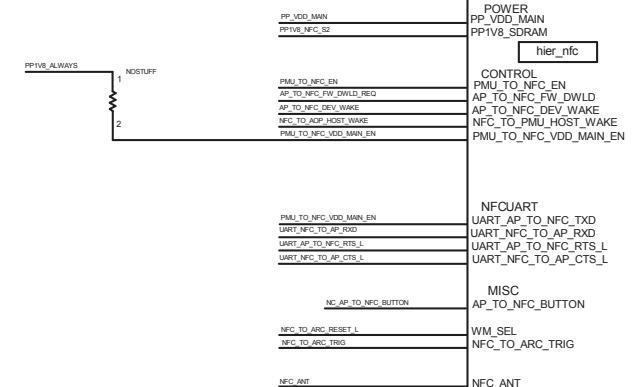
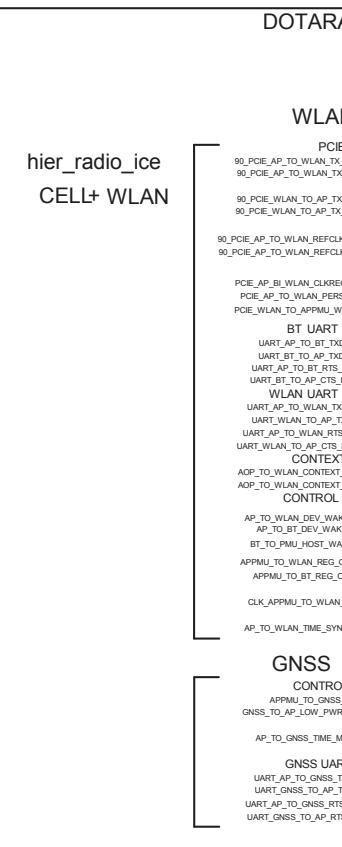
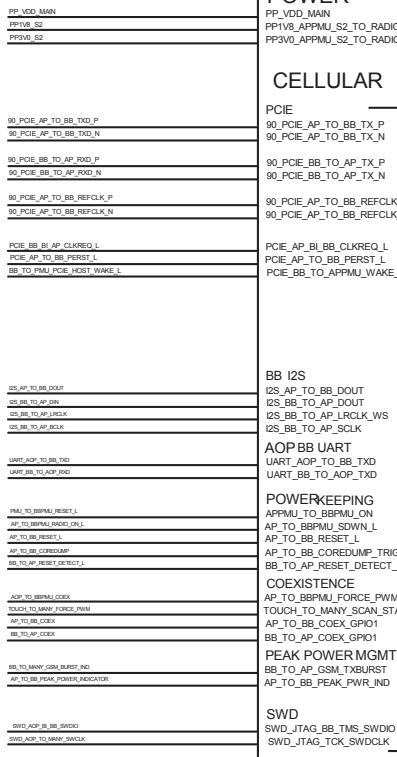
8 7 6 5 4 3 2 1

AP/PMU GPIOs



8	7	6	5	4	3	2	1
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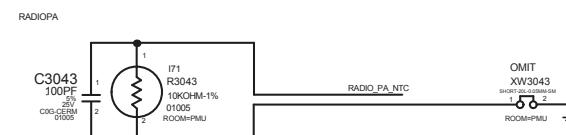
D



NFC ANTENNA FEED

TP8001
SM-TP805-TOP

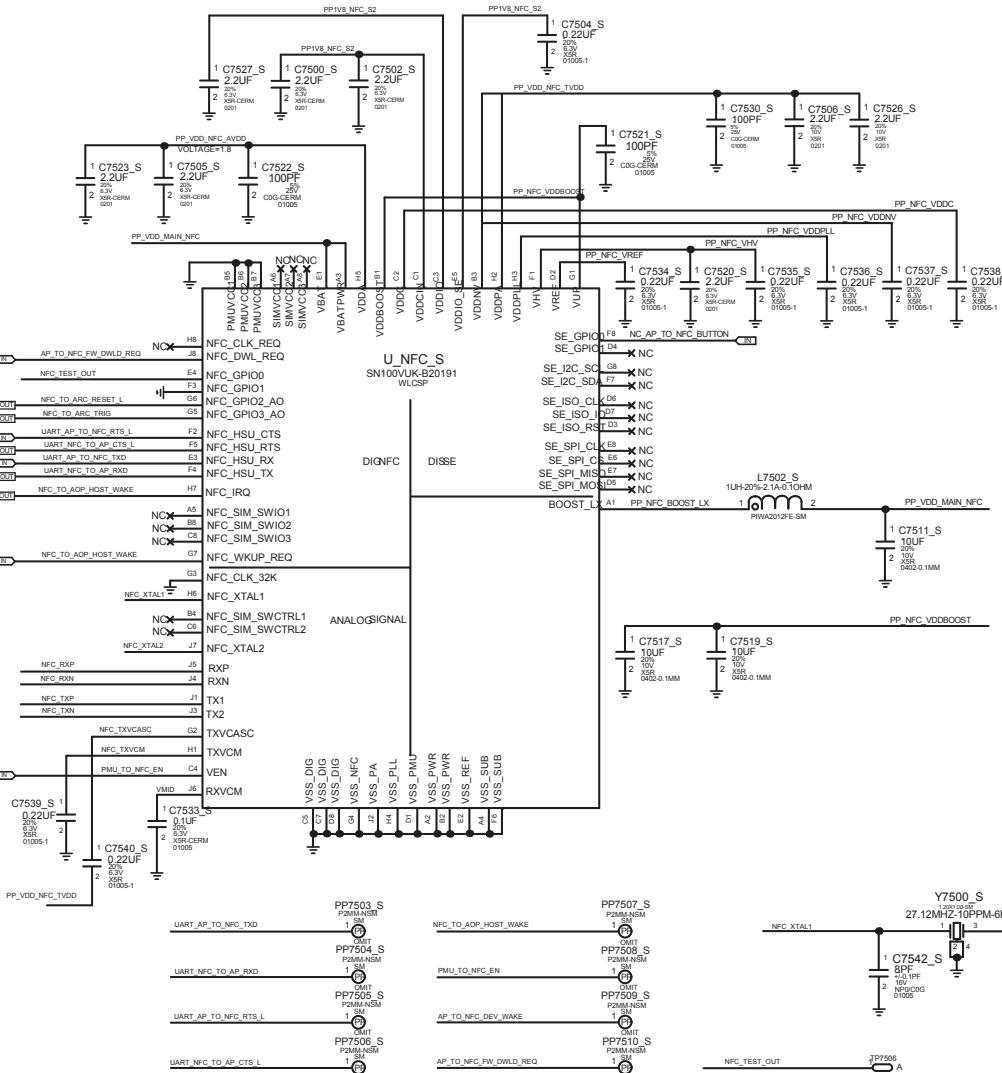
NTCs



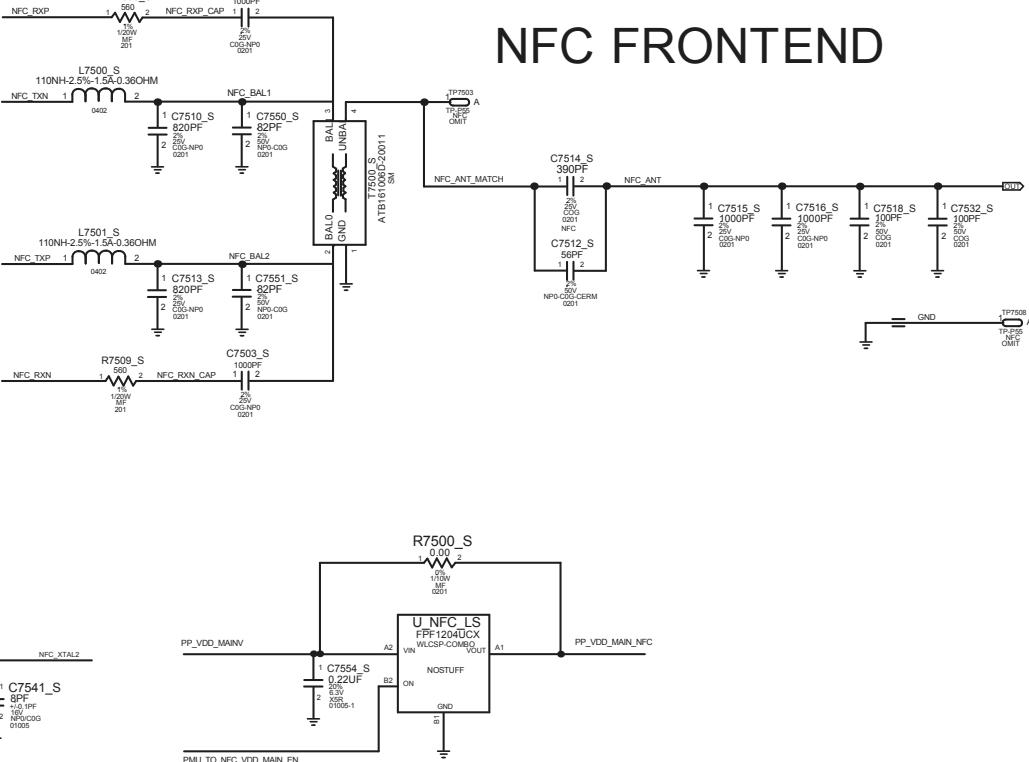
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STOCKHOLM

NFC CONTROLLER

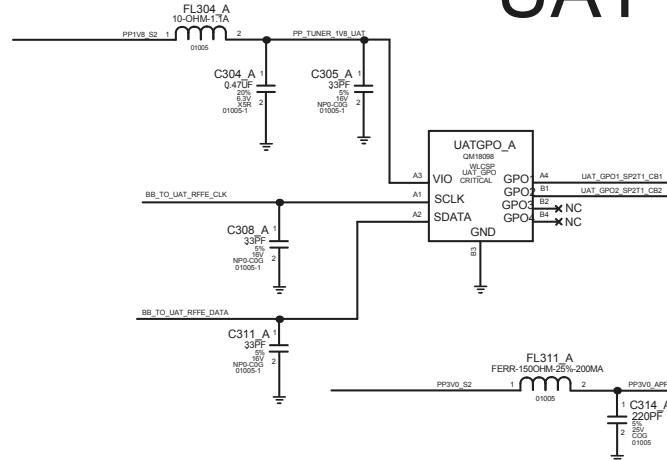


NFC FRONTEND



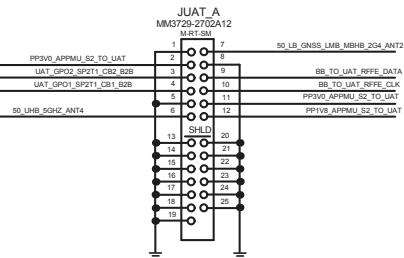
ANTENNA B2BS

UAT

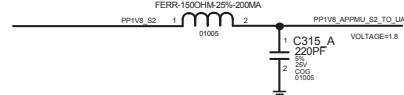


N84 UAT B2B

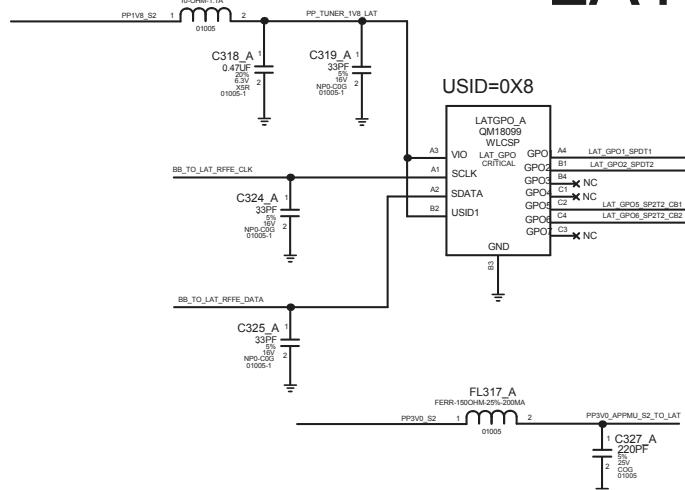
RCPT ON MLB (518S00123)
PLUG ON FLEX (518S00124)



N84 ONLY

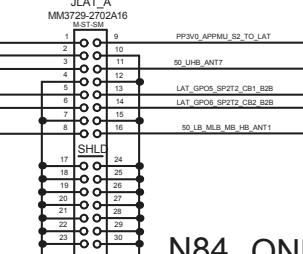


LAT

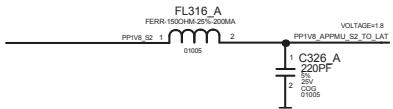


N84 LAT B2B

RCPT ON MLB (518S00125)
PLUG ON FLEX (518S00126)



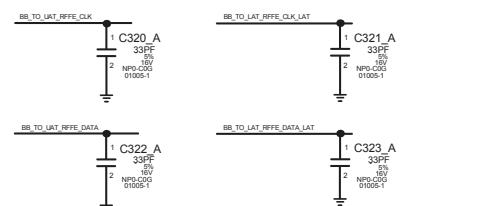
N84 ONLY



GPO FILTERS



RFFE FILTERS



ANTENNA CONNECTIONS

50_UH_MB_AB_ANT1	50_UH_MB_AB_HB_ANT1
50_UH_GNSS_LMB_MB2G_ANT2	50_UH_GNSS_LMB_MB2G_ANT2
50_204_5GHz_ANT5	50_204_5GHz_ANT5
50_UH_SOHC_ANT4	50_UH_SOHC_ANT4
50_UH_ANT7	50_UH_ANT7

BBPMU:CONTROL

D

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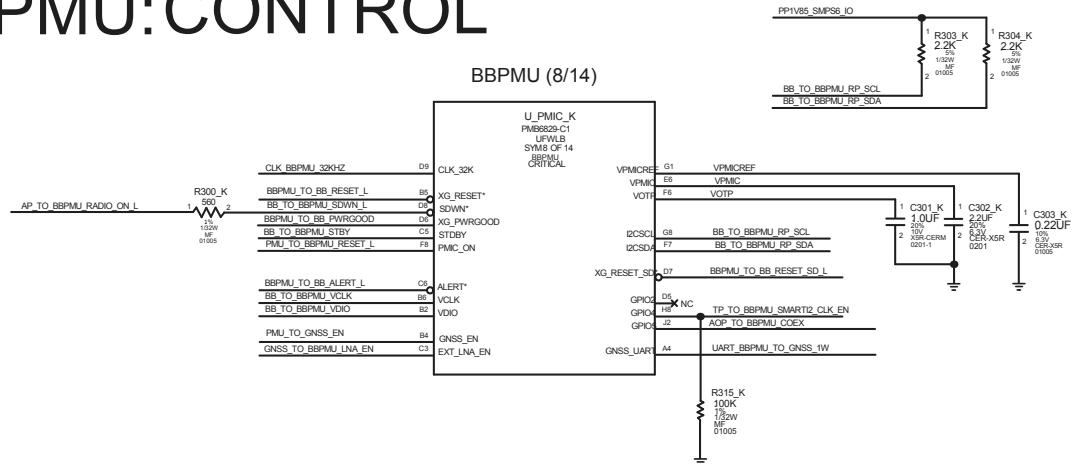
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B

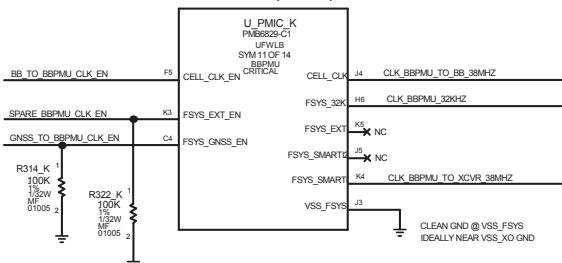
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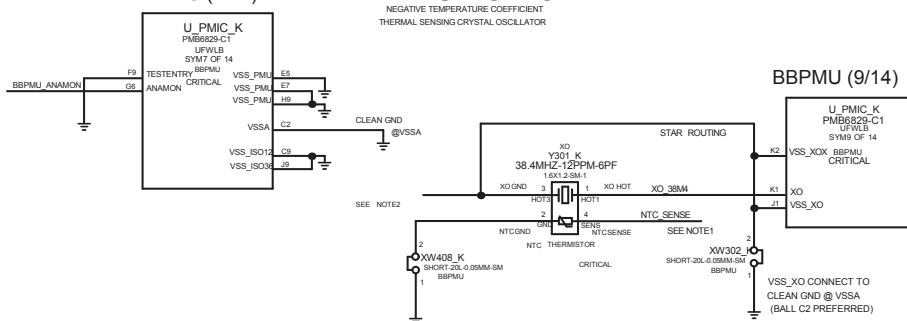
BBPMU (8/14)



BBPMU (11/14)



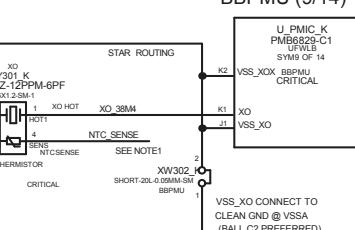
BBPMU (7/14)



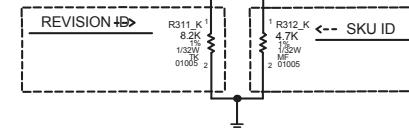
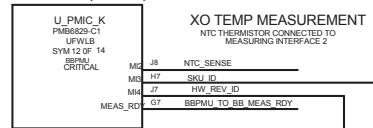
NTC TS-XO

NEGATIVE TEMPERATURE COEFFICIENT
THERMAL SENSING CRYSTAL OSCILLATOR

BBPMU (9/14)



BBPMU (12/14)



REVISION

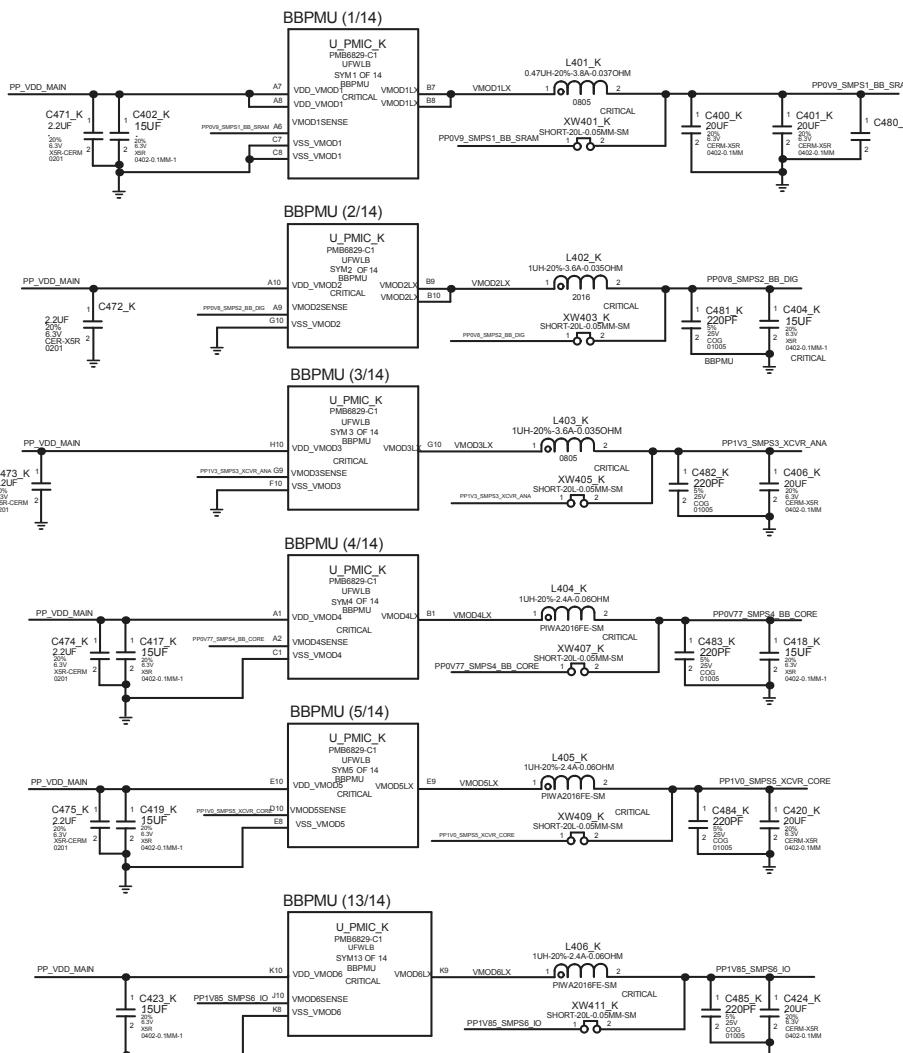
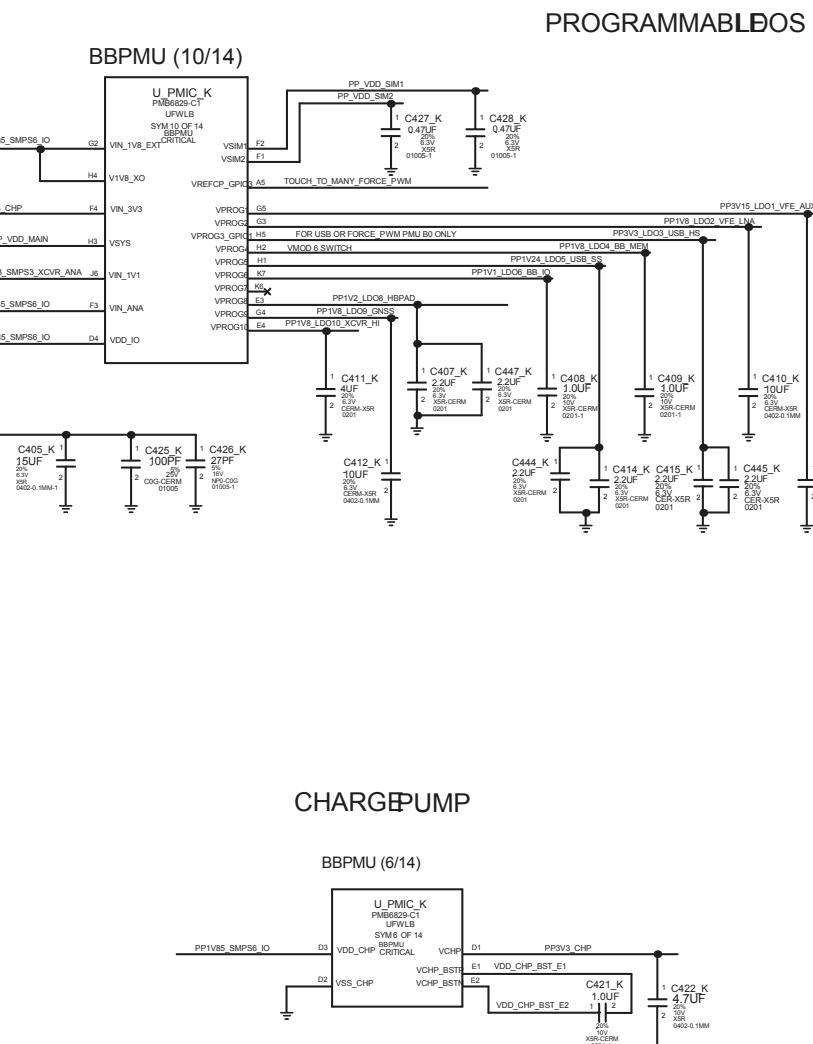
R311_K	MLB	REVISION	RF DEV
0.0	T/POC/PRE-PROTO	1.0	
1.2K	P0	1.1	
2.2K	P1 SINGLEFEED	2.0	
3.3K	P2	2.1	
4.7K	PRE-EVT	3.0	
6.8K	EVT		
8.2K	EVT 1.5	4.0	
10K	CARRIER		
12K	DVT	5.0	
15K	PVT		
18K			
22K			
27K			
33K			
39K			
47K			
56K			
82K			
100K	P1 DUALFEED/OE		
120K			
150K			

SKU/CATEGORY

R312_K	HW REVISION	X-CODE
0.0	RFDEV_JP	
1.2K	ICE 18.0 JP	X1344
2.2K	ICE 18.0 ROW	(ICE 18.0)
3.3K	ICE 18.1 ROW	X1049
4.7K	ICE 18.1 ROW	(ICE 18.1)
6.8K	ICE 18.2 JP	X1210
8.2K	ICE 18.2 ROW	(ICE 18.2)
10K	RFDEV ROW	
12K	ICE 18.5 JP	X1170
15K	ICE 18.6 JP	X1176
18K	DARWIN	
22K	ICE 18.5 US	X1170
27K	ICE 18.6 US	X1176
33K	ICE 18.0 NA	X1344
39K		
47K		
56K		
82K		
100K		
120K		
150K		

BBPMU:RAILS

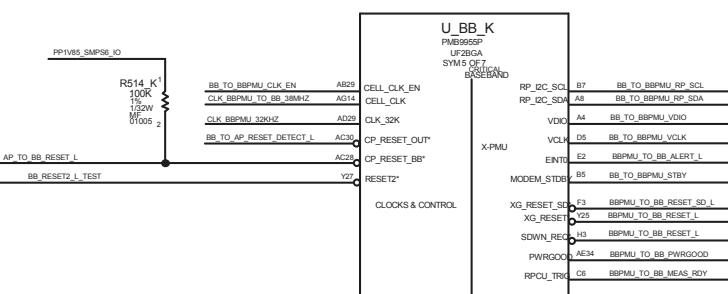
SWITCHERS



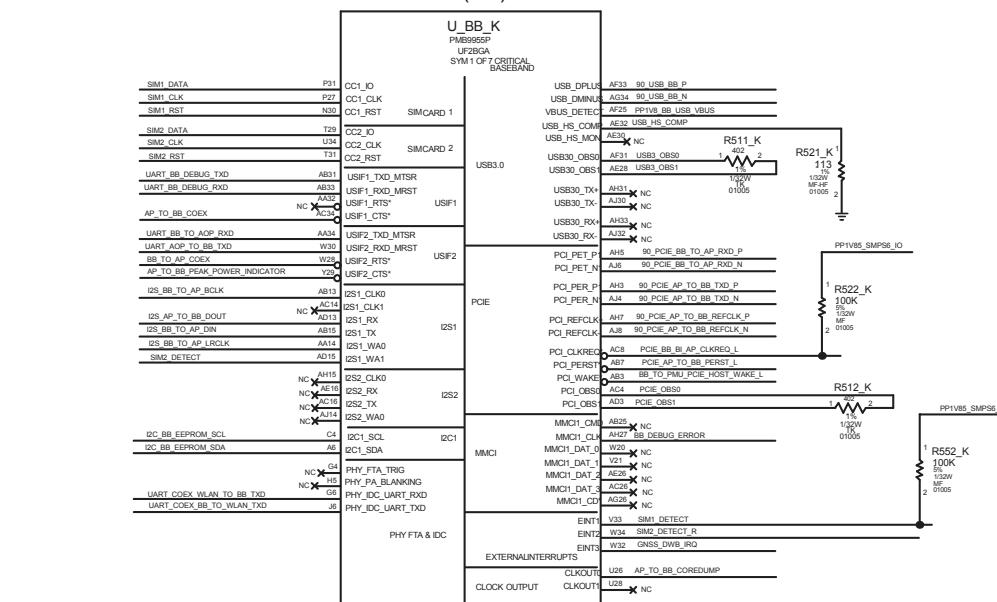
BB: INTERFACE

D

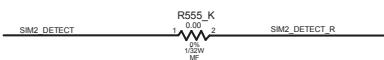
XG756 (5/7)



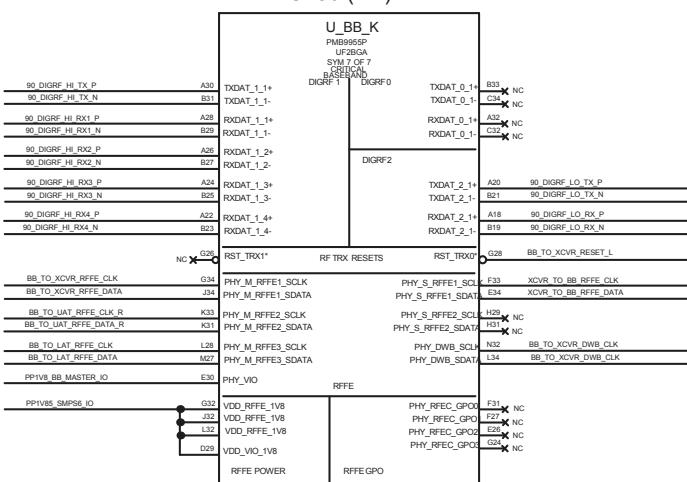
XG756 (1/7)



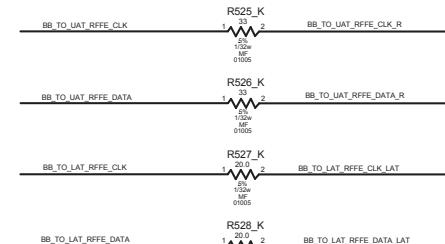
SIM2_DETECT TO EINT2



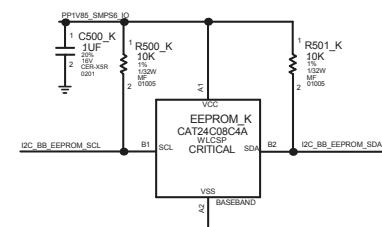
XG756 (7/7)



DAMPENING RESISTOR FOR RFFE LAT/UAT



BB EEPROM



BB: DDR PWR & JTAG

D

D

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C

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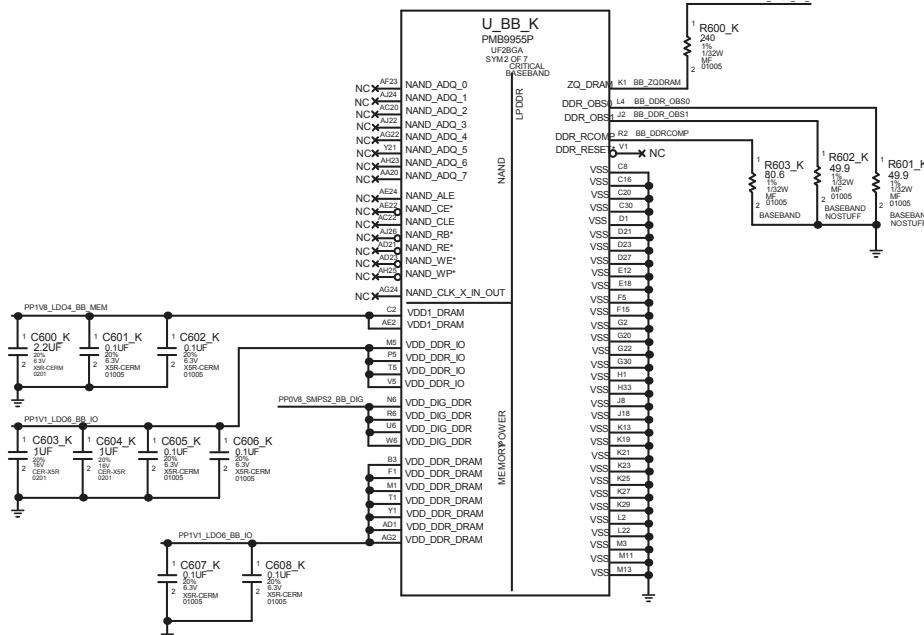
B

A

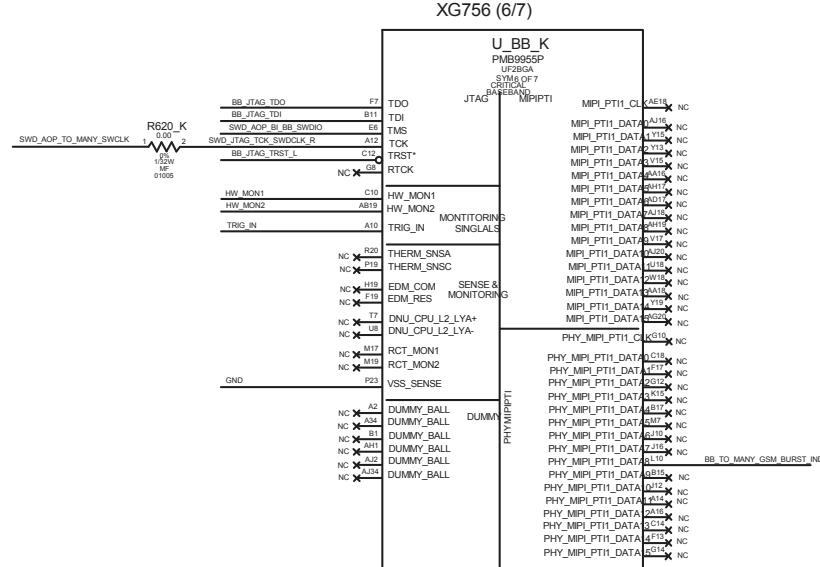
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HOOKS FOR DDR4 TESTING/CAL

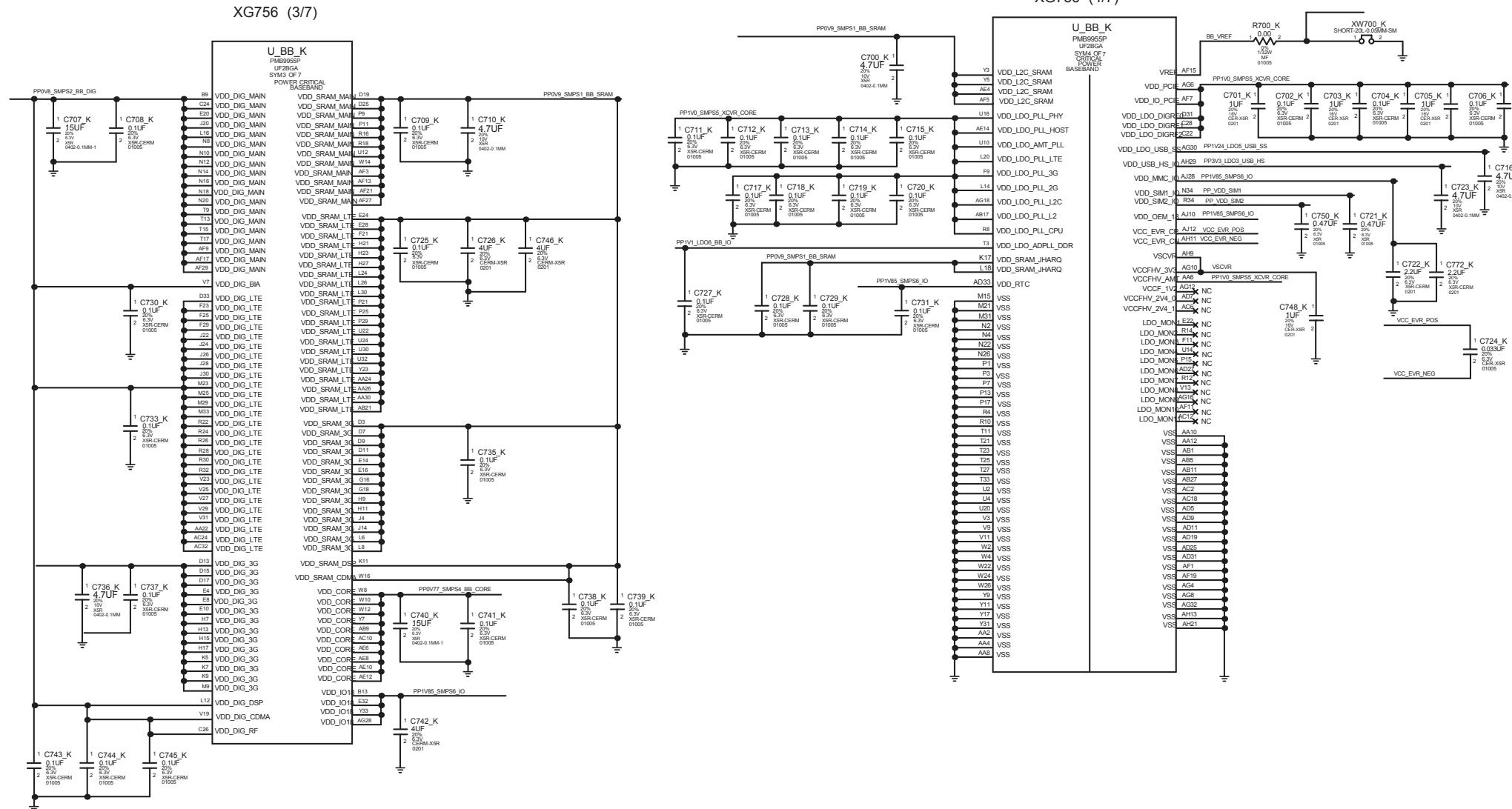
XG756 (2/7)



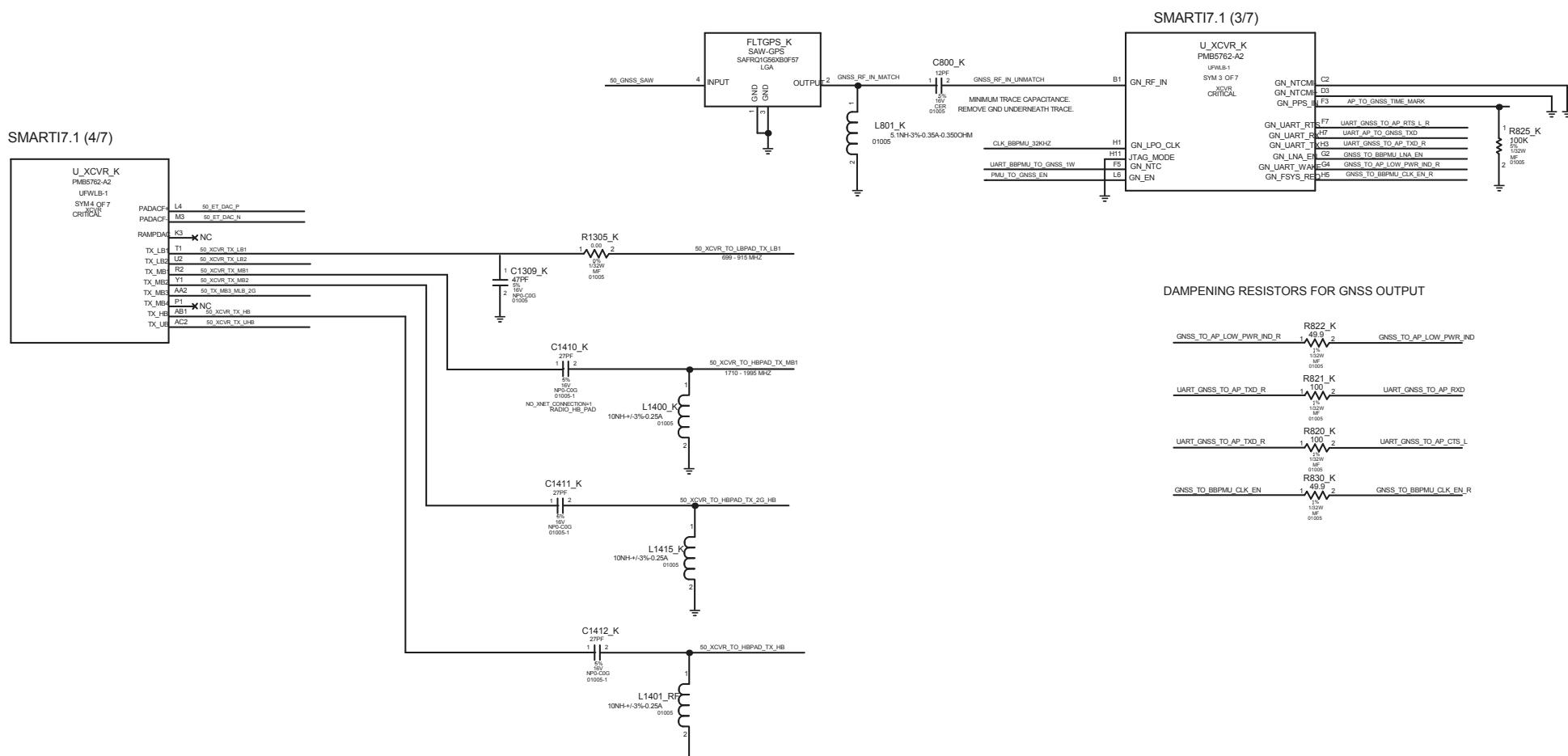
XG756 (6/7)



BB: DIGITAL PWR

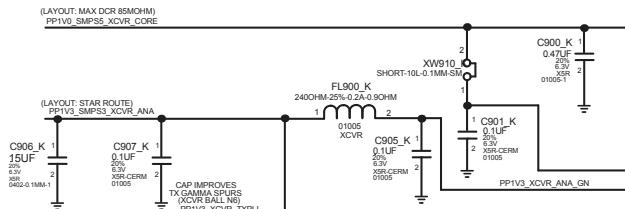


XCVR: TRANSMIT & GNSS

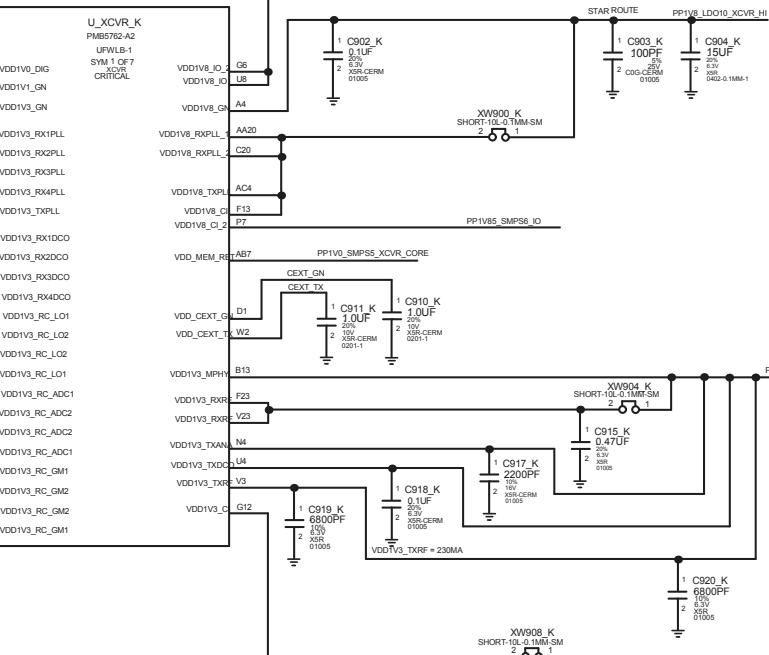


XCVR: INTERFACE & PWR

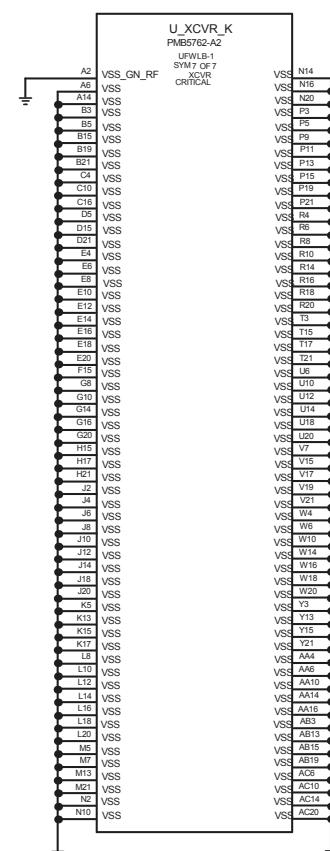
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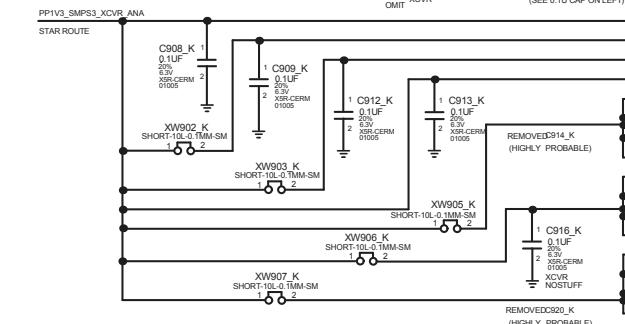
SMARTI7.1 (1/7)



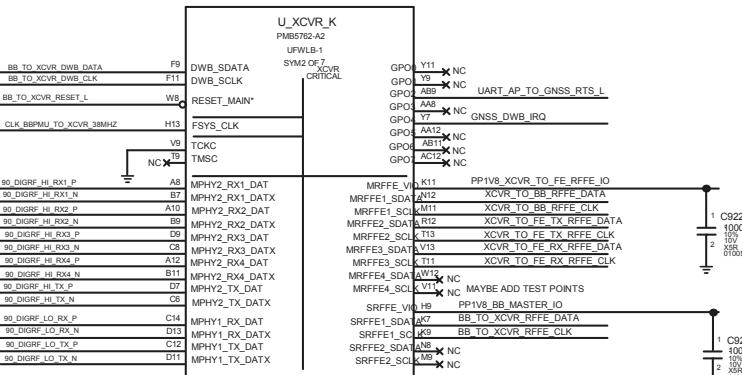
SMARTI7.1 (7/7)



C



SMARTI7.1 (2/7)



XCVR + FRONT END POWER DISTRIBUTION

CONFIGURATION 4

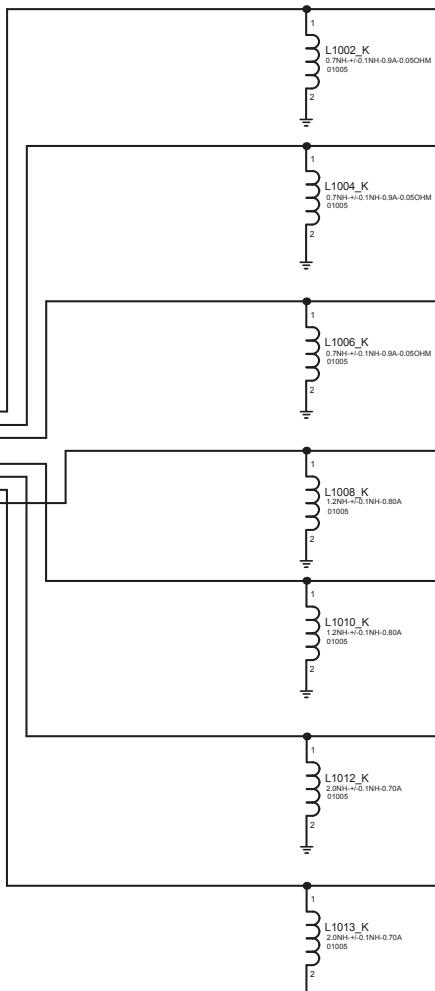
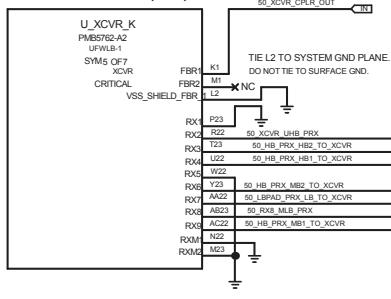
PP1V3_SMPSS_XCVR_ANA	PP1V3_SMPSS_XCVR_ANA
PP1V0_SMPSS_XCVR_CORE	PP1V0_SMPSS_XCVR_CORE
PP1V8_SMPSS_IO	PP1V8_SMPSS_IO
PP3V15_LDO1_VFE_AUX	PP3V15_LDO1_VFE_AUX
PP1V8_LDO2_VFE_LNA	PP1V8_LDO2_VFE_LNA
PP1V2_LDO8_HPAD	PP1V2_LDO8_HPAD
PP1V8_LDO9_GNSS	PP1V8_LDO9_GNSS
PP1V8_LDO10_XCVR_HI	PP1V8_LDO10_XCVR_HI

XCVR: PRIMARY/DIVERSITY RX

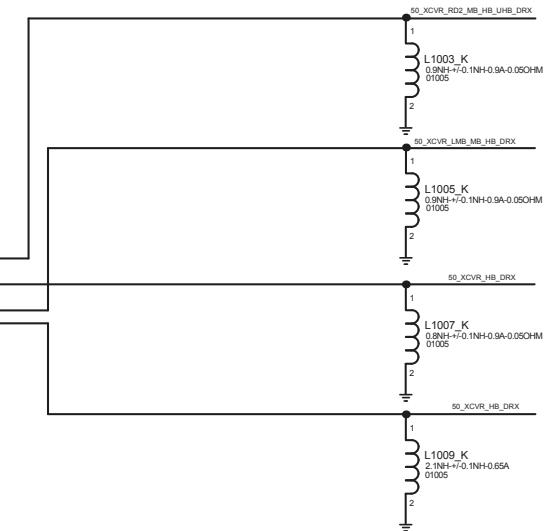
D

D

SMARTI7.1 DRX (5/7)



SMARTI7.1 DRX (6/7)



KAROO CONFIG

D

D

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C

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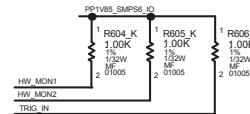
A

A

BOOTCFG

BOOTSTRAPS ARE INTERNALLY PULLED DOWN

	HW_MON1	HW_MON2	TRIG_IN
NAND	0	0	1
FLASHLESS	1	0	1
FLASHLESS WDOG DIS	1	1	0
NAND (NON-SECURE)	1	1	1

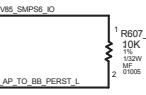


THESE DON'T CHANGE FOR KAROO CONFIG MLBS, DEV ONLY

DEFAULTS SET TO AP/FLASHLESS BOOT

PERST_L

PERST_L SIGNAL LOW WILL KEEP BB IN RESET.



STUFF PU WHEN AP IS NOT CONNECTED
(KAROO CONFIG: USB BOOT)

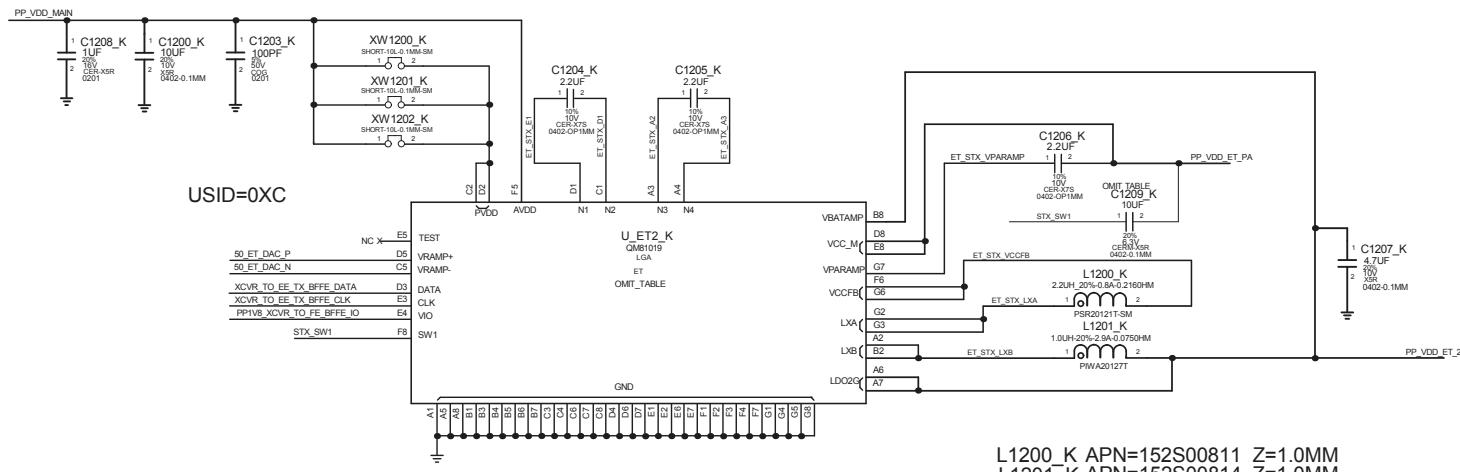
JTAG_RESET_L



STUFF PU WHEN USING JTAG

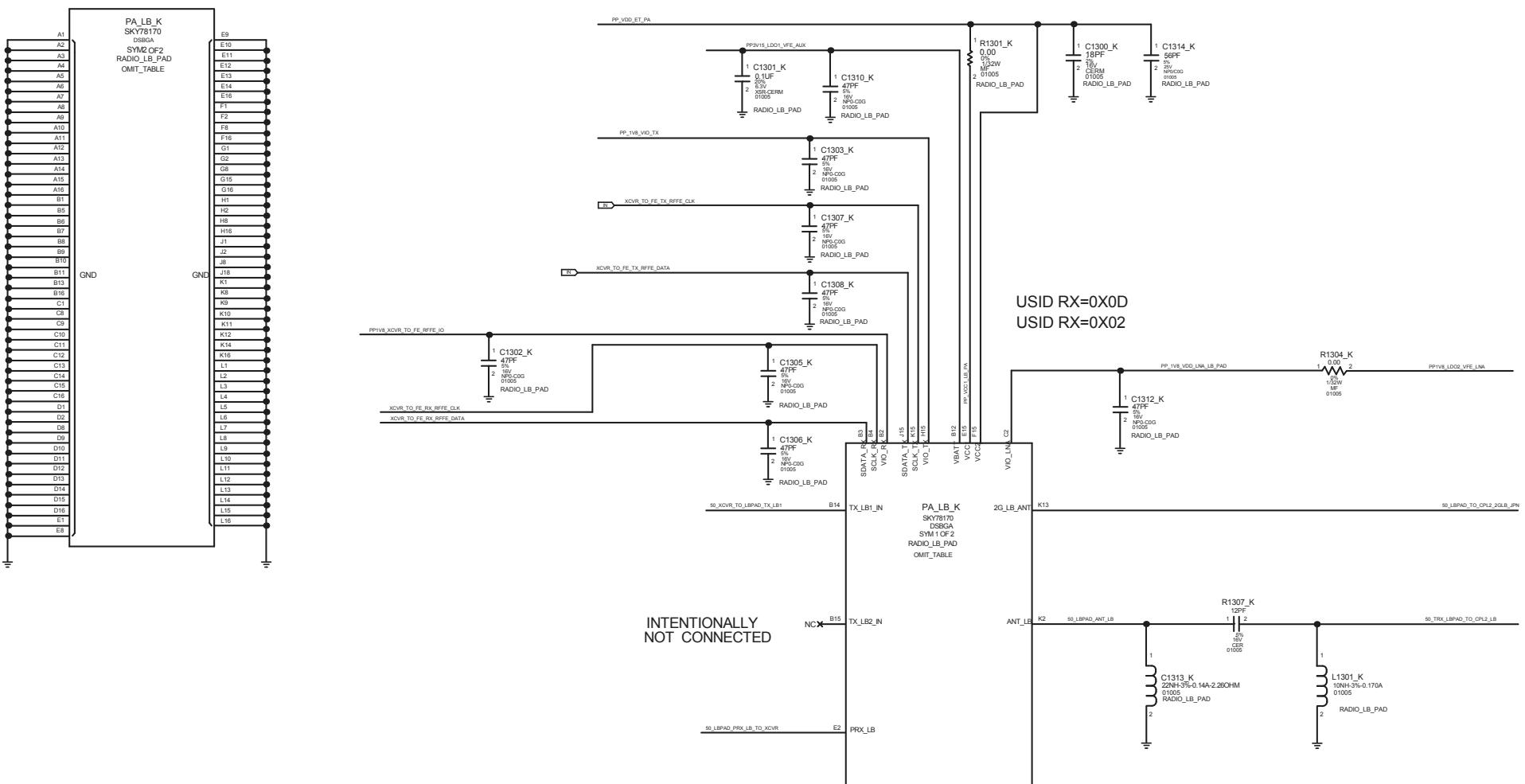
ET MODULATOR

ALPES STX QM81019 MODULE



8 7 6 5 4 3 2 1

LB SPAD



8 7 6 5 4 3 2 1

8

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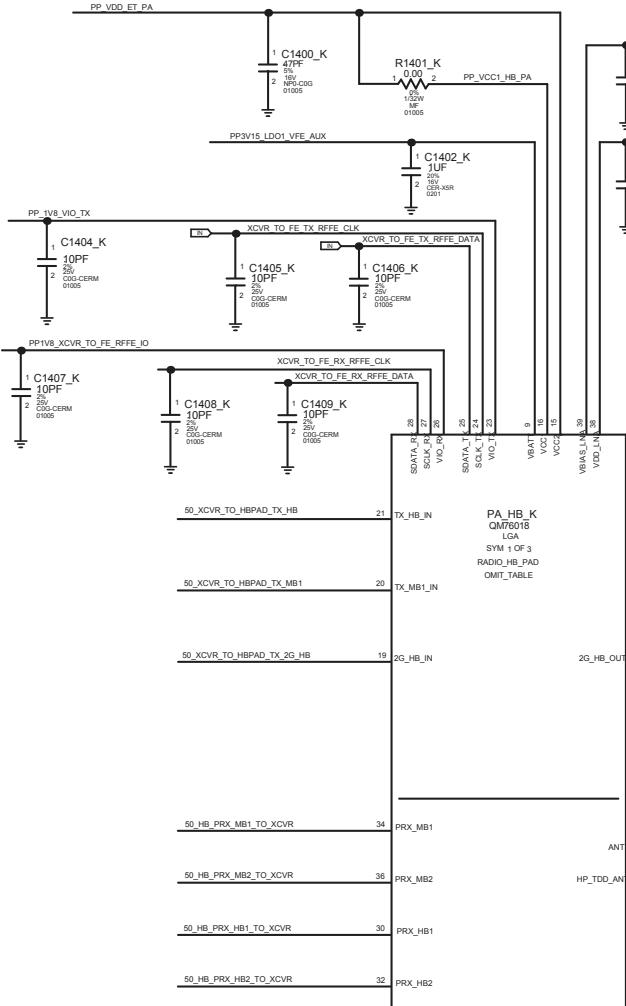
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2

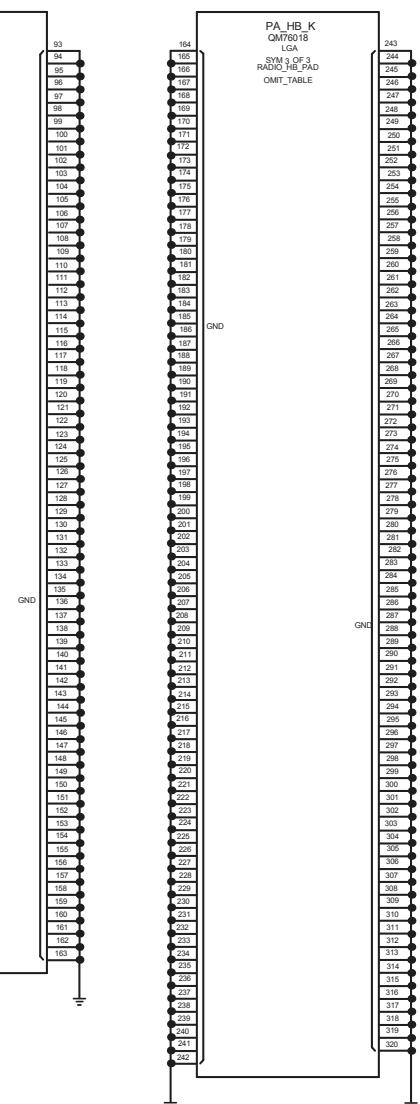
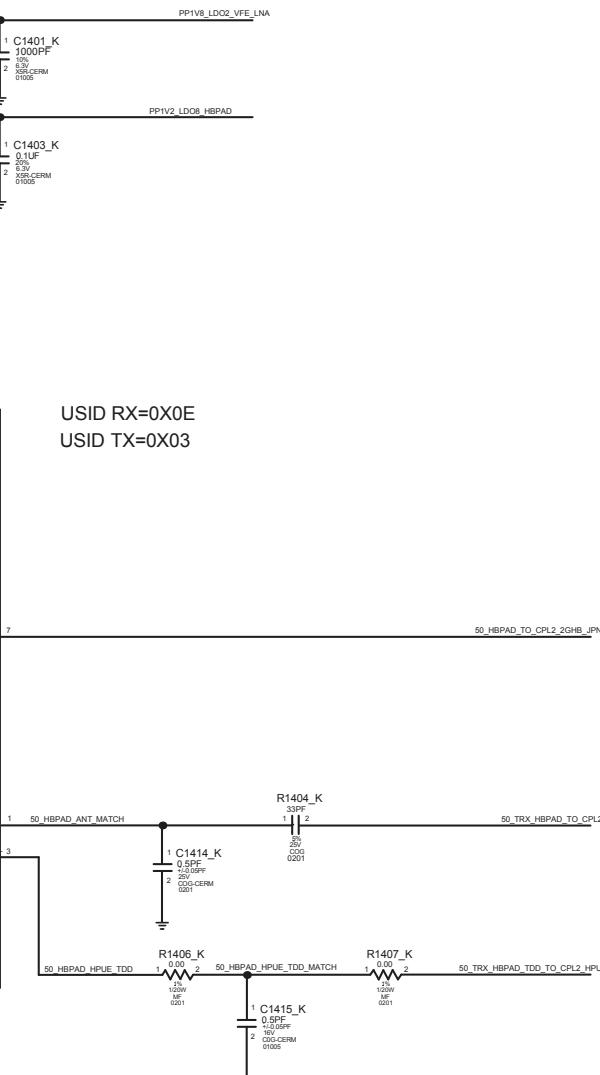
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HB SPAD

D



USID RX=0X0E
USID TX=0X03



8

7

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5

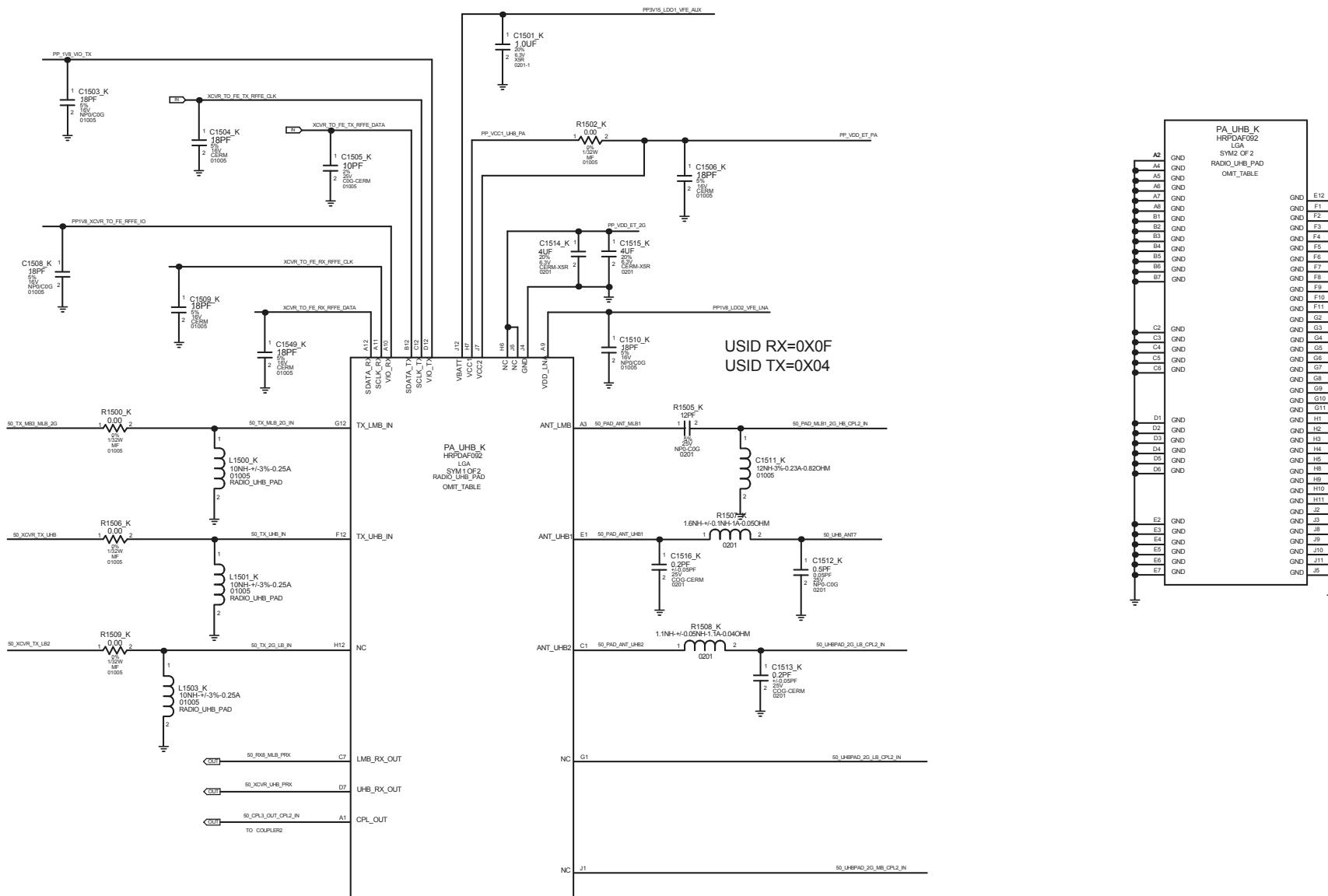
4

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1

UHB LMB SPAD



METROCIRC

D

D

C

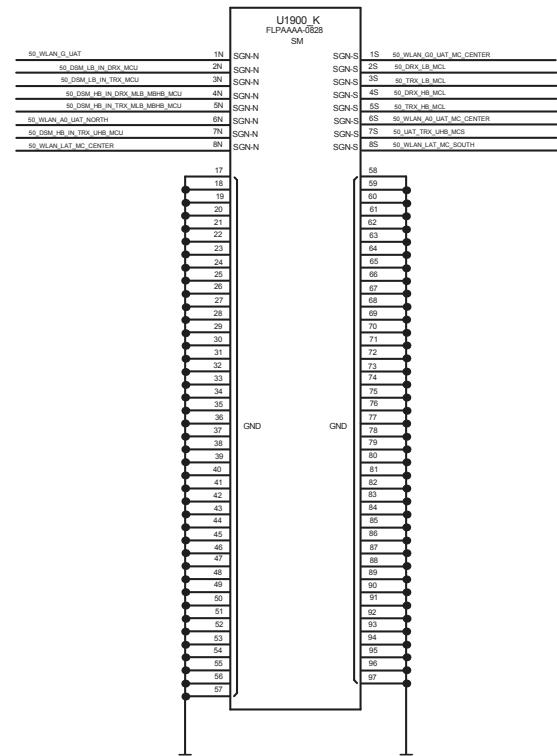
C

B

B

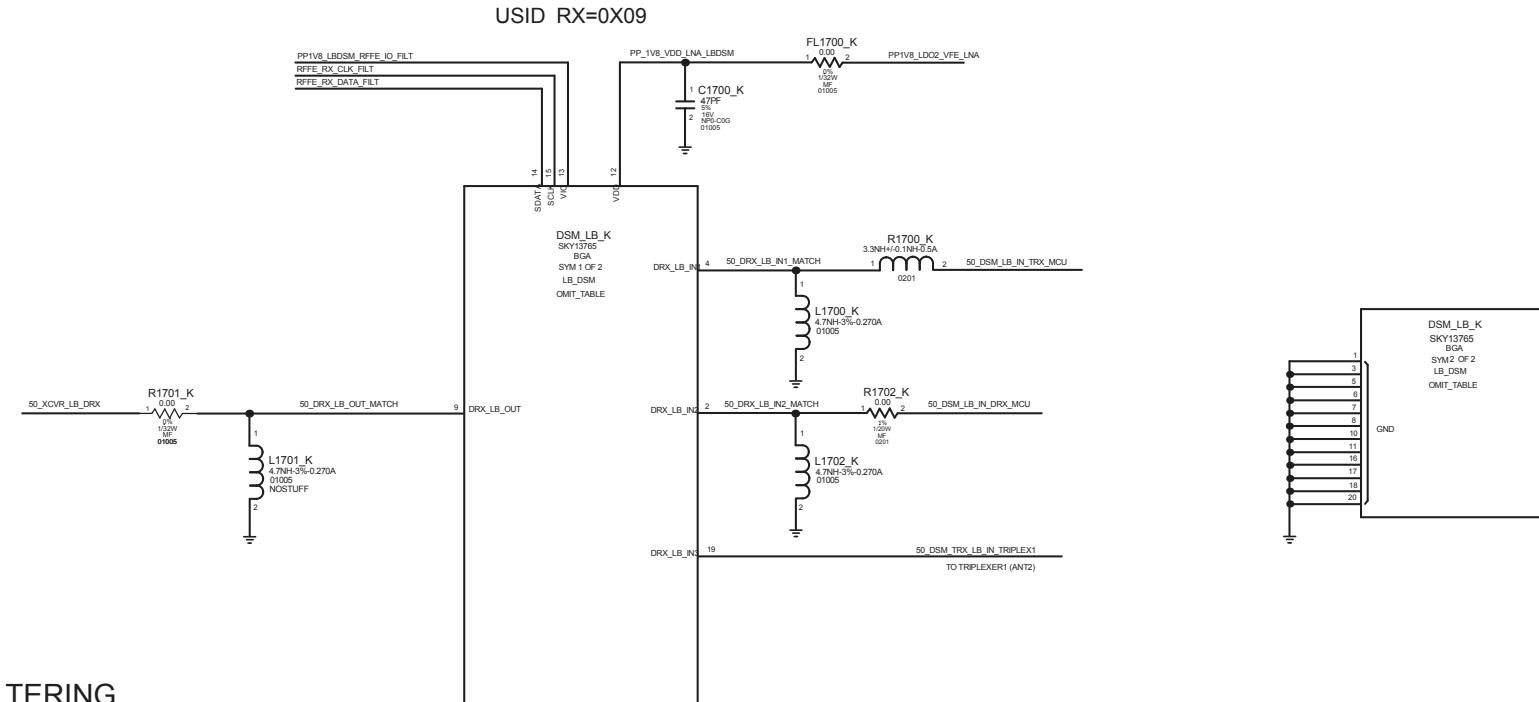
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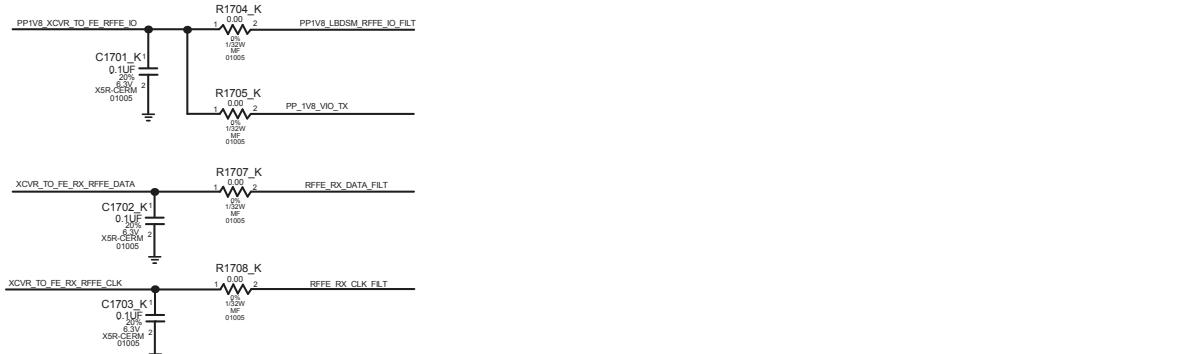


8 7 6 5 4 3 2 1

LB DIVERSITY RECEIVE LNA



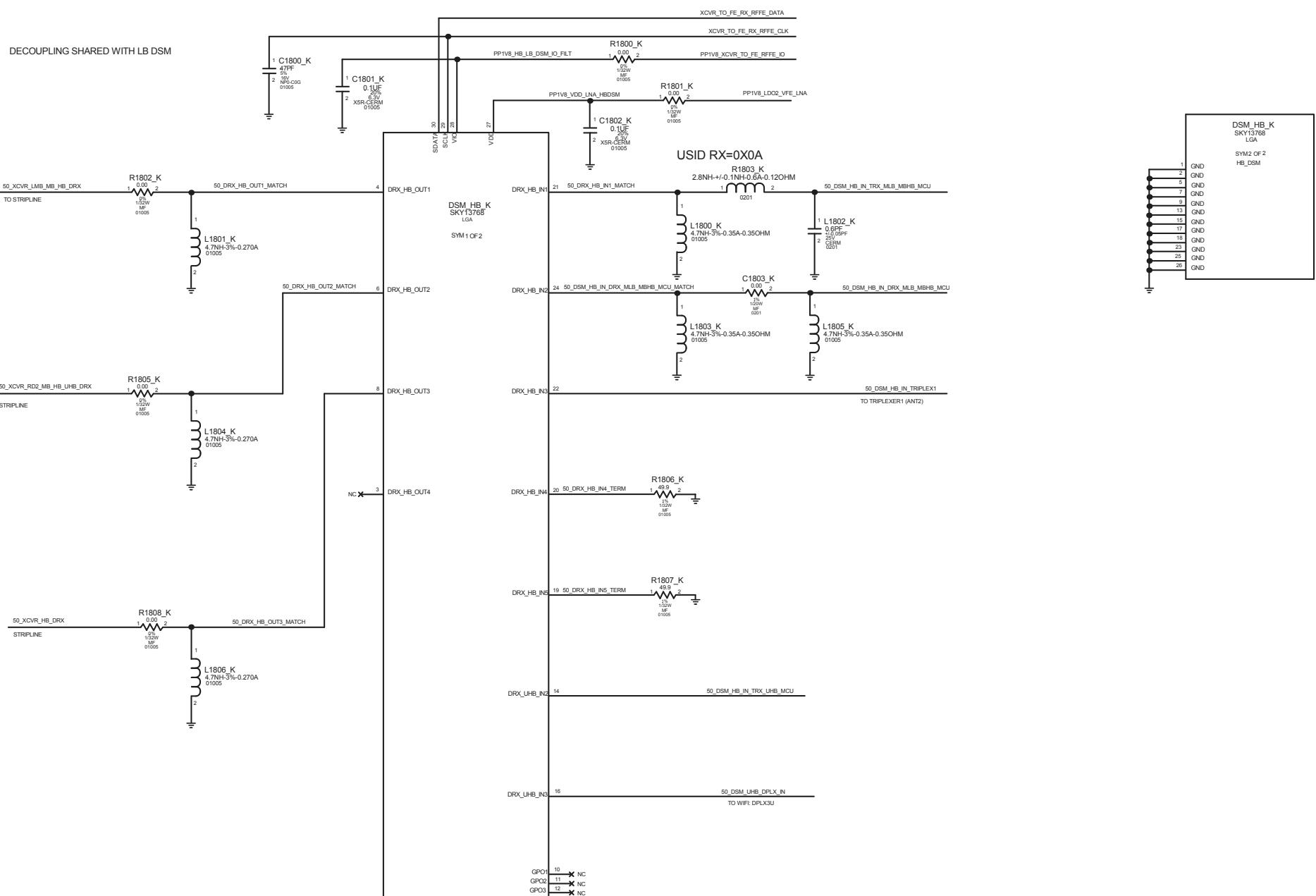
RFFE FILTERING



8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

HB DIVERSITY RECEIVE LNA



8 7 6 5 4 3 2 1

8

7

6

5

4

3

2

1

LOWER ANTENNA AND COUPLER

D

D

C

C

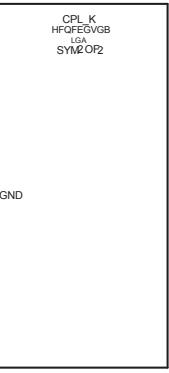
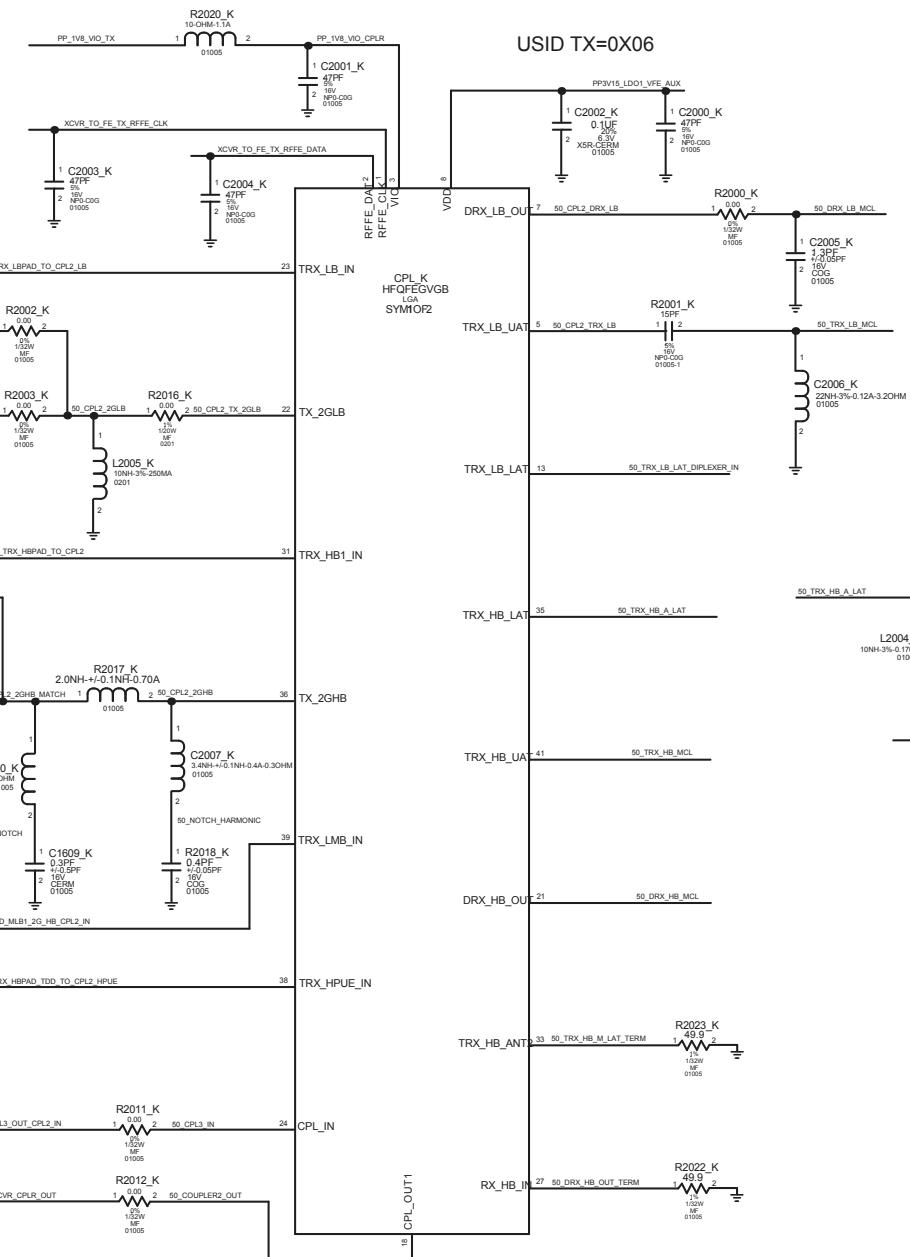
B

B

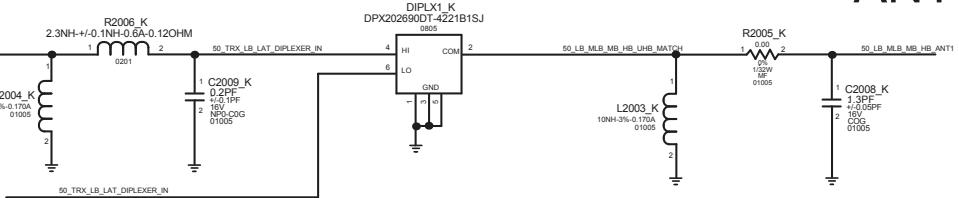
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A

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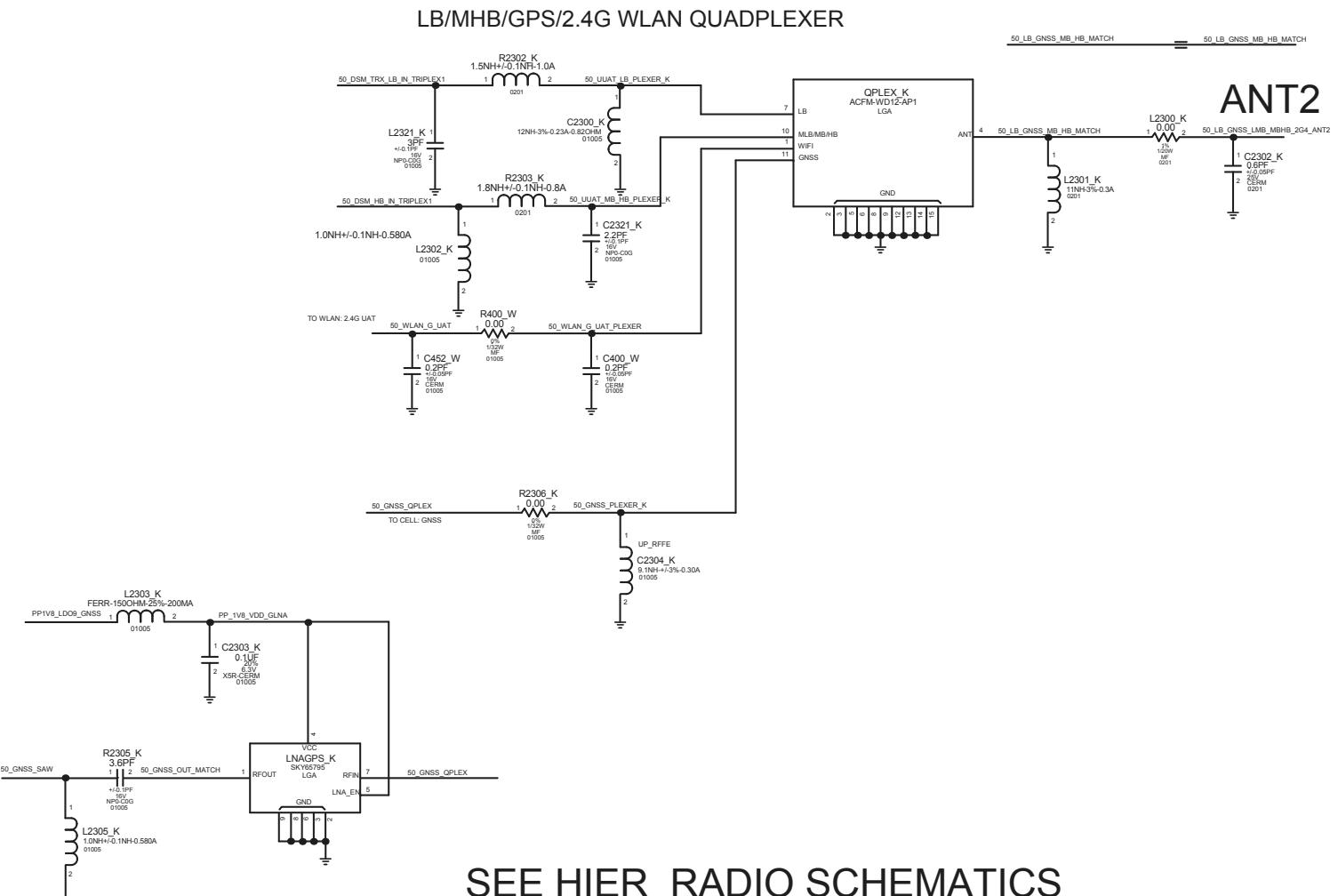
LB-MHB DIPLEXER1 (ANT1)



ALIAS FOR LAYOUT PURPOSES

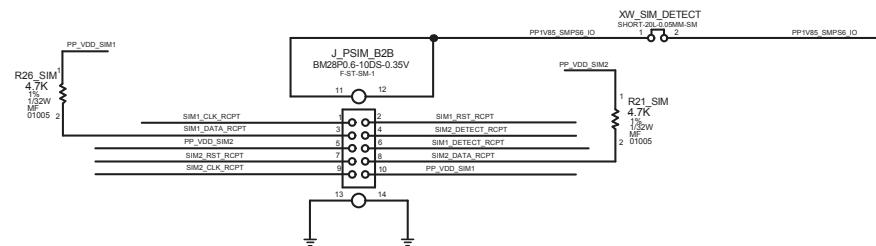
ANT1

UPPER ANTENNA FEEDS



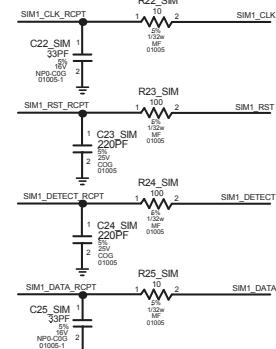
8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

PSIM - REPLACED W/ B2B FOR SIM

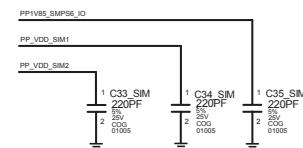
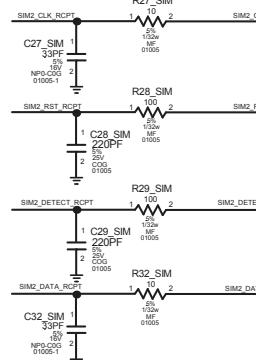


PLUG (FLEX) APN:516S00407
RCPT (MLB) APN:516S00406

AOS RESISTORS



AOS RESISTORS

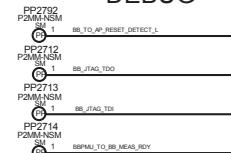


8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

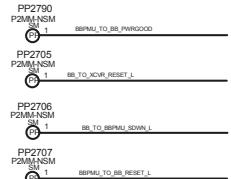
DEBUG: TEST POINTS

D

DEBUG



POWER-KEEPING



COEXISTENCE



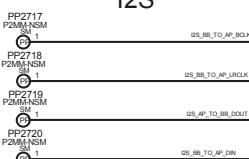
PEAK-POWER



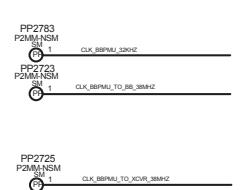
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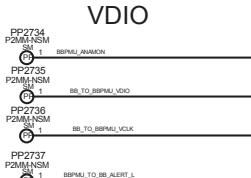
I2S



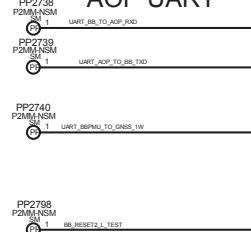
CLKS



VUDIO



AOP UART



GNSS



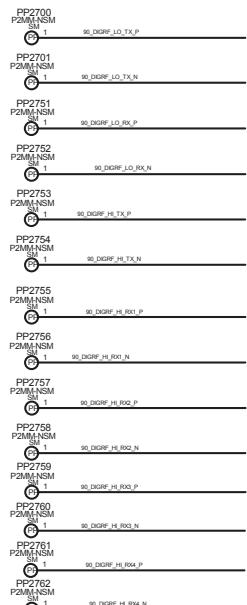
AP COEX



BB RFFE



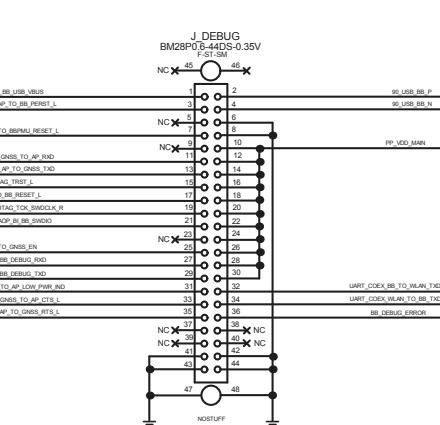
DIGRF



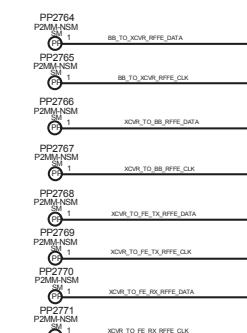
LO

HI

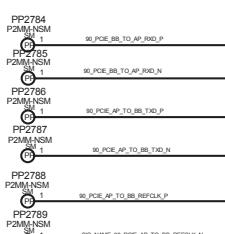
DEBUGCONNECTOR



XCRV RFFE



BB PCIE



SYMBOL: WIFI

HIERARCHICAL SYMBOL FOR HIER_WIFI

D

D

C

C

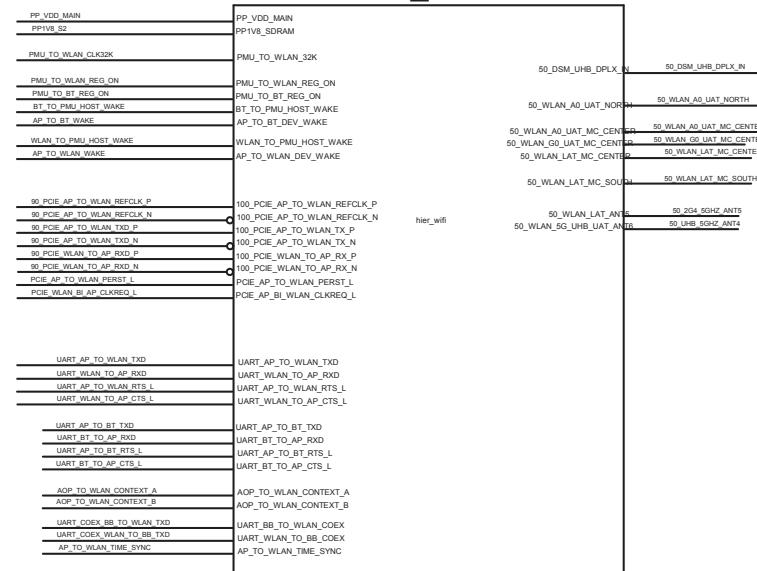
B

B

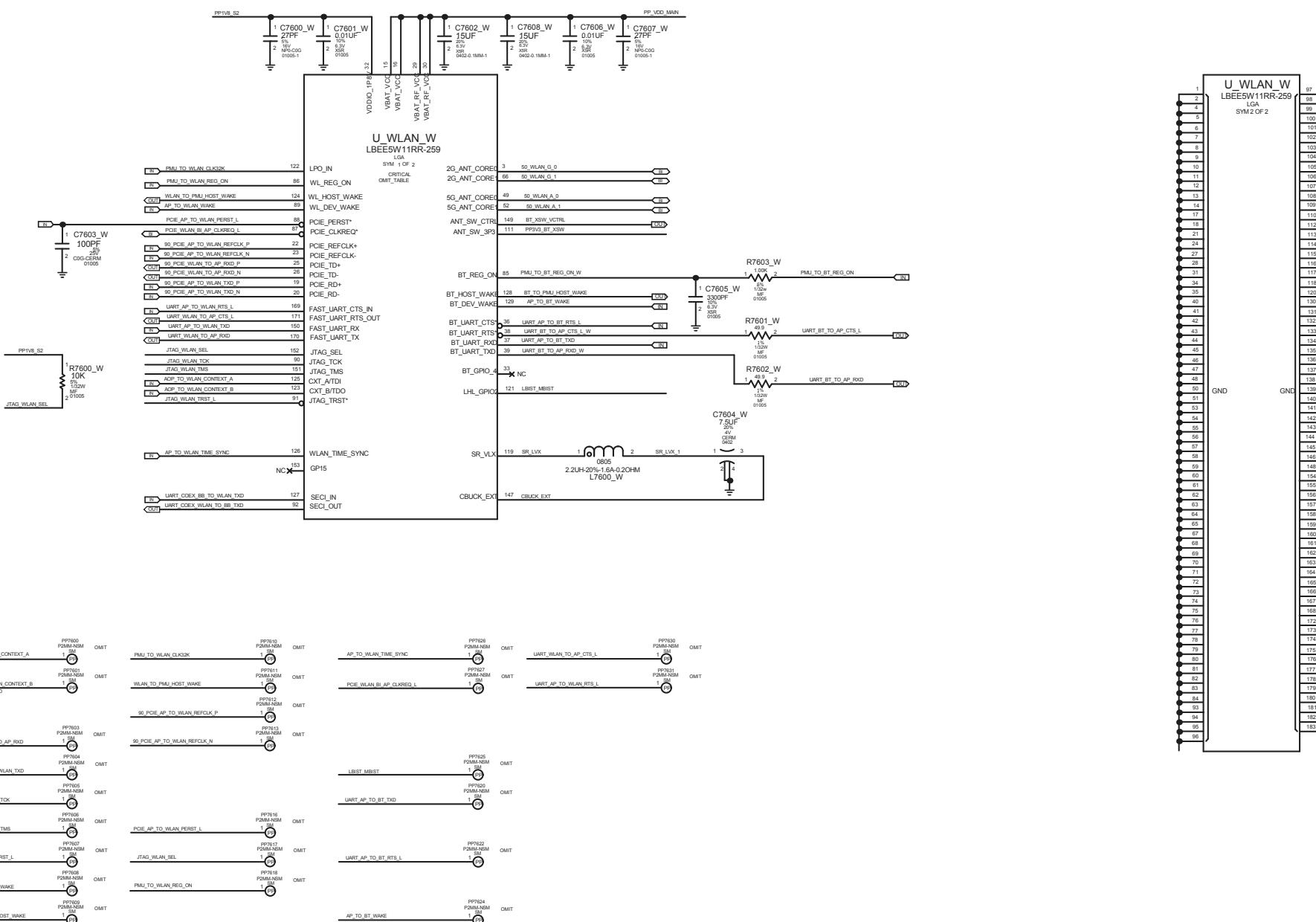
A

A

DORADO HIER_WIFI



WIFI/BT



WIFI FRONT-END ANTENNA FEEDS

