

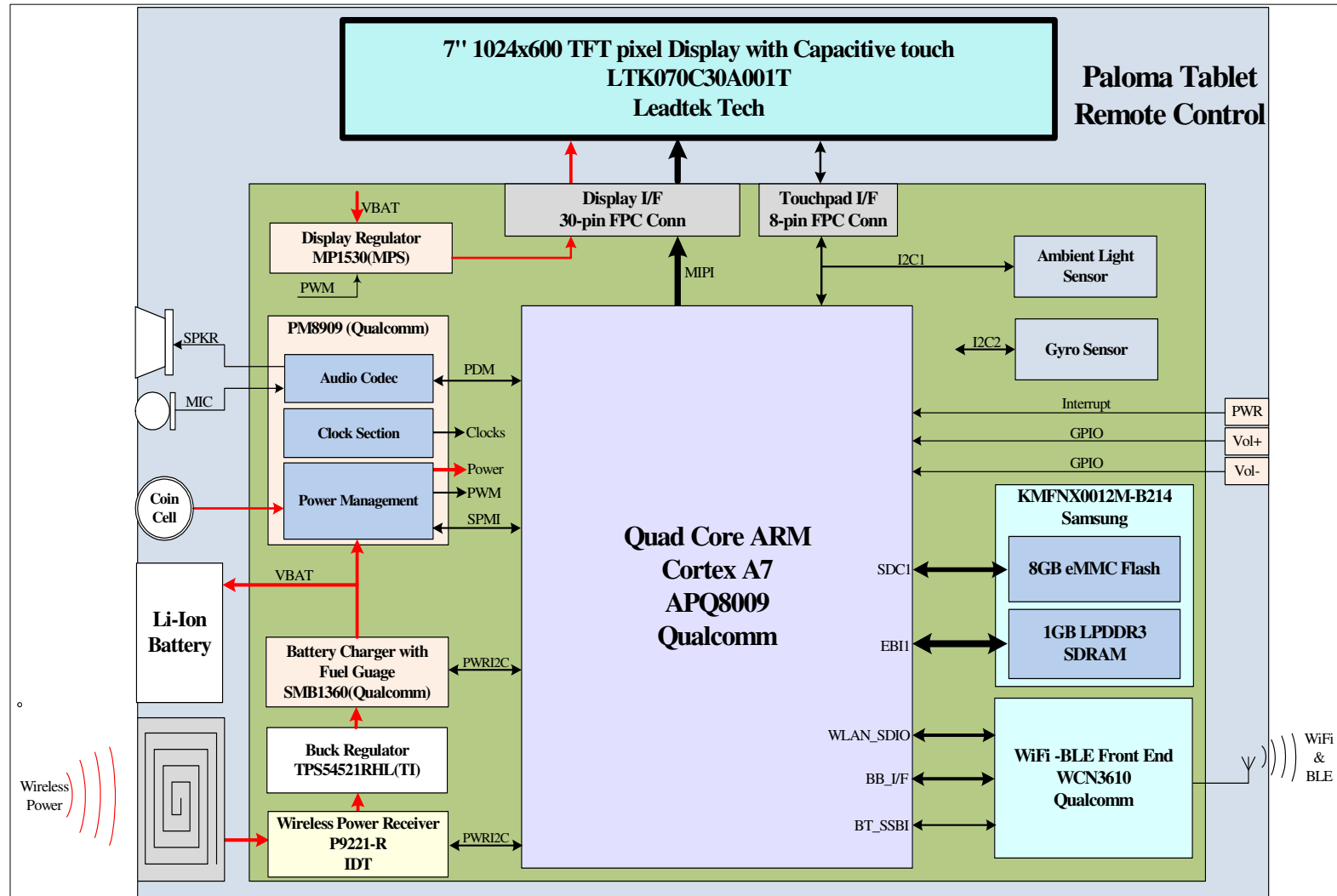
REV	Revision Notes	Designer	Approver	Date
A1	Rev_A1 Schematics is released	VVDN	Vignesh Babu	08-04-2017

PLMJ_TABC


TABLET REMOTE

Content	
Page No	Sheet Name
01	BLOCK DIAGRAM
02	APQ8009 - PROGRAMMING & DEBUG INTERFACE
03	APQ8009 - MEMORY INTERFACE
04	APQ8009 - RF XCVR & MIPI INTERFACE
05	APQ8009 - MISCELLANEOUS INTERFACE
06	APQ8009 - POWER1
07	APQ8009 - POWER2
08	SD9DS28K-8G - MEMORY
09	WCN3610 - RF TRANSCEIVER
10	SENSORS - GYRO, AMBIENT LIGHT
11	PM8909
12	PM8909- SWITCHERS
13	PM8909 - LDOS
14	PM8909 - CLOCK & RESET
15	PM8909 - AUDIO CODEC
16	LCD POWER
17	SMB1360 - BATTERY CHARGER
18	P9221-R - WIRELESS POWER RECEIVER
19	NON CAD ITEMS
20	MISCELLANEOUS

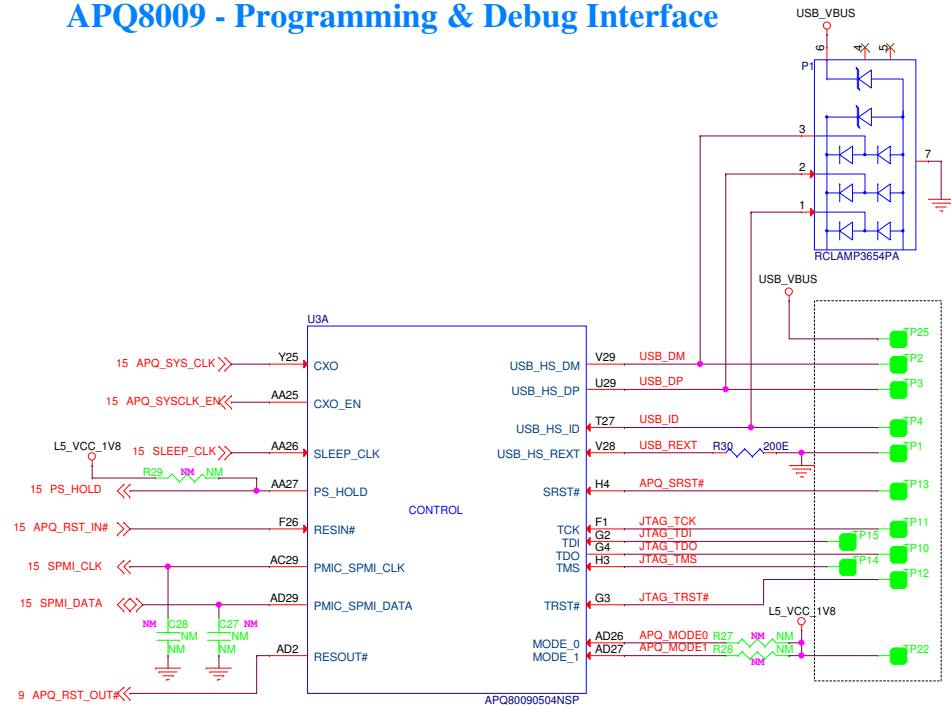
BLOCK DIAGRAM



ASSEMBLY


 VVDN TECHNOLOGIES	A3	Title : BLOCK DIAGRAM	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 2 of 22

APQ8009 - Programming & Debug Interface

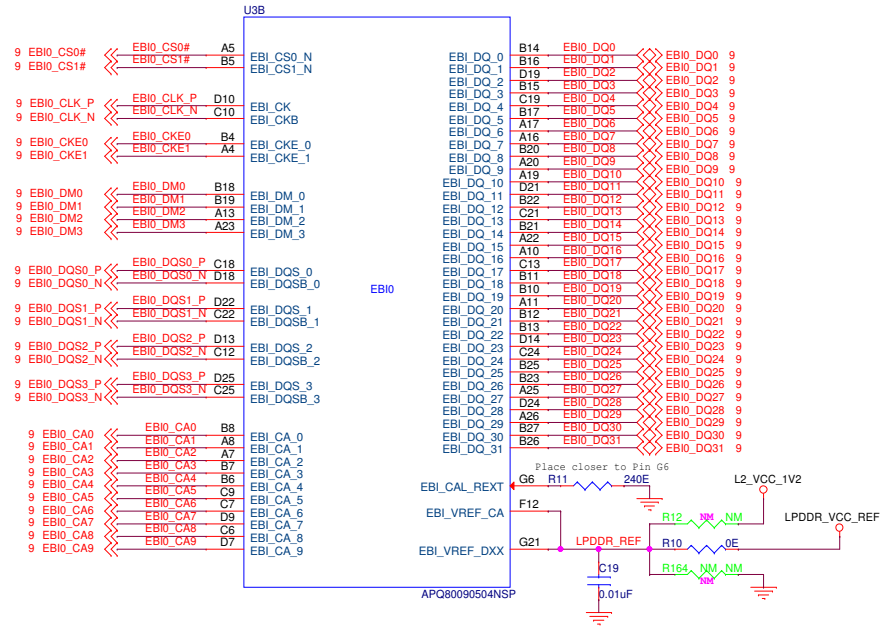


Program & Debug
Test points

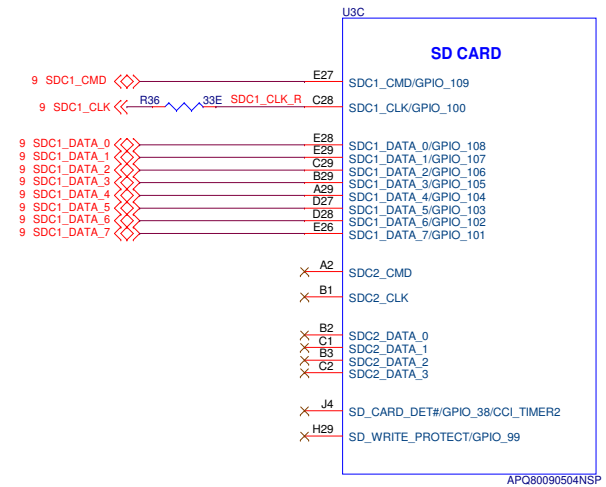
ASSEMBLY

	A3	Title : APQ8009 PROGRAM & DEBUG INTERFACE	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 3 of 22

APQ8009 - LPDDR3 SDRAM Interface



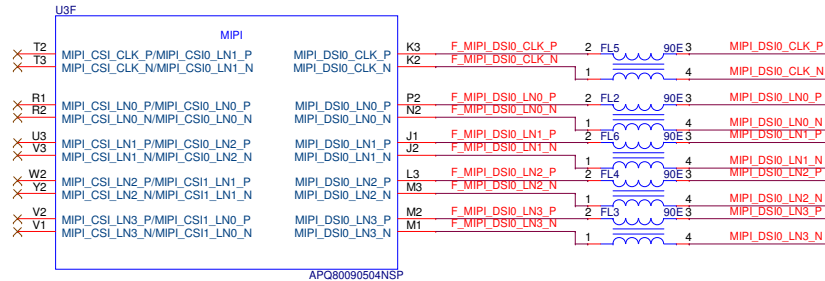
AP8009 - eMMC Interface



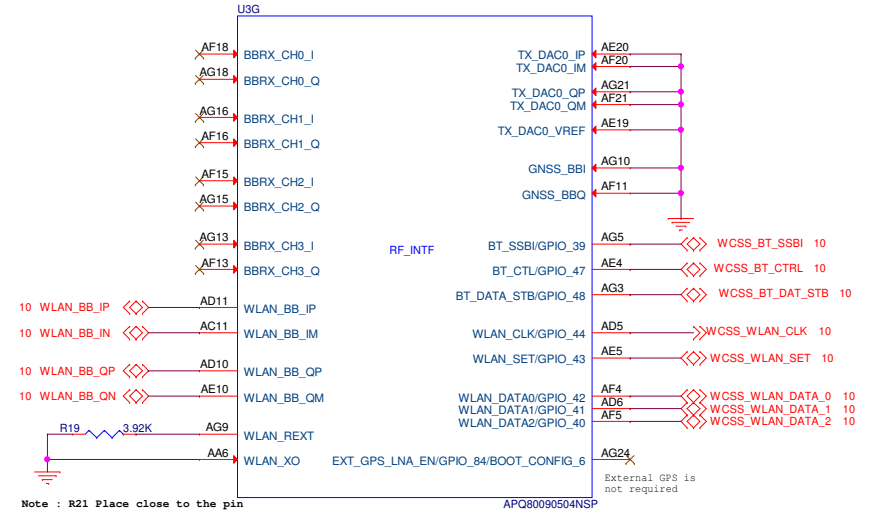
ASSEMBLY

	A3	Title : APQ8009 - LPDDR3 & eMMC INTERFACE	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 4 of 22

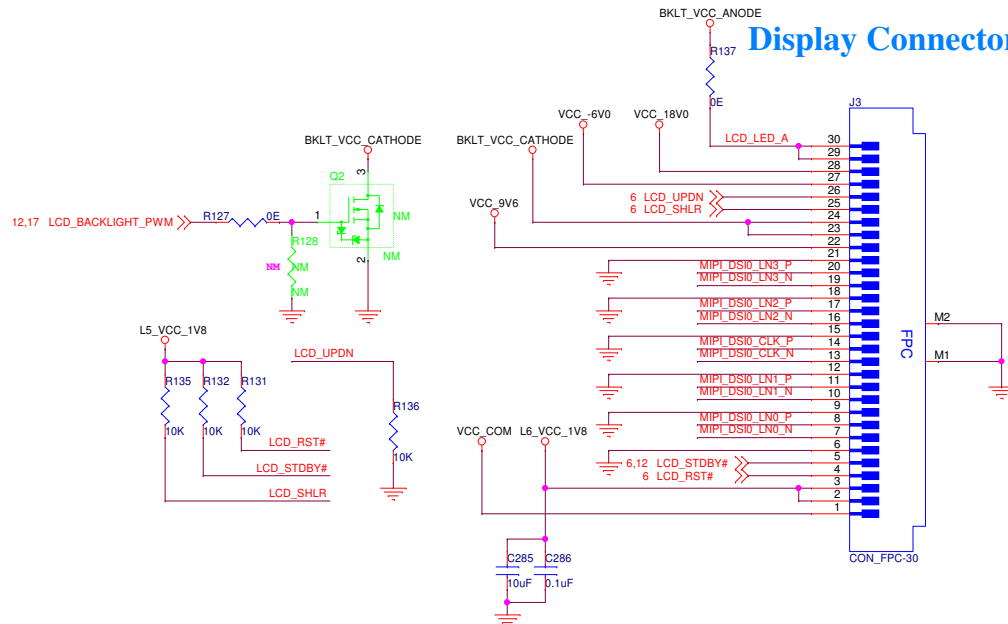
AP8009 - MIPI Interface



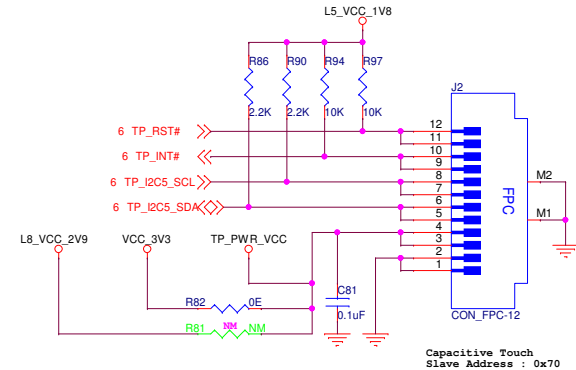
AP8009 - WIFI & BLE Interface



Display Connector



Capacitive Touch Connector

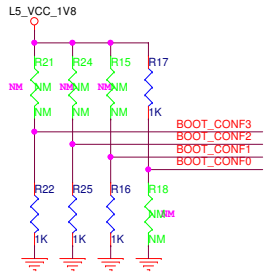


ASSEMBLY

	A3	Title : APQ8009 - RF & MIPI INTERFACE	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 5 of 22

APQ8009 - MISCELLANEOUS INTERFACE

Boot Selection

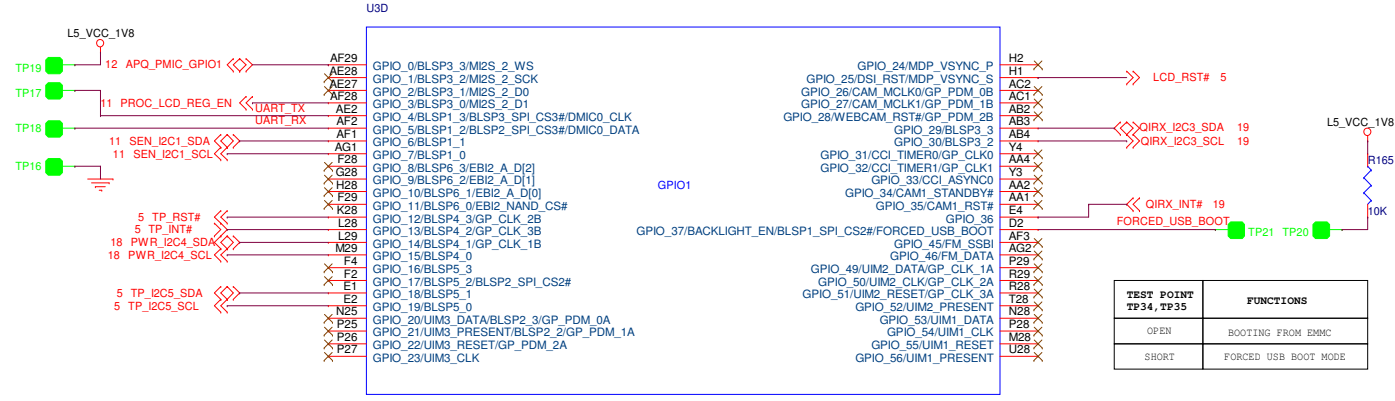
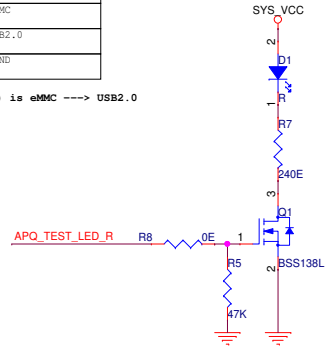


BOOTING CONFIGURATION TABLE

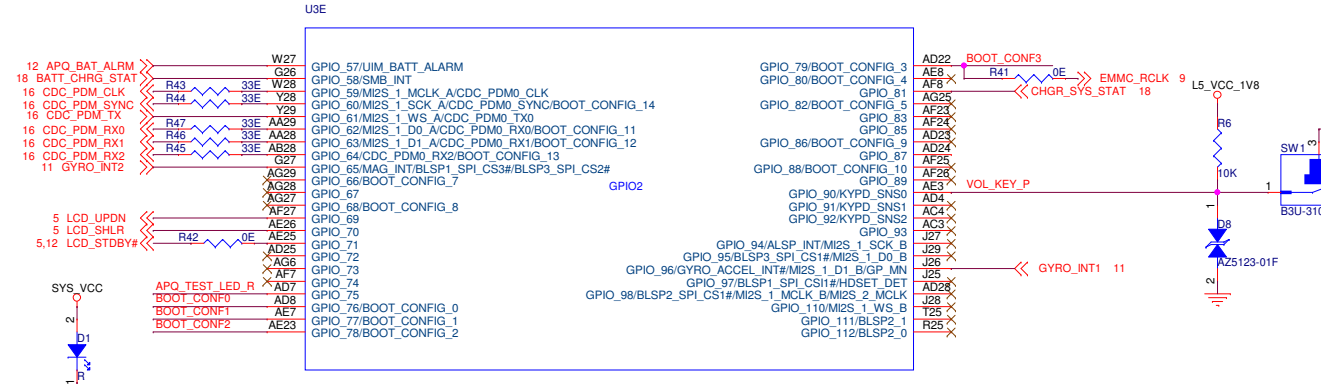
GPIOs	Boot Configuration
GPIO_76	BOOT_CONFIG_0, WDOG
GPIO_77	BOOT_CONFIG_1
GPIO_78	BOOT_CONFIG_2
GPIO_79	BOOT_CONFIG_3

BOOT_CONFIG[3:1]	BOOT_CONFIG
0b000	EMMC -> USB2.0
0b001	SDC2 -> EMMC
0b010	EMMC
0b011	USB2.0
0b100	NAND

Default Boot Config (0b000) is eMMC ----> USB2.0



TEST POINT	FUNCTIONS
TP34, TP35	BOOTING FROM EMMC
TP36	FORCED USB BOOT MODE



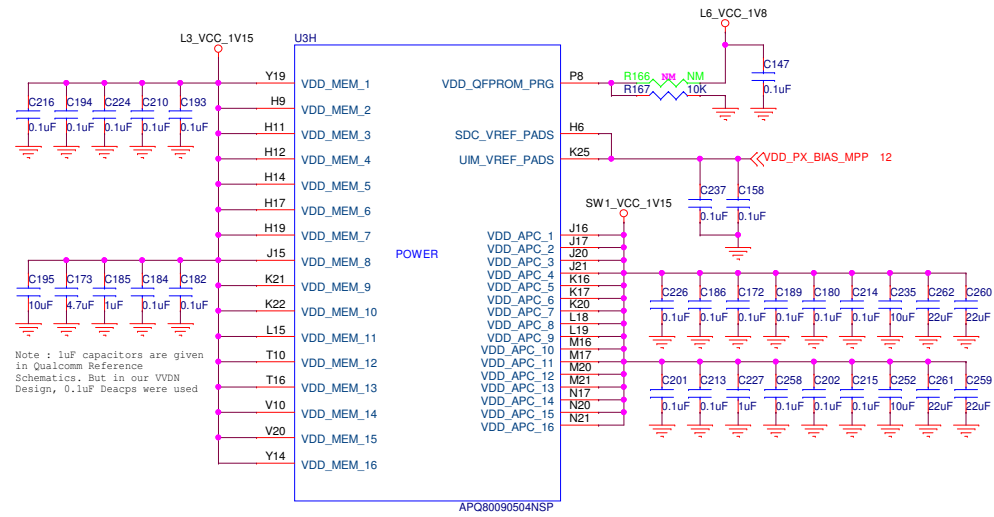
Note : Need to be check with software team for IO Mapping

ASSEMBLY

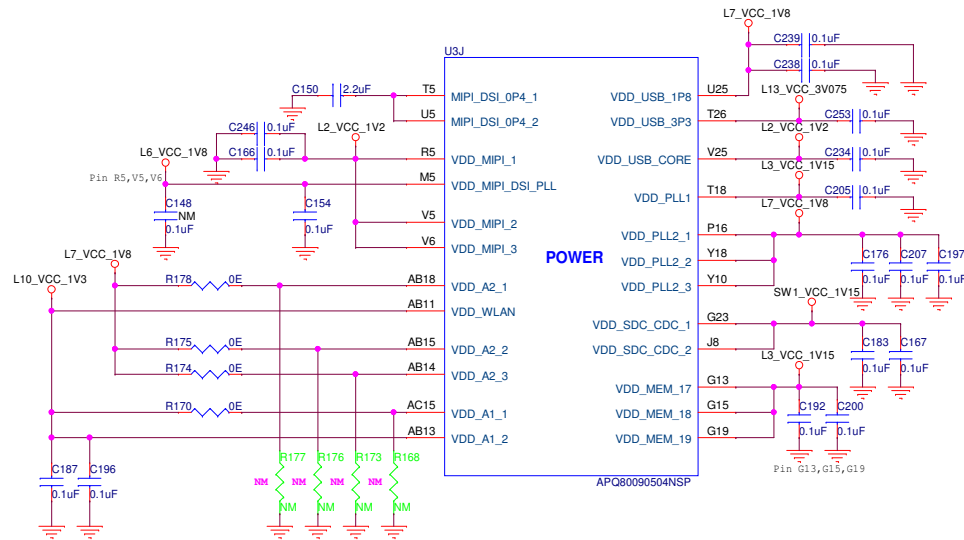
	A3	Title : APQ8009 - MISCELLANEOUS INTERFACE	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 6 of 22

APQ8009 - POWER1


APQ8009 - POWER_Memory & APC



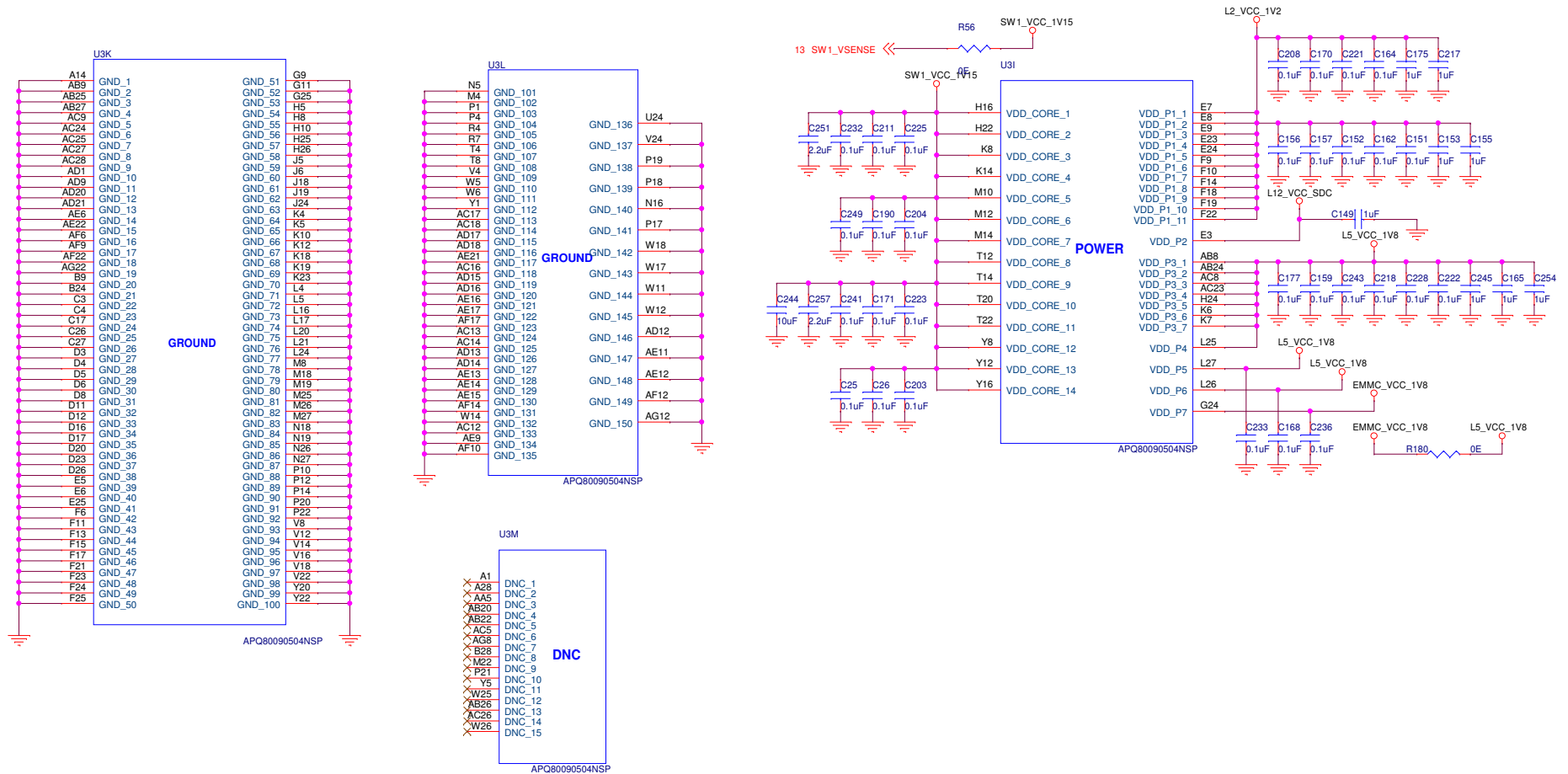
APQ8009 - POWER (MIPI DISI USB & Analog)



ASSEMBLY

	A3	Title : APQ8009 POWER1	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 7 of 22

APQ8009 - POWER2 & GND



ASSEMBLY



A3	Title : APQ8009 POWER2 & GND
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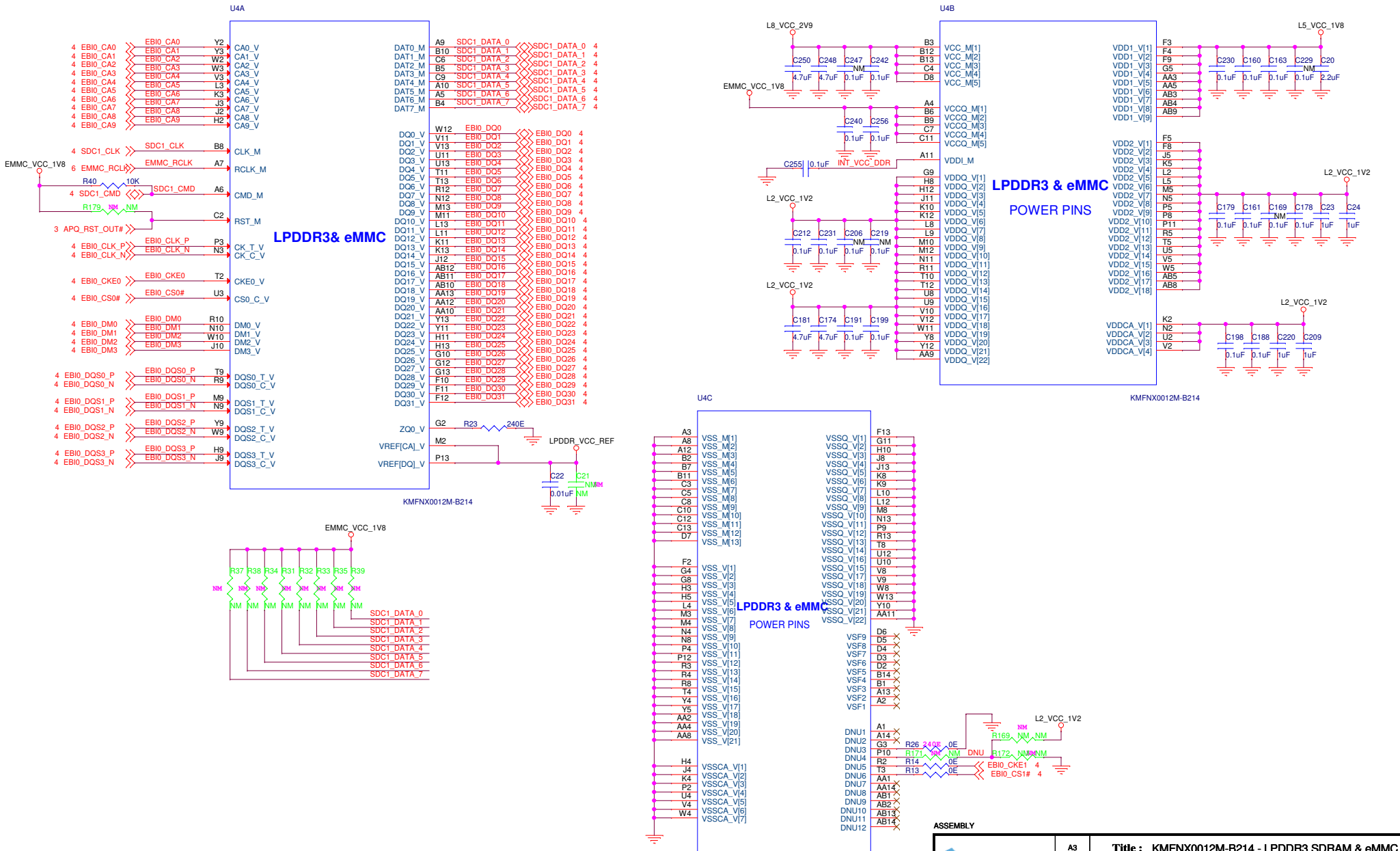
Fab No : 501-1-00588

Rev: A1

Asy No : 701-1-00682

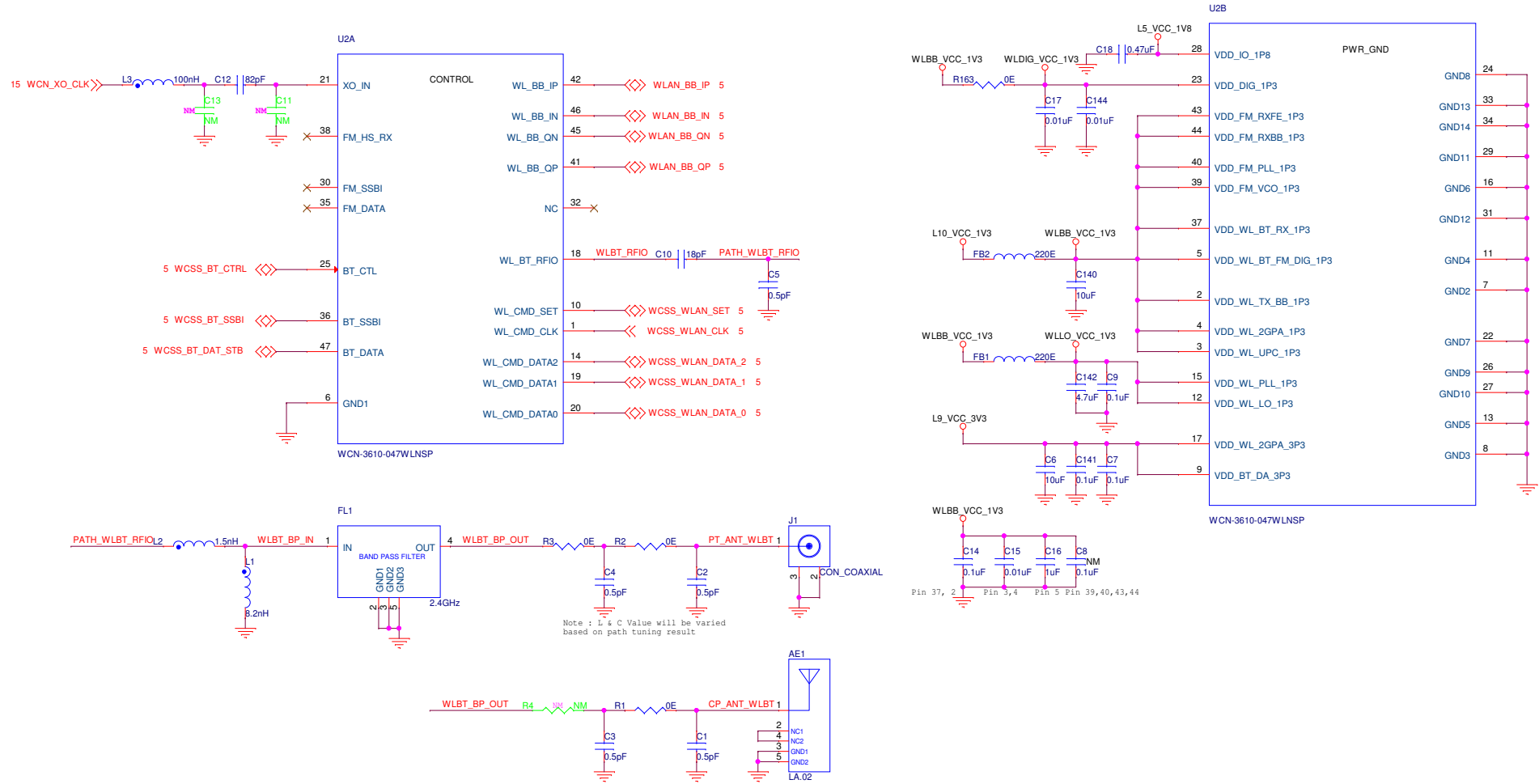
Sheet 8 of 22

KMFNX0012M-B214 - LPDDR3 SDRAM & eMMC FLASH




	Title : KMFNX0012M-B214 - LPDDR3 SDRAM & eMMC	
	Fab No : 501-1-00588	Rev: A1
	Asy No : 701-1-00682	Sheet 9 of 22

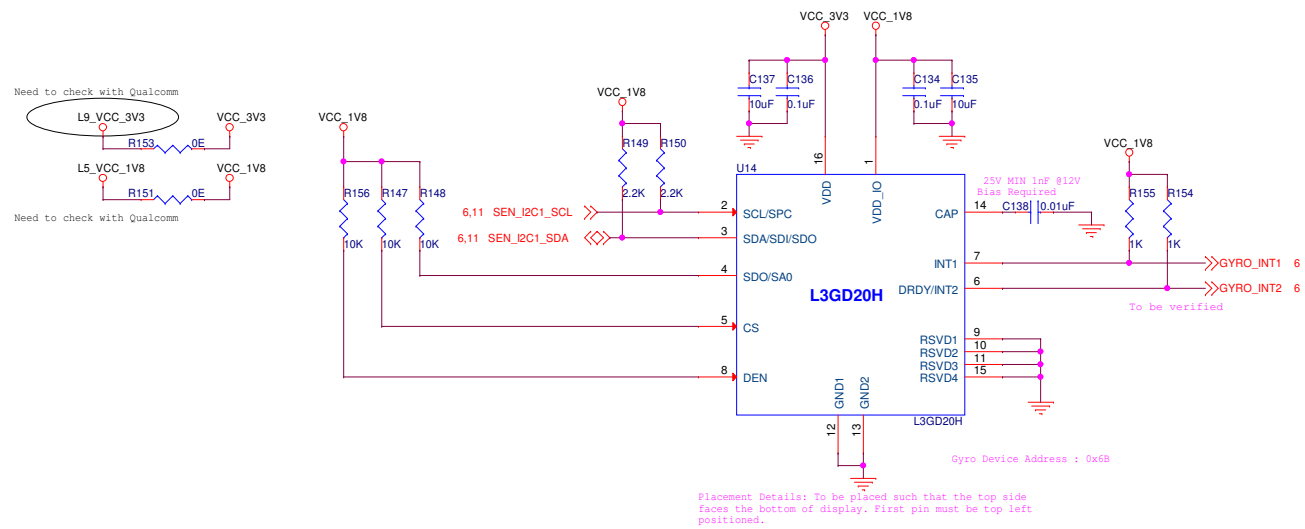
WCN3610 - RF Transceiver



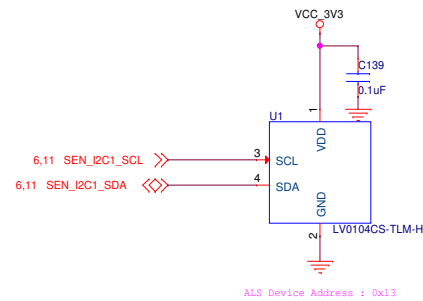
ASSEMBLY

	A3	Title : WCN3610 - RF TRANSCEIVER	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 10 of 22

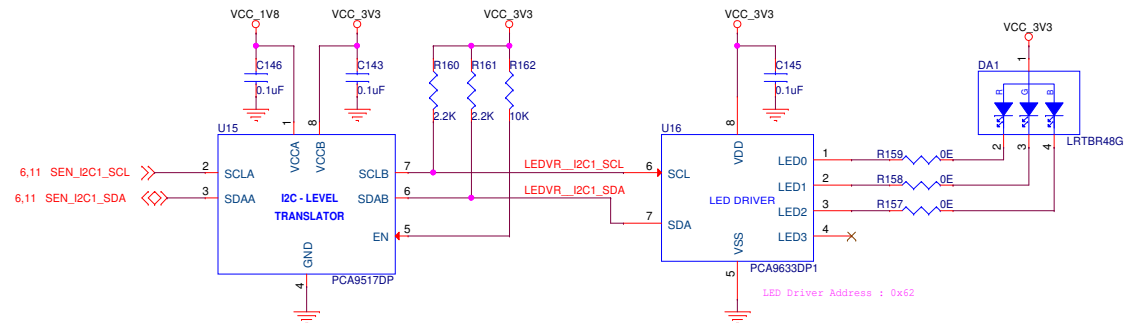
L3GD20H - Gyro sensor



LV0104CS - Ambient Light Sensor



PCA9633DP1 - LED Driver



ASSEMBLY



A3	Title : SENSORS - GYRO & AMBIENT LIGHT
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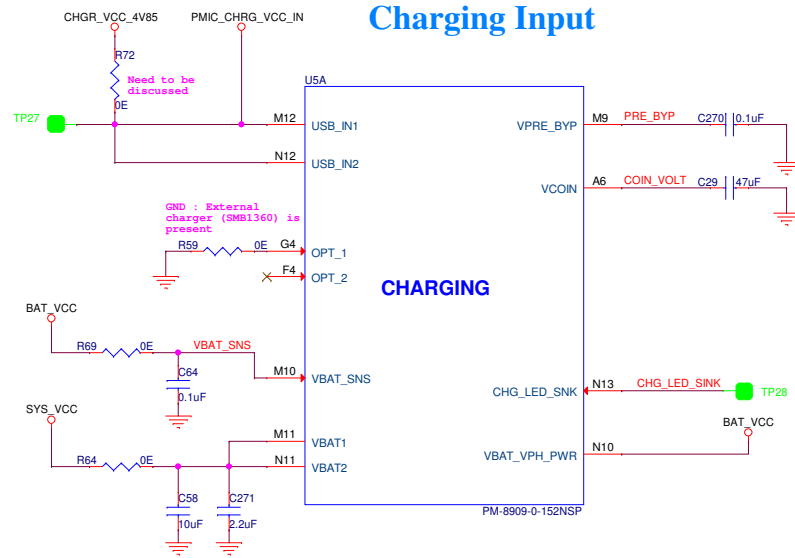
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Rev: A1

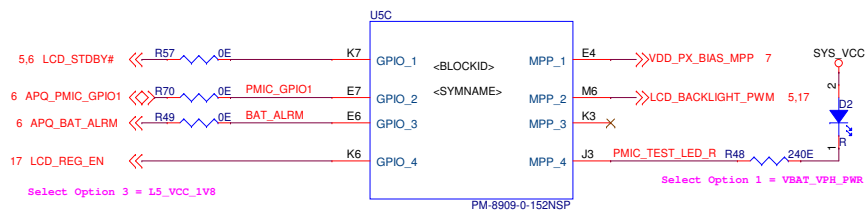
Asy No : 701-1-00682

Sheet 11 of 22

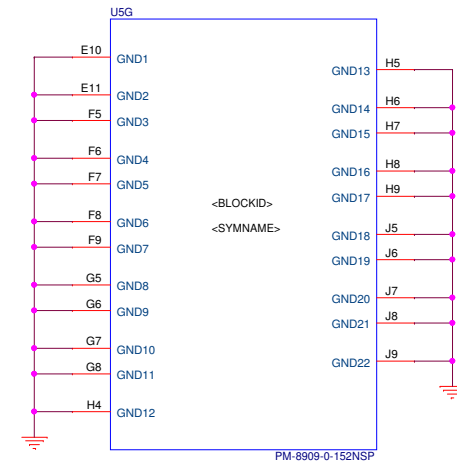
PM8909



PM8909_GPIO & MPP



PM8909_GND

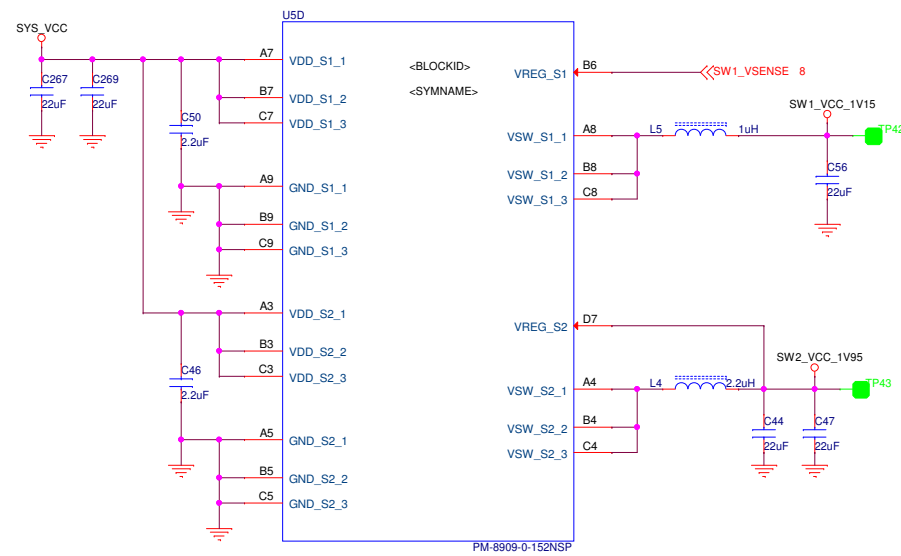


CAD NOTE: Create separate GND islands for PMIC and CODEC CMN_GND balls and star route them to REF GND plane
CODEC GND balls: E9, D10, D11, and G10, H10, H11, H12
Rest are PMIC GND balls


ASSEMBLY

	A3	Title : PM8909	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 12 of 22

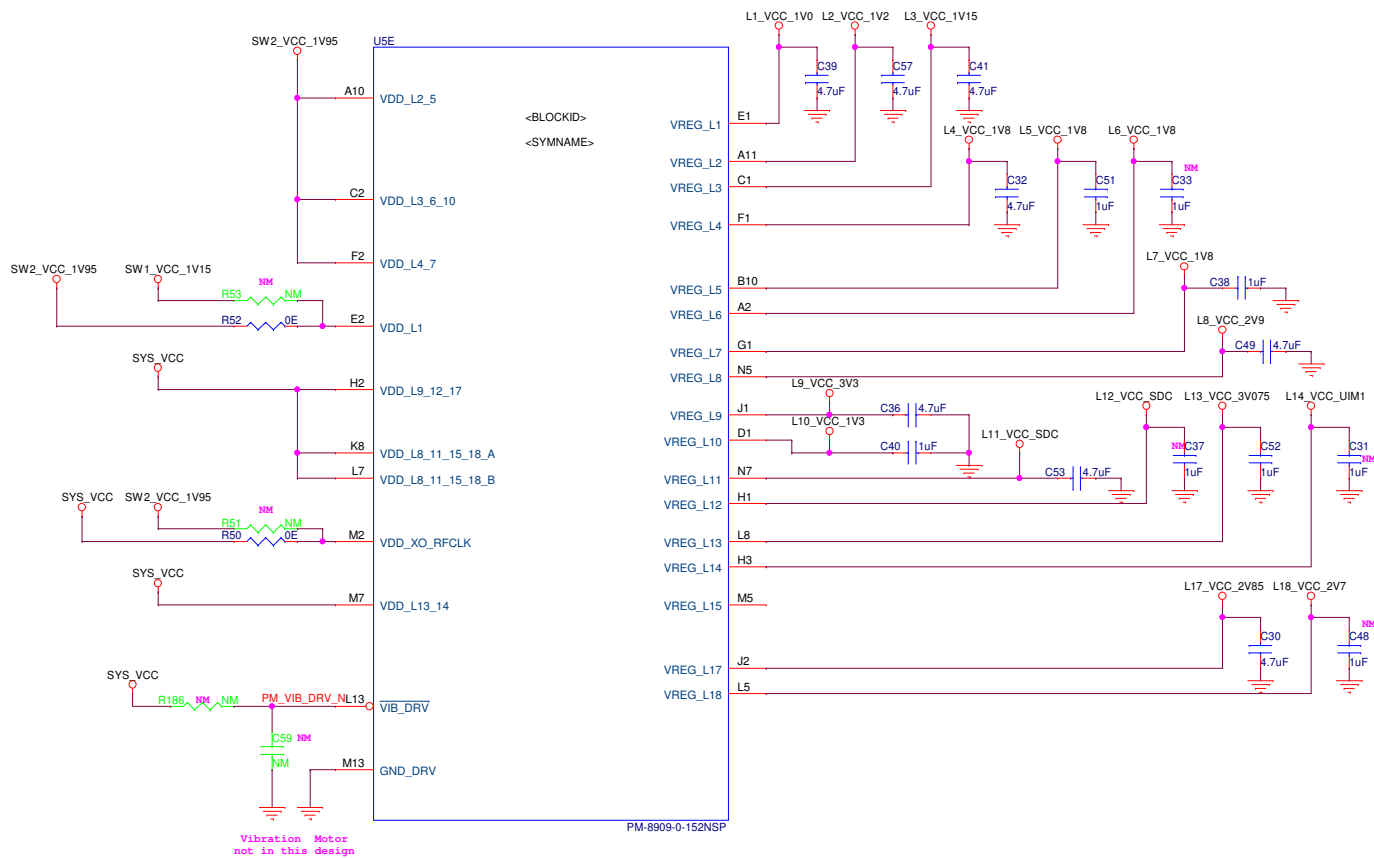
PM8909 - SWITCHERS



ASSEMBLY

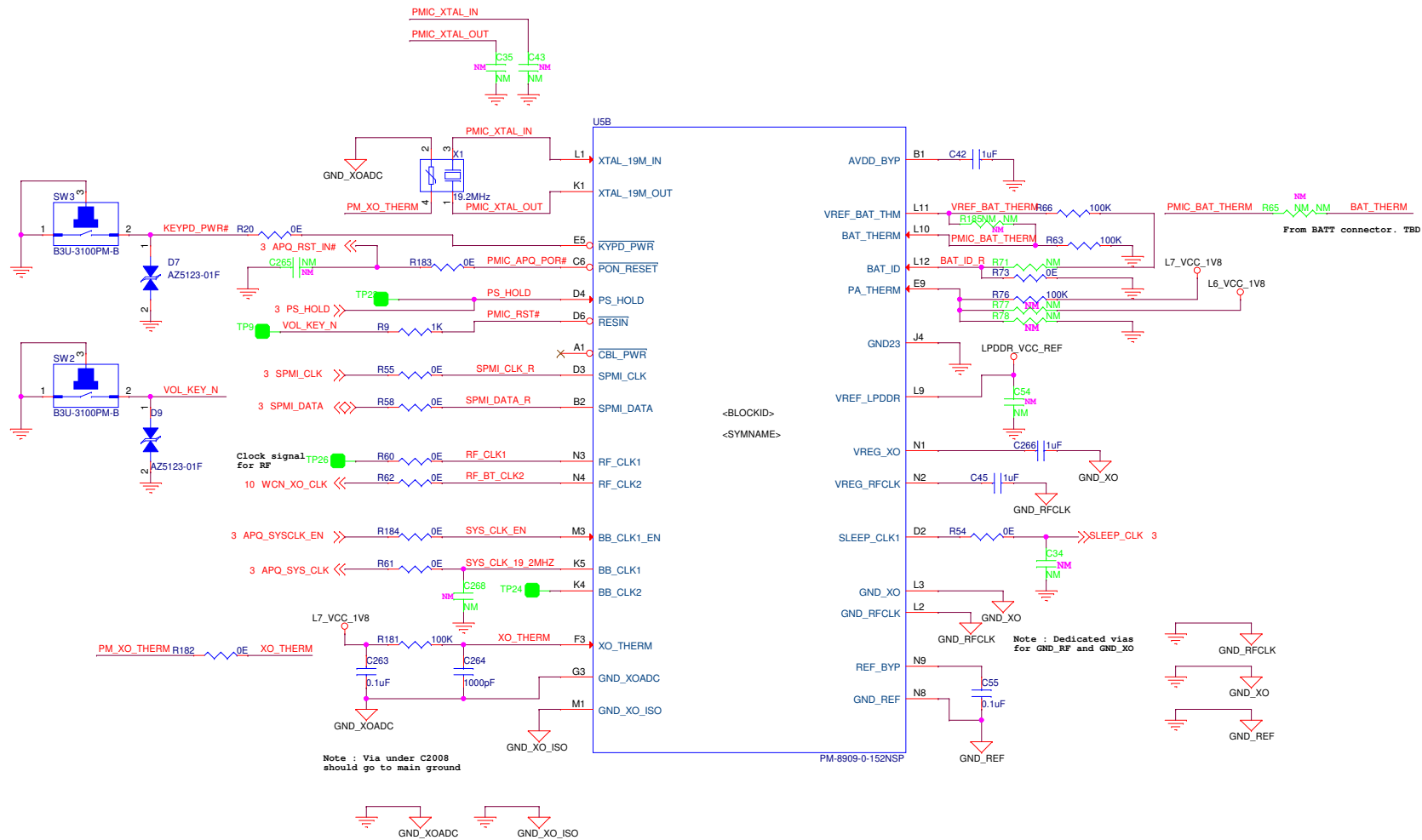
	A3	Title : PM8909 - SWITCHERS	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 13 of 22

PM8909 - LDOS



ASSEMBLY		Title : PM8909 - LDOS	
VVDN TECHNOLOGIES		Fab No : 501-1-00588	Rev: A1
		Asy No : 701-1-00682	Sheet 14 of 22

PM8909 - CLOCK & RESET



Note: Place C165 close to X1 and connect cap GND through dedicated via to GND REF plane

Note: Connect Pin J3 to negative terminal of VREG_FCLKL (C197) and connect to the main GND using direct vias
Connect Pin J2 to negative terminal of VREG_XO (C198) and connect to the main GND using direct vias
Connect H3 to main GND using dedicated via

ASSEMBLY



A3	Title : PM8909 - CLOCK & RESET
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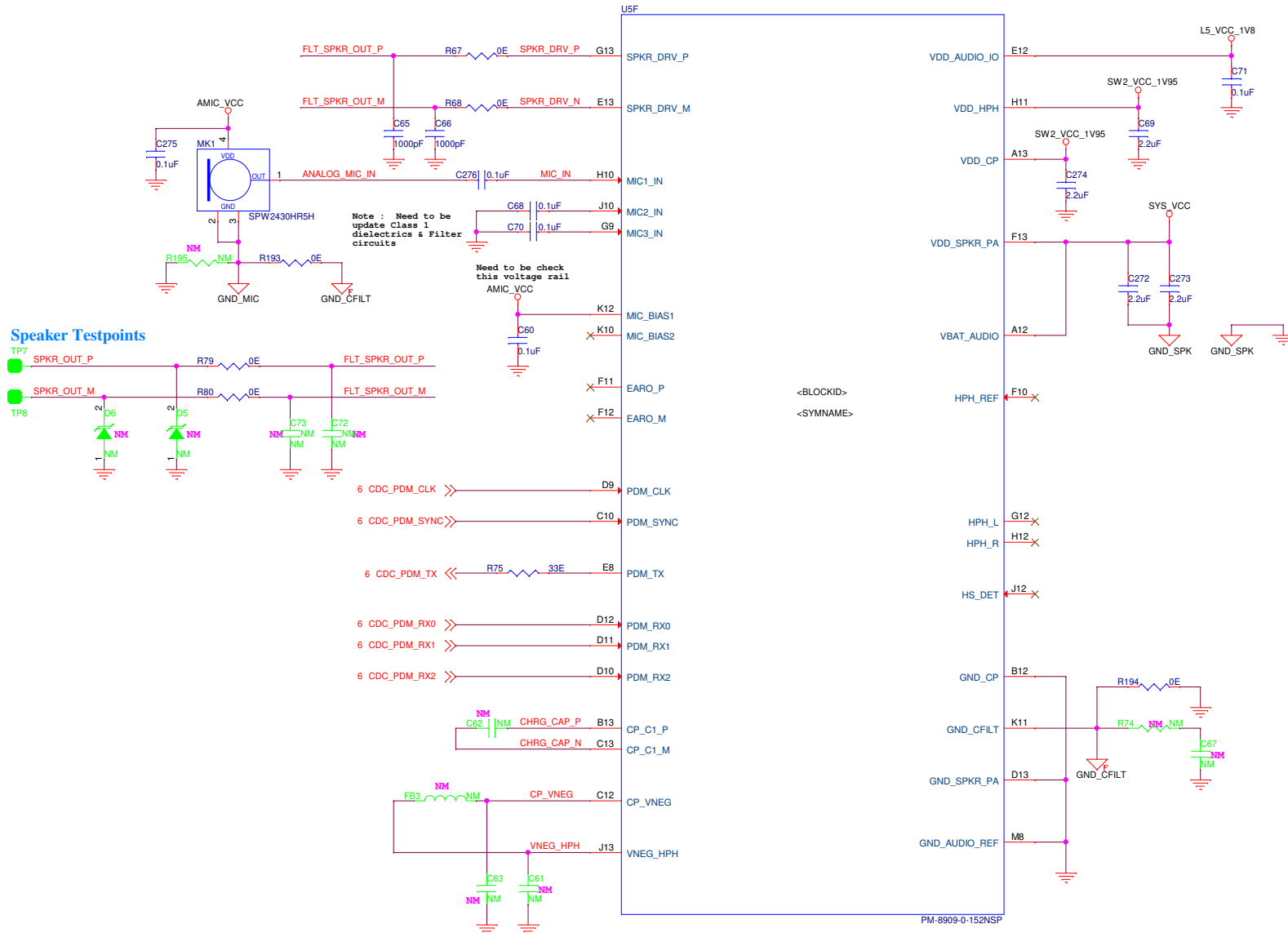
Fab No : 501-1-00588


Rev: A1

Asy No : 701-1-00682

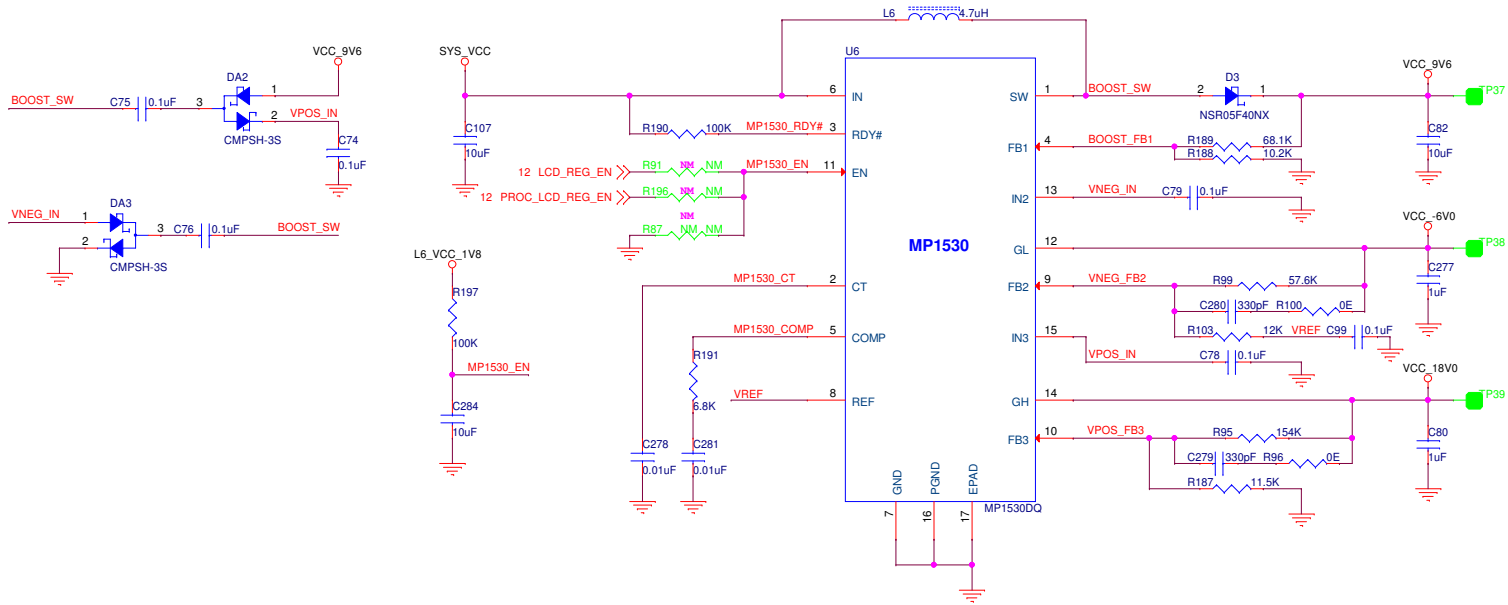
Sheet 15 of 22

PM8909 - AUDIO CODEC

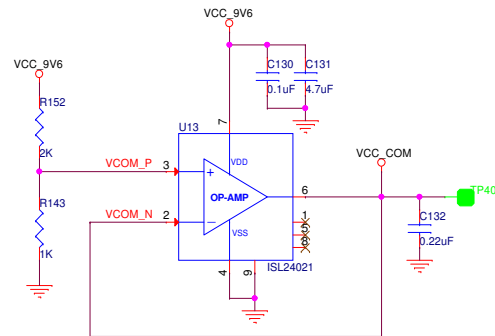


ASSEMBLY			
	A3	Title : PM8909 - AUDIO CODEC	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 16 of 22

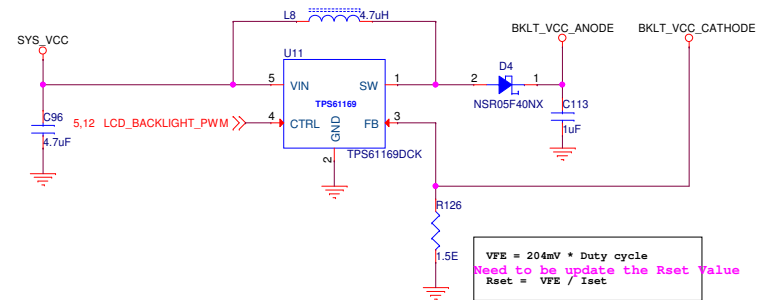
LCD Power & Backlight Driver



VCOM Buffer



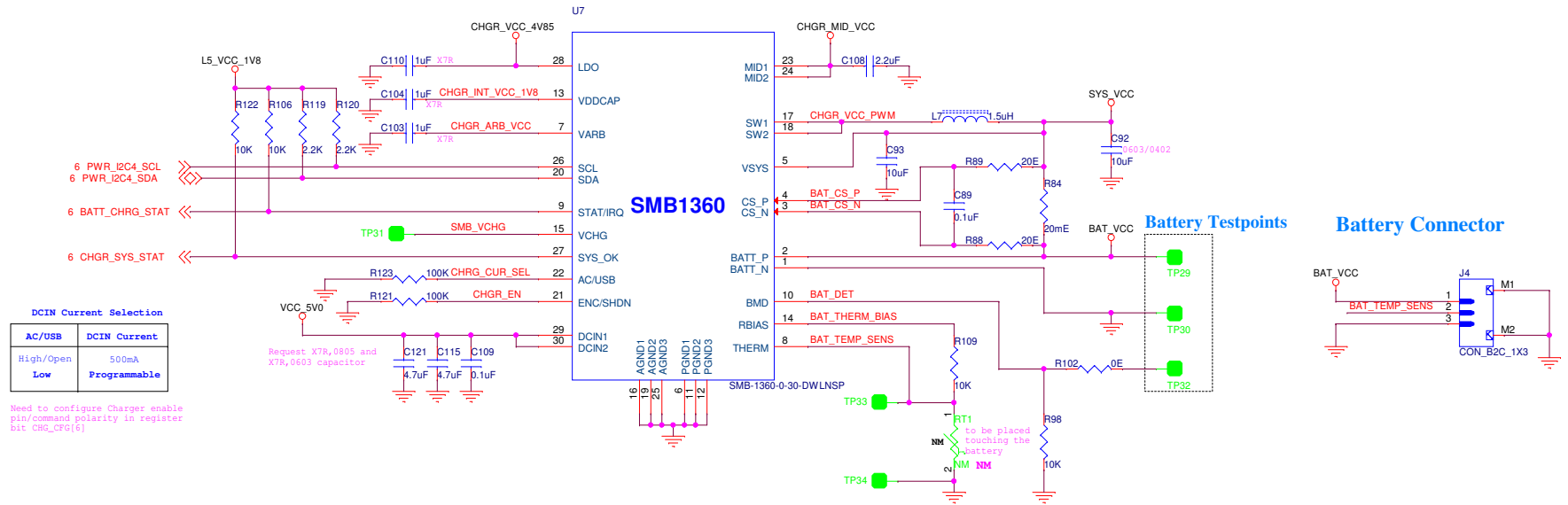
LCD Backlight Driver



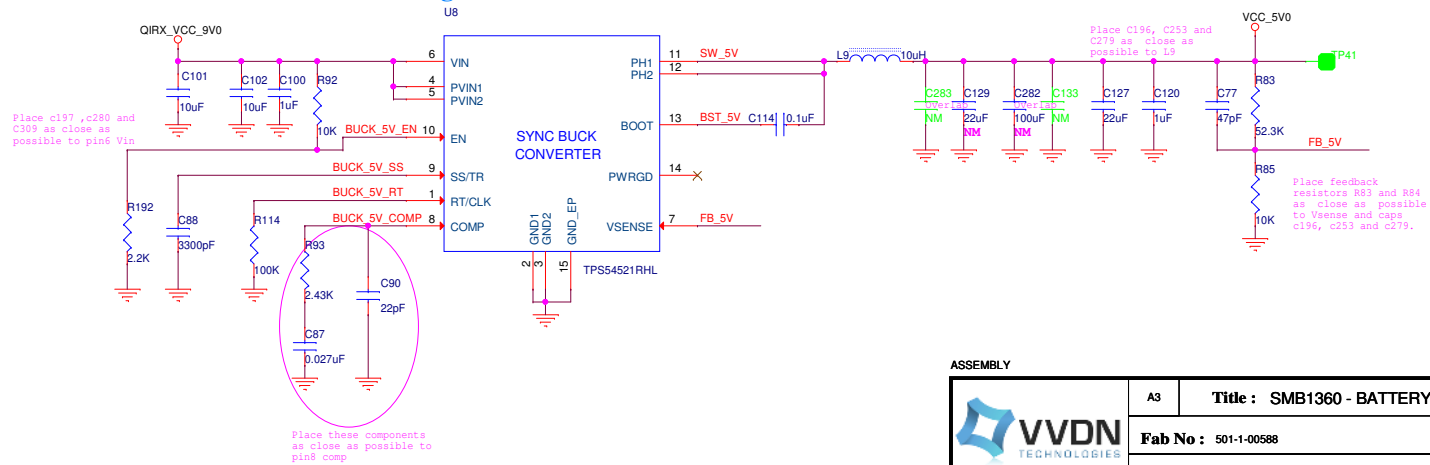
ASSEMBLY

	A3	Title : LCD_POWER	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 17 of 22

SMB1360 - Battery Charger



5V Buck Regulation from Wireless Receiver



ASSEMBLY



A3	Title : SMB1360 - BATTERY CHARGER
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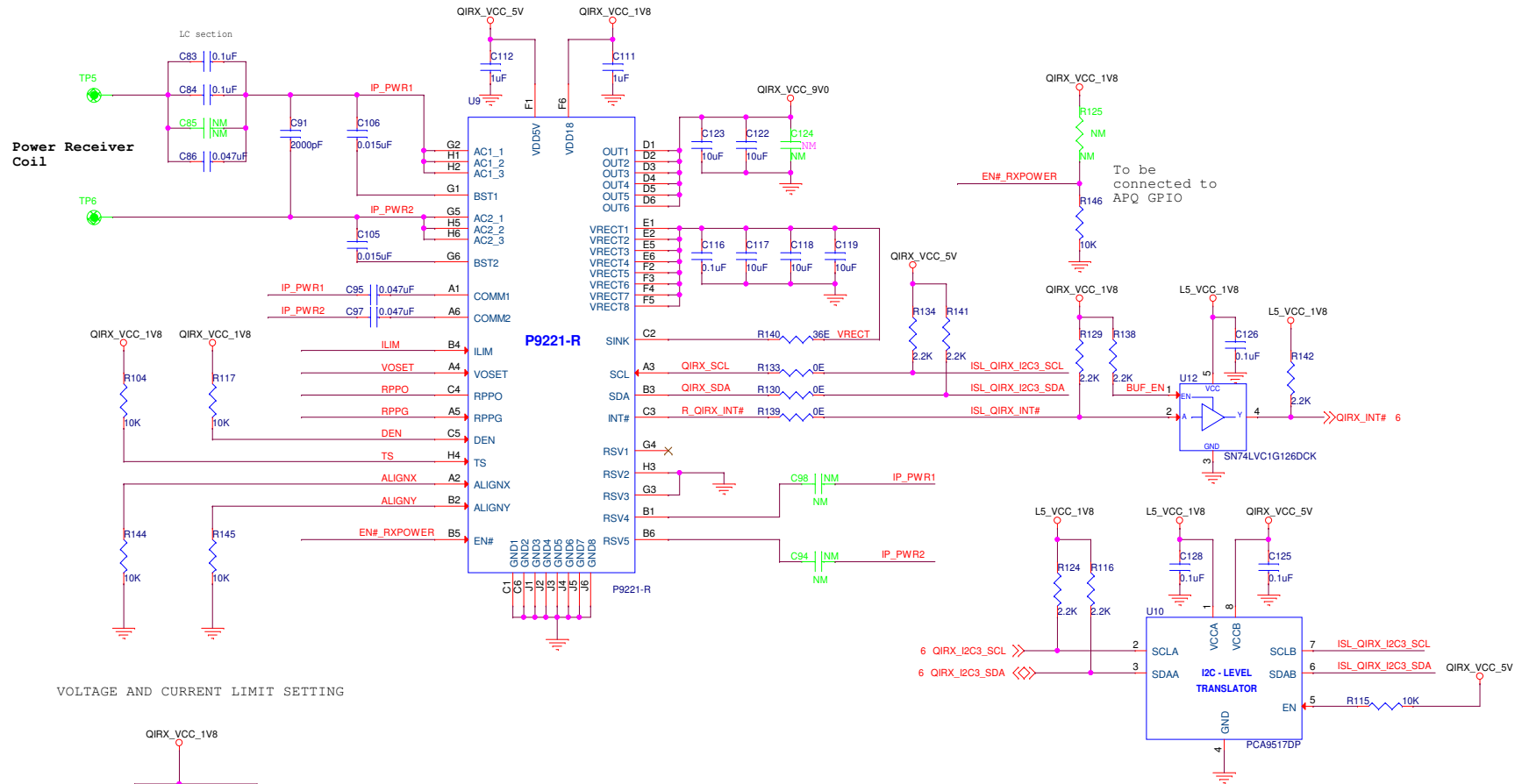
Fab No : 501-1-00588

Rev: A1

Asy No : 701-1-00682

Sheet 18 of 22

P9221-R - Wireless Power Receiver



FOD GAIN SETTING

VOLTAGE AND CURRENT LIMIT SETTING

Output Voltage and current limit setting

Parameter	Value	R pu	R pd
Vout	12V	10K	open
Vout	9V	open	10K
Iout max	1.5A	10K	10K
Iout max	1A	10K	5K

ASSEMBLY

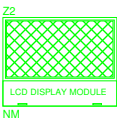
	A3	Title : P9221-R - WIRELESS POWER RECEIVER	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 19 of 22

NON CAD ITEMS

Speaker



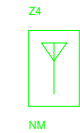
Display



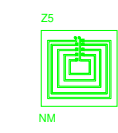
Battery




Antenna



Receiver Coil

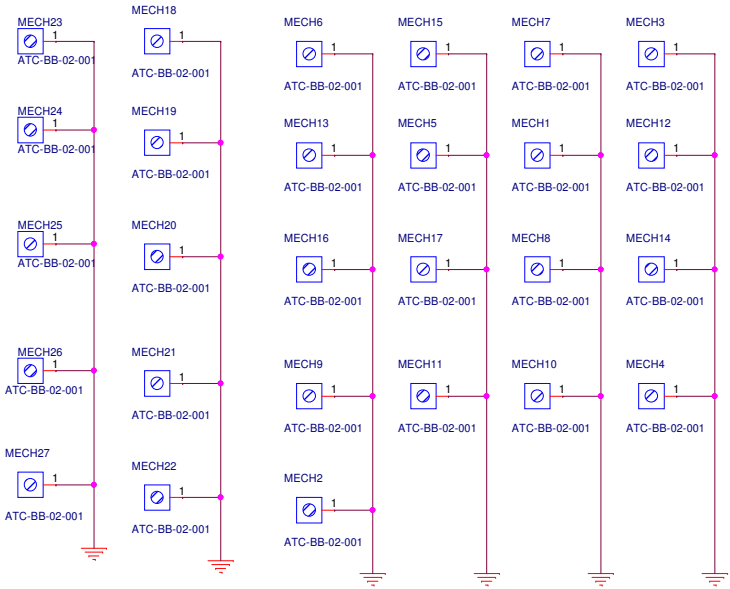


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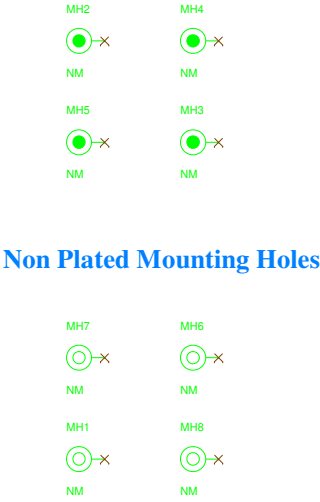
	A3	Title : NON CAD PARTS	
	Fab No : 501-1-00588		Rev: A1
	Asy No : 701-1-00682		Sheet 20 of 22

MISCELLANEOUS

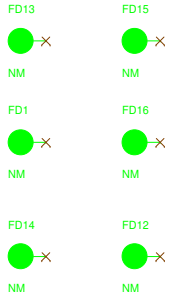
Shielding Clips



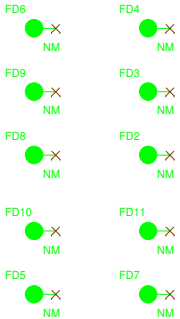
Mounting Holes



Global Fiducials



Local Fiducials



Non Plated Mounting Holes

