

BLOCK DIAGRAM

Revision Record			
No.	Date	Revised by	Remarks

D

D

C

C

B

B

A

A

Title & No			
UNSP230_A_CS_A_SCH_V0.1.0			
Revision No.			

Revised by	Date	Revised by	Date

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RF BLOCK DIAGRAM

REVISION HISTORY			
REV.	DESCRIPTION	DATE	BY

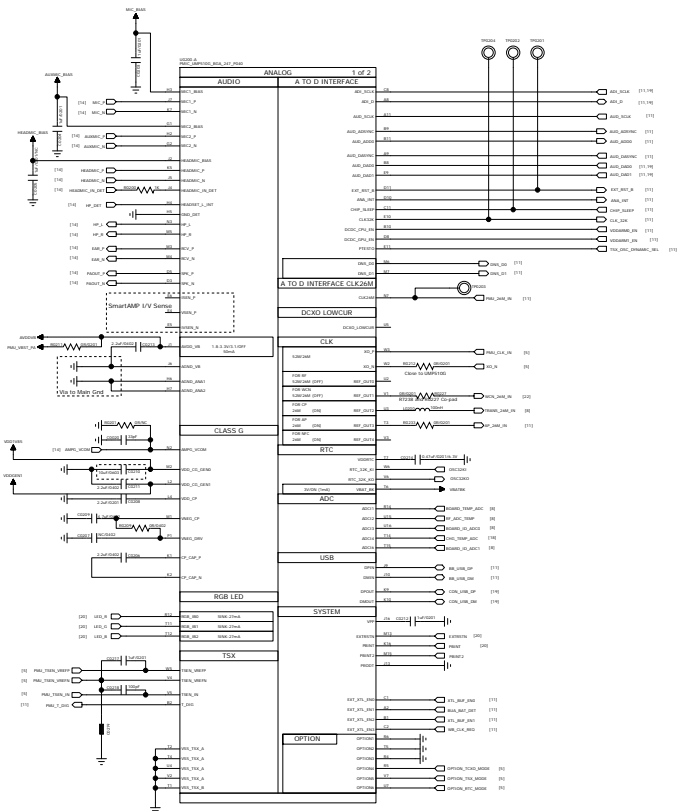
D
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TITLE & REV.	
DESCRIPTION NO.	
DESIGNER	DATE
DRAWN	DATE
APPROVED	DATE
COMPANY NAME	
UNISOC	
CONFIDENTIAL AND PROPRIETARY	

REV	DATE	DESCRIPTION	BY

PMU_ANALOG

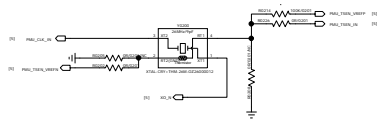


	R0211
1/D	1/C
2/K	0/R

BKBT

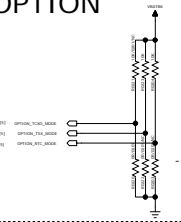


TSX (PMU) Only



Clock solution	Y0200	X0200	R0227	R0213	R0215	R0205	R0203	R0214	R0226	R0208
TSX (PMU) Only	TSX	NF	OR	NF	OR	NF	OR	100K	OR	NF
TCXO (WGN) + DCXO (PMU)	DCXO	NF	NF	NF	OR	OR	NF	NF	NF	OR

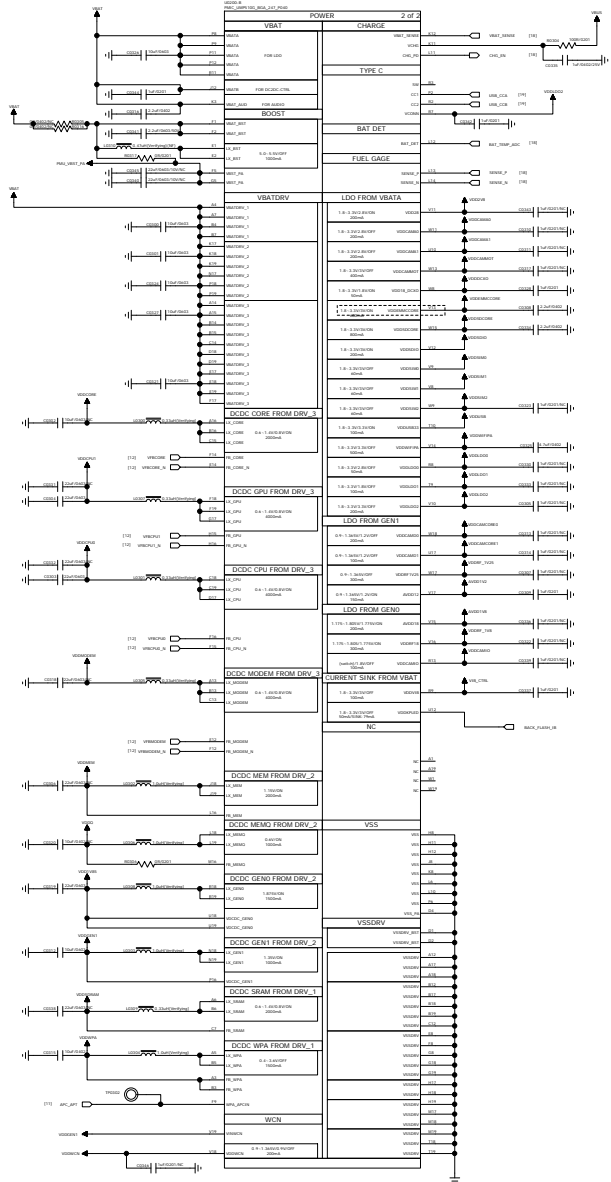
OPTION



Scenario	Option3(DMFSM)	Option4(TCXO_MODEL)	Option5(TSX_MODEL)	Option6(RTC_MODEL)
26M TCXO + 32K Crystal	0	1	0	0
26M TSX + 32K Crystal	0	0	1	0
26M TSX + 32K-less from PMIC internal	0	0	1	1
26M DCXO + 32K-less from PMIC internal	0	1	1	1
26M DCXO + 32K Crystal	0	1	1	0

PMU_POWER

R007	R008	R009	R010	R011	R012	R013	R014	R015	R016	R017
OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
15M	2.2M	10M	10M	10M	10M	10M	10M	10M	10M	10M
NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC



PMIC PN	PMIC VDDMEMCCORE
UMPS10G	3.0V400mA

Memory	LFS VCC	LFS VCCD	LFS VCCD2
LFS2 X Device	PMIC VDDMEMCCORE 3.0V(Back up external LDO or DCDC)	Not Used	PMIC VDD1V85

Note: If LFS VCC is greater than 600mA, please use external LDO or DCDC.

UMP510G DCDC output

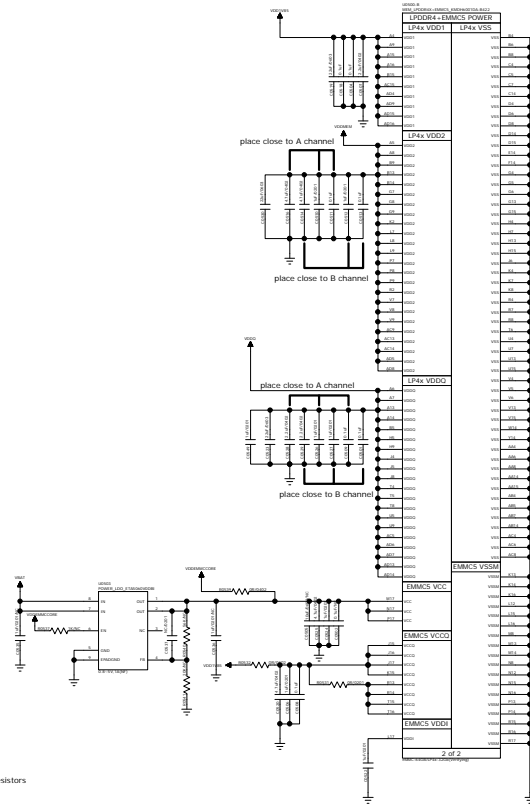
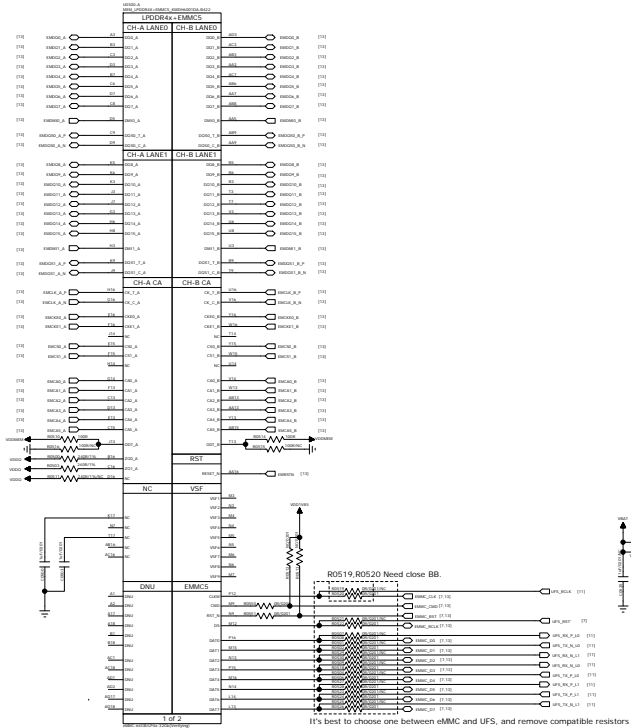
Input Power	Power Name	Output Voltage (V)	Output Current (mA)	Default Voltage (V)	Default
VBAT	DCDC CORE	0.3-1.3	2000	0.8	ON
	DCDC GPU	0.3-1.3	4000	0.8	ON
	DCDC CPU	0.3-1.3	4000	0.8	ON
	DCDC MODEM	0.3-1.3	4000	0.8	ON
	DCDC MEM	0.25-1.25	2000	1.15	ON
	DCDC MEMQ	0.25-1.25	1000	0.6	ON
	DCDC GEN0	1.8-2.5	1500	1.85	ON
	DCDC GEN1	0.6-1.5	1000	1.3	ON
	DCDC SRAM	0.3-1.3	2000	0.8	ON
	DCDC WPA	0.6-3.3	1500	/	OFF

UMP510G LDO output

Input Power	Power Name	Output Voltage (V)	Output Current (mA)	Default Voltage (V)	Default
VBAT	VDD28	1.8-3.3	200	2.8	ON
	VDDCAMA0	1.8-3.3	200	2.8	OFF
	VDDCAMA1	1.8-3.3	200	2.8	OFF
	VDDCAMMOT	1.8-3.3	400	3	OFF
	VDD18_DCXO	1.8-3.3	50	1.8	ON
	VDDMEMCCORE	1.8-3.3	600	3	ON
	VDDSDCORE	1.8-3.3	800	3	ON
	VDDSDIO	1.8-3.3	200	3	ON
	VDDSIM0	1.8-3.3	60	3	OFF
	VDDSIM1	1.8-3.3	60	3	OFF
	VDDSIM2	1.8-3.3	60	3	OFF
	VDDUSB33	1.8-3.3	100	3.3	ON
	VDDWIFIPA	1.8-3.3	500	3.3	OFF
	VDDLDO0	1.8-3.3	50	2.8	OFF
	VDDLDO1	1.8-3.3	100	3.3	OFF
VDDLDO2	1.8-3.3	200	3.3	OFF	
GEN1	VDDCAMD0	1.0-1.25	400	1.1	OFF
	VDDCAMD1	1.0-1.25	200	1.1	OFF
	VDDRF1V25	1.0-1.25	300	1.25	OFF
GEN0	AVDD12	1.0-1.25	150	1.2	ON
	AVDD18	1.2-1.8	200	1.8	ON
GEN1	VDDRF18	1.2-1.8	300	1.8	ON
	VDDCAMIO	1.2-1.8	100	1.8	OFF
GEN1	WCN	1.0-1.6	200	1	OFF

Title & Rev		Revision History	
Description		Hardware DEPT	
Date		Spreadtrum communications, Inc.	
Approved		C:\SPRINGER\DESIGN\HW\HW	

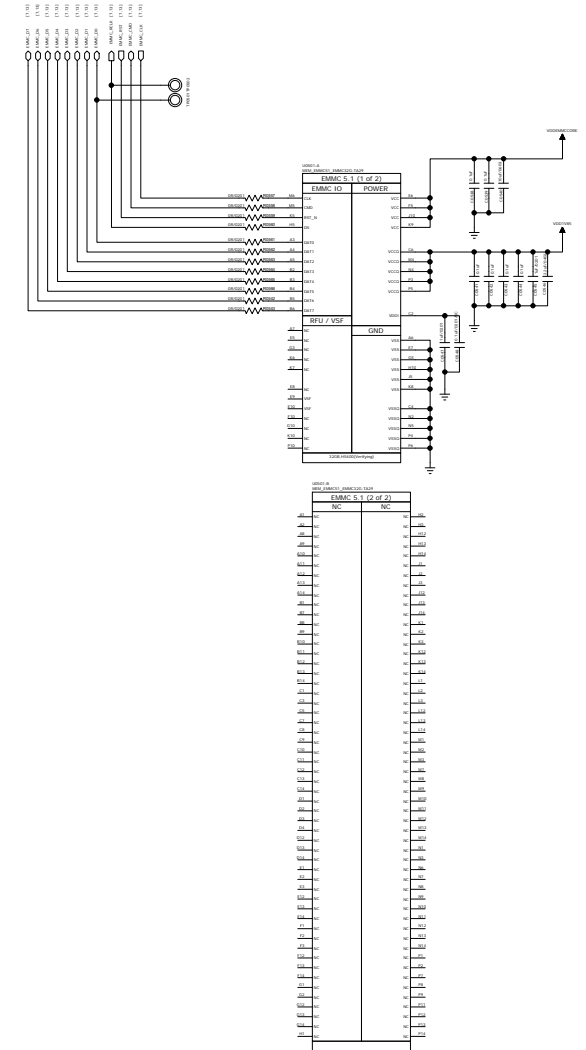
eMMC + LPDDR4/eMMC + LPDDR4X/UFS+LPDDR4X(Only support UFS2.X)



PMIC FN	PMIC VDD5B/MC0CORE	UFS VCC0	UFS VCC02
UFS110G	3.0V/600mA	PMIC VDD1V65	PMIC VDD1V65
Memory	UFS VCC	PMIC VDD1V65	PMIC VDD1V65
eMMC Device	PMIC VDD5B/MC0CORE 3.0V/Back up external LDO or DCDC	PMIC VDD1V65	PMIC VDD1V65
UFS2.X Device	PMIC VDD5B/MC0CORE 3.0V/Back up external LDO or DCDC	PMIC VDD1V65	PMIC VDD1V65

Notes: If UFS VCC is greater than 600mA, please use external LDO or DCDC.

Discrete eMMC

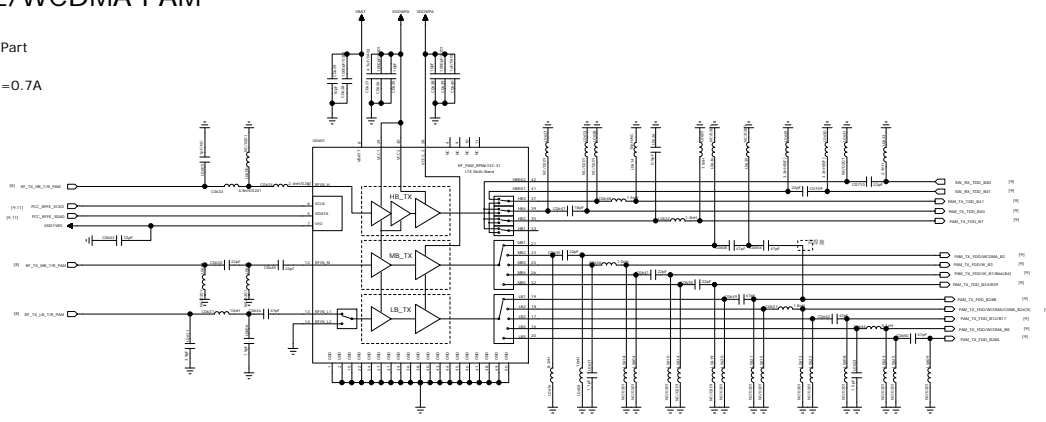


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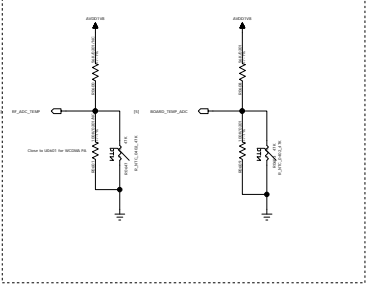
REV	REVNO	DESCRIPTION	DATE

LTE/WCDMA PAM

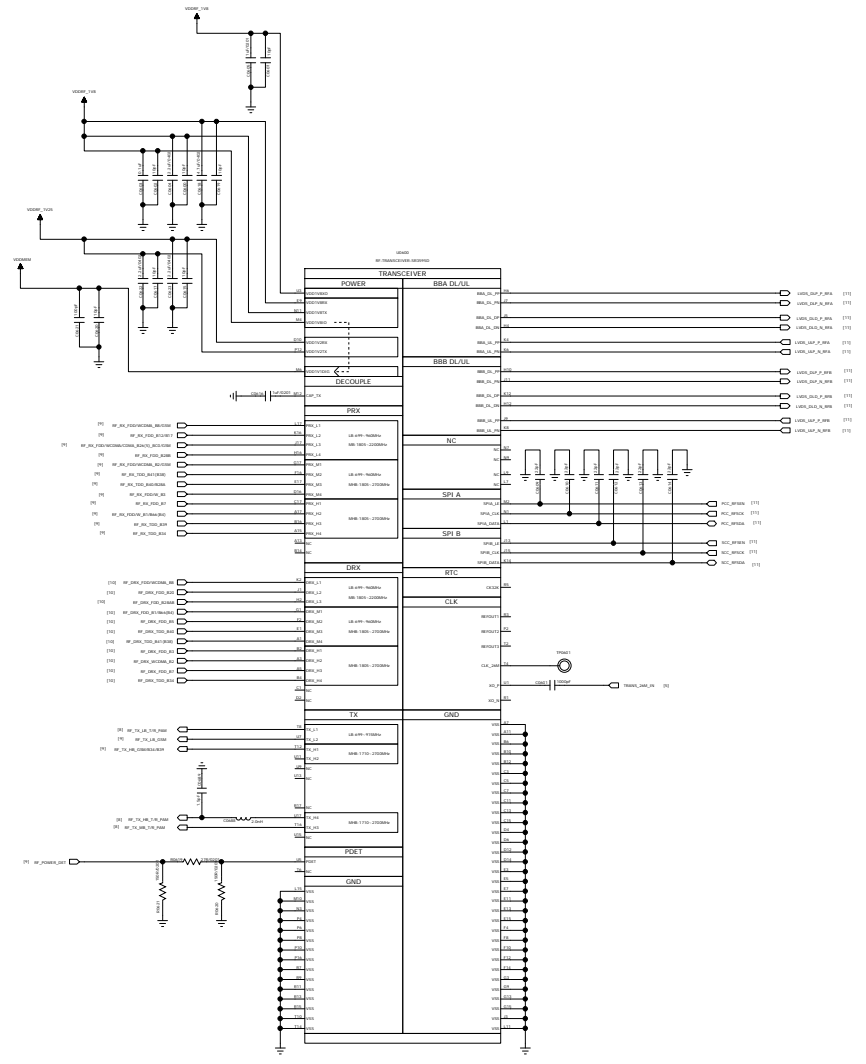
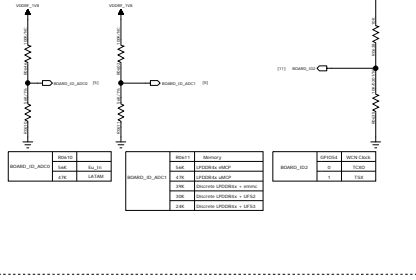
PA Part
Ipp=0.7A



NTC



Band info/Board ID



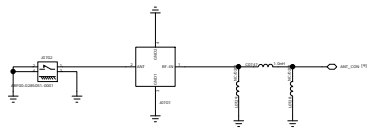
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DESIGNER	DATE	APPROVED

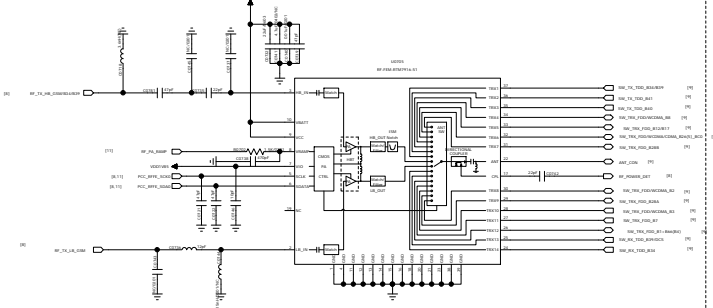
DESIGNER	DATE	DESCRIPTION

DESIGNER	DATE	DESCRIPTION

Primary Antenna

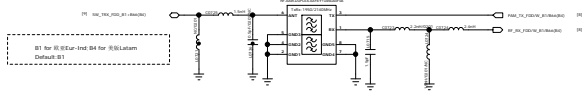


TDS/TDD B34_B39/GSM PA + Switch

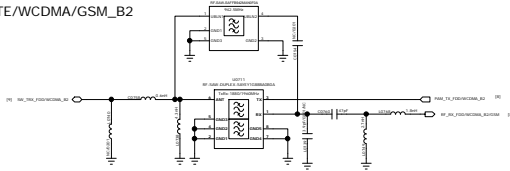


FDD LTE Parts

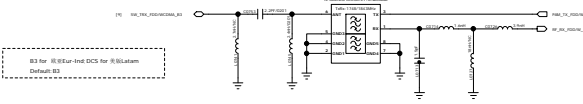
FDDLTE/WCDMA_B1



FDDLTE/WCDMA/GSM_B2

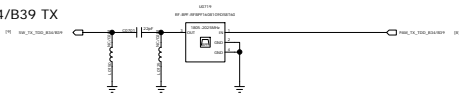


FDDLTE/WCDMA_B3

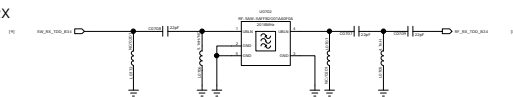


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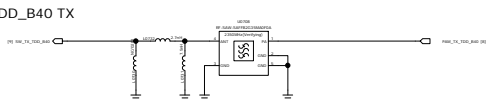
TDD_B34/B39 TX



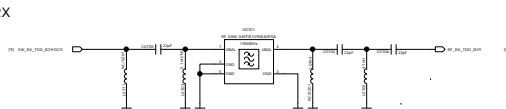
TDD_B34_RX



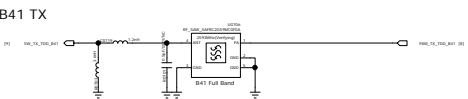
TDD_B40 TX



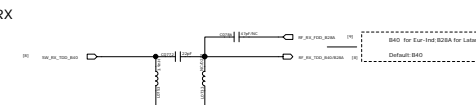
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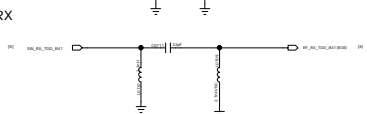
TDD_B41 TX



TDD_B40_RX

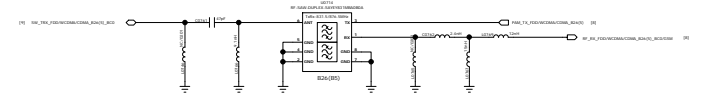


TDD_B41_RX

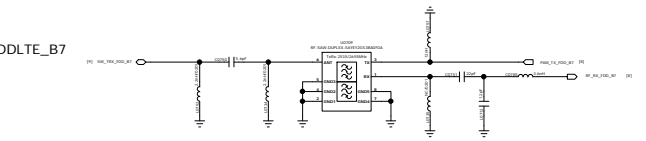


PRIMARY TRX Path FDD LTE Parts

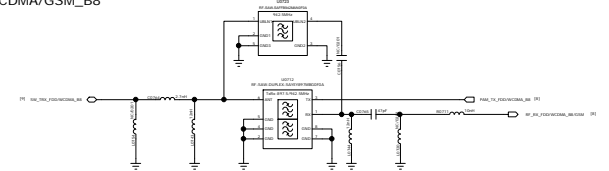
FDDLTE/WCDMA/CDMA/GSM_B5_B26



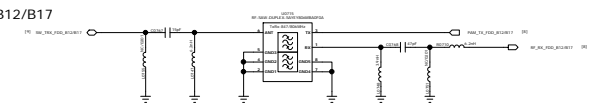
FDDLTE_B7



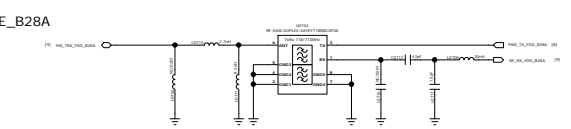
FDDLTE/WCDMA/GSM_B8



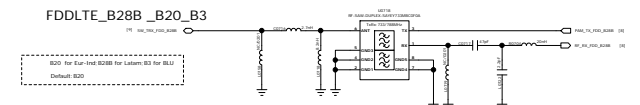
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FDDLTE_B28A

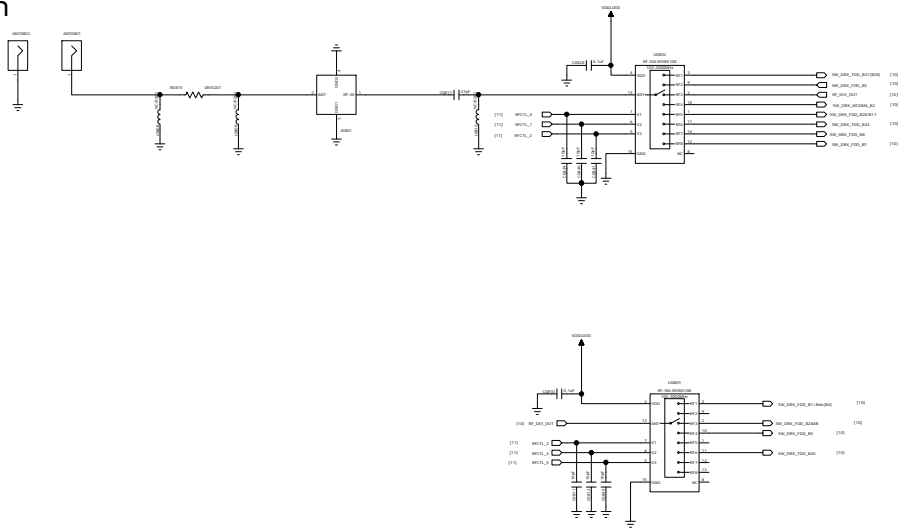


FDDLTE_B28B_B20_B3

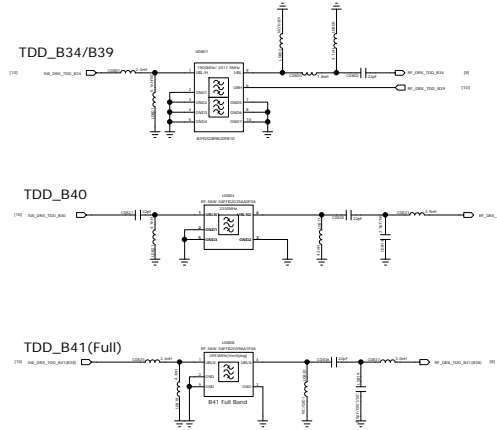


REV.	REV. NO.	DESCRIPTION	DATE

Diversity LTE Path

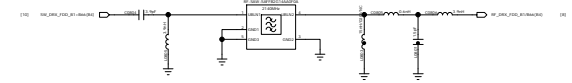


Diversity RX Path

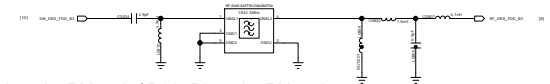


Diversity RX Path

FDD_B1+B66(B4)_Diversity RX path



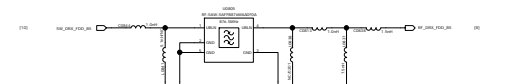
FDD_B3_Diversity RX path



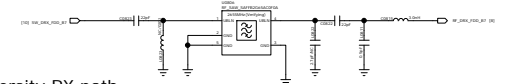
FDD_B2_Diversity RX path / B39_Diversity RX path



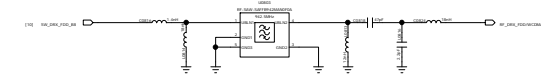
FDD_B5_Diversity RX path



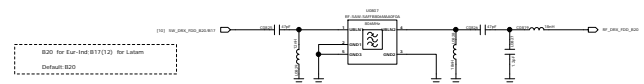
FDD_B7_Diversity Rx path



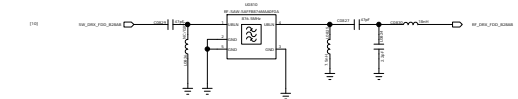
FDD_B8_Diversity RX path



FDD_B12/B17_Diversity RX path



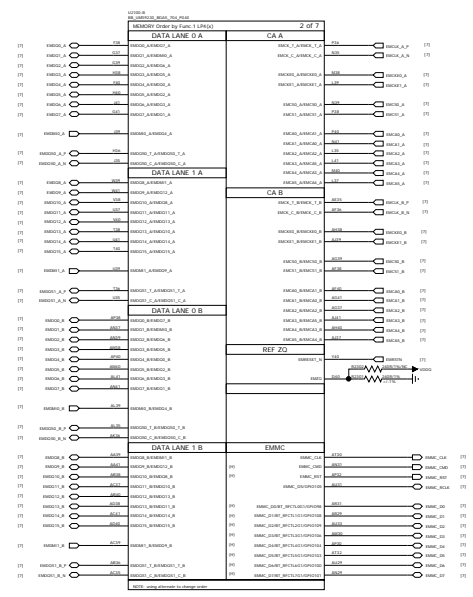
FDD_B28A/B_Diversity RX path



TITLE & REV.		DRAWING NO.	
DESIGNED	DATE	CHECKED	DATE
Hardware DEPT.			
SPREADTRUM COMMUNICATIONS, INC.			
CONFIDENTIAL AND PROPRIETARY			

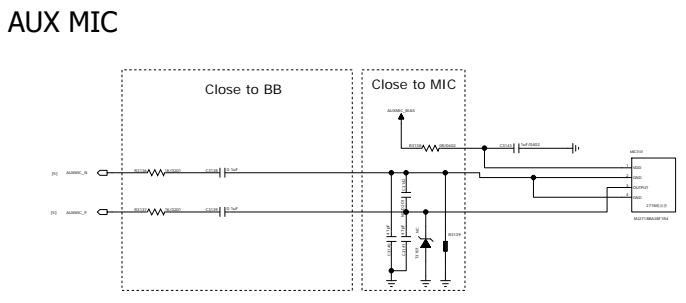
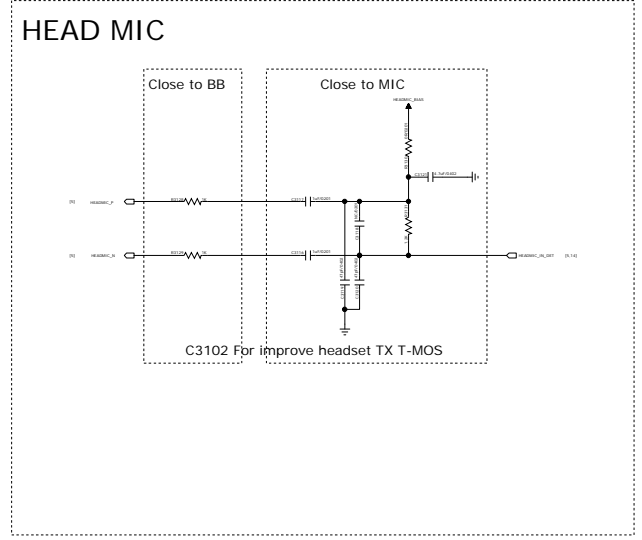
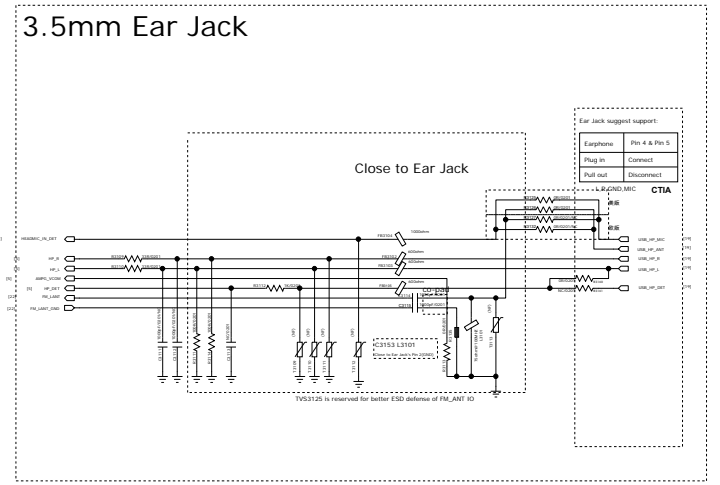
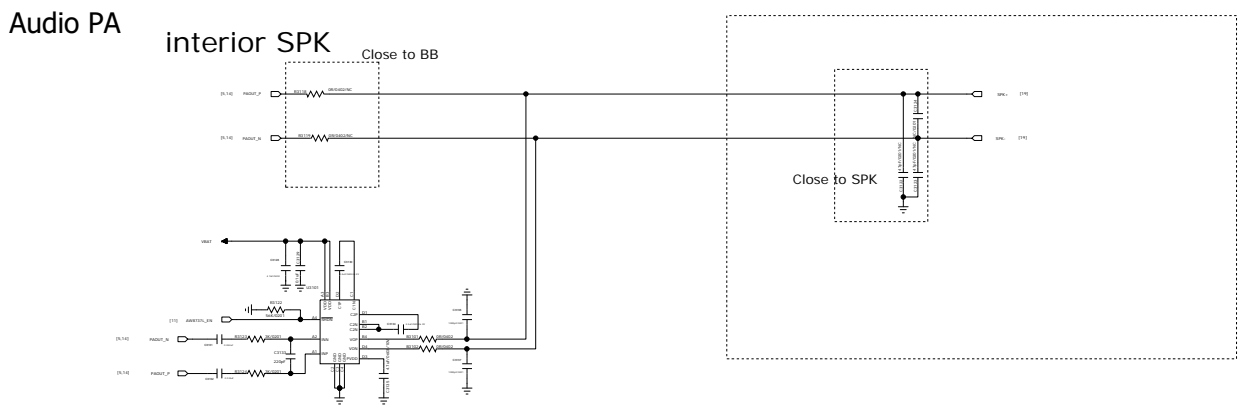
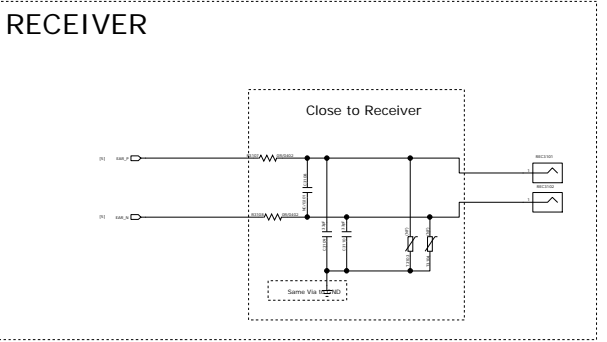
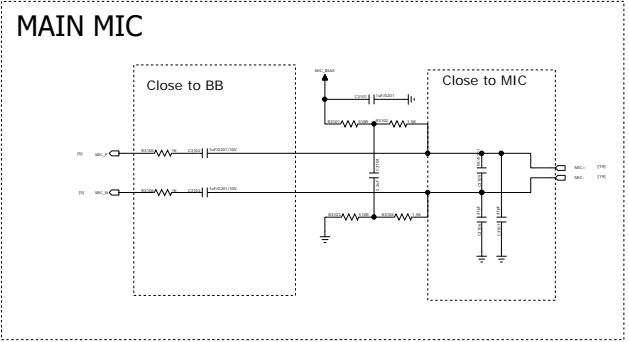
REVISION HISTORY			
REV.	DESCRIPTION	APPROVED	DATE

MEMORY



TITLE & REV			
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DESIGNER	DATE	APPROVED	Hardware DEPT
CHK	DATE		
APPROVED	DATE		Spreadtrum communications, Inc.
CONFIDENTIAL AND PROPRIETARY			

REV	DESCRIPTION	DATE	BY



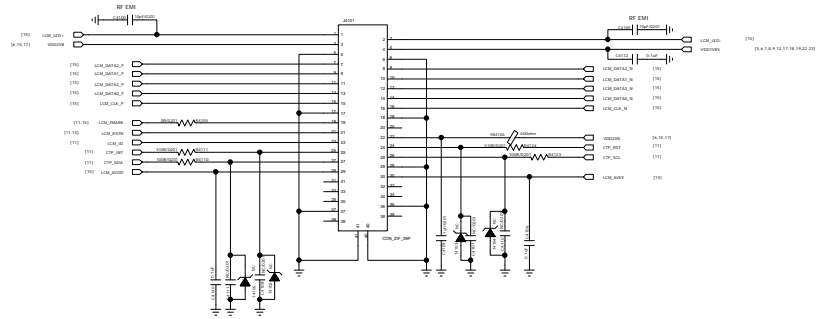
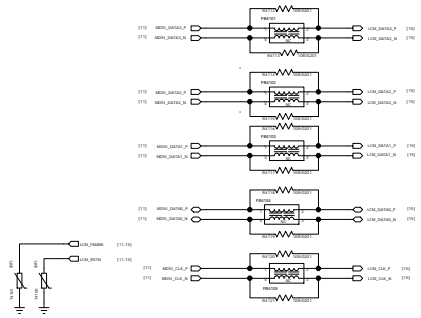
REV	DESCRIPTION	DATE	BY

REVISION	DATE	DESCRIPTION

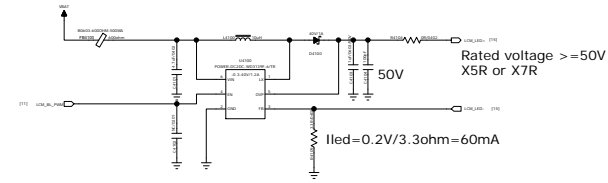
Hardware DEPT
 Spreadtrum communications, Inc.
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REV. RECORD			
REV.	DATE	DESCRIPTION	BY

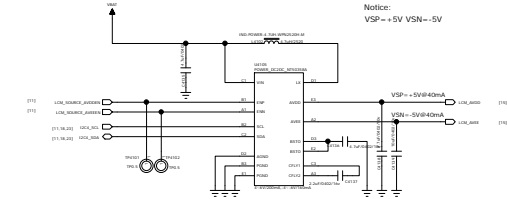
5.99" LCM(MIPI)



Back Light Driver

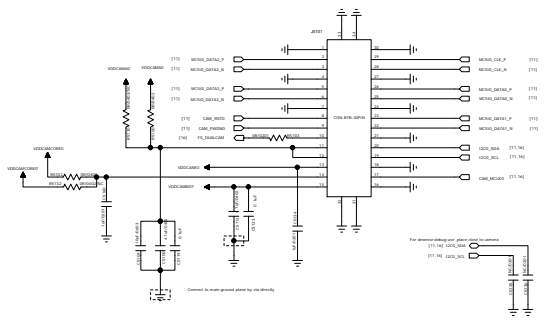


Source Driver

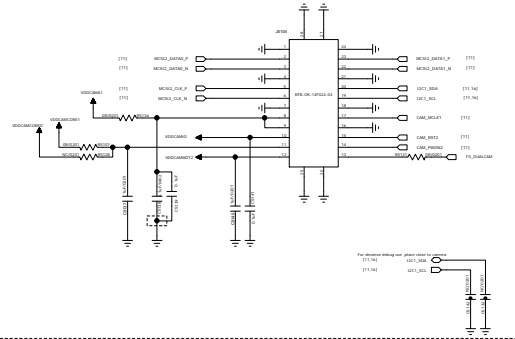


TITLE & REV.			
DESCRIPTION NO.			
DESIGNER	DATE	APPROVED	
CHK	DATE	DESIGN	
APPROVED	DATE	Spreadtrum communications, Inc.	
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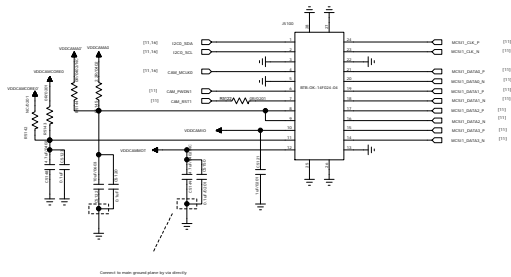
Rear Camera 0: Main 48M



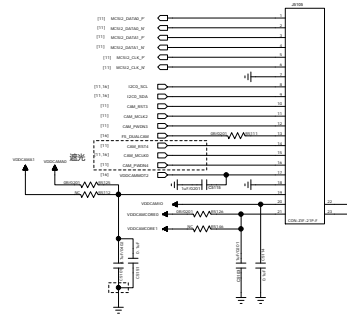
Ultra wide camera:8M



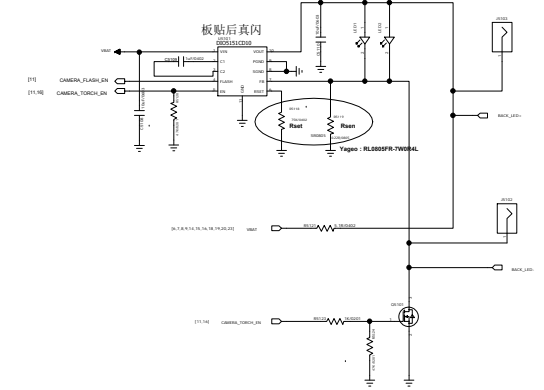
Front Camera 1:16M



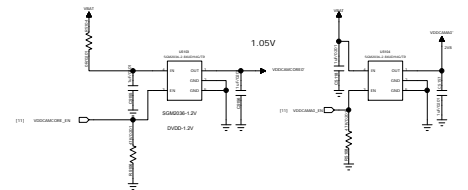
Micro distance 2M



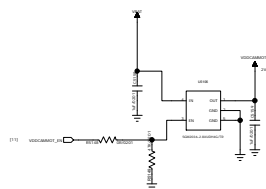
Back FLASH LED



(VCAMD_1) LDO for Rear Camera (VCAMA_EXT1) LDO for Rear Camera



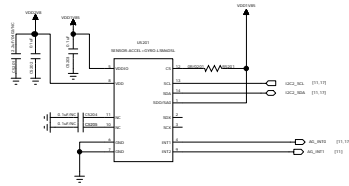
(VCAMAF) LDO for camera AF 2.8V



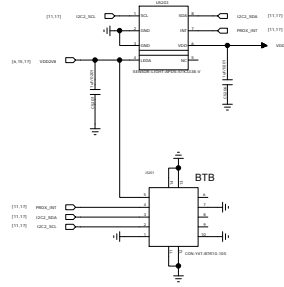
REVISION HISTORY			
VER.	REVISED BY	REVISION	DATE

TITLE & REV.			
DOCUMENT NO.			
DESIGNER	DATE	DEPARTMENT	
		Hardware DEPT	
CHK	DATE	COMPANY	
		Spreadtrum communications, Inc.	
APPROVED	DATE		
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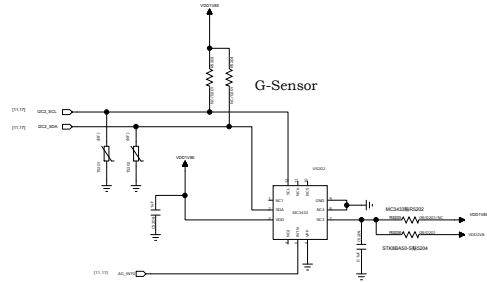
Accelerometer&GYRO: ICM-20600



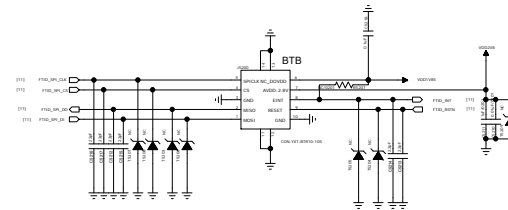
ALS & PROX



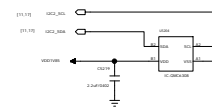
G Sensor



FingerPrint ID



Magnetic Sensor



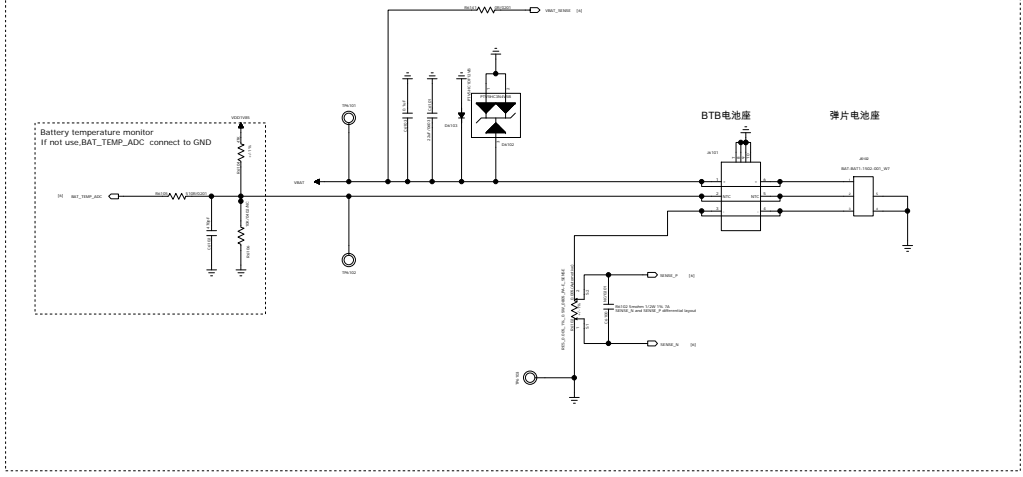
REVISION HISTORY		DATE	DESCRIPTION
1.0	1.0	2018-01-01	Initial Release

DESIGNER	DATE	APPROVED

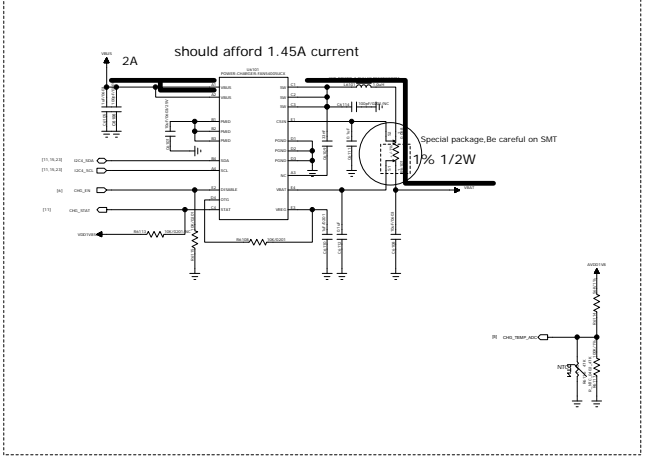
TITLE & REV	
DESIGNER	
DATE	
APPROVED	

REVISION HISTORY			
REV.	DATE	DESCRIPTION	BY

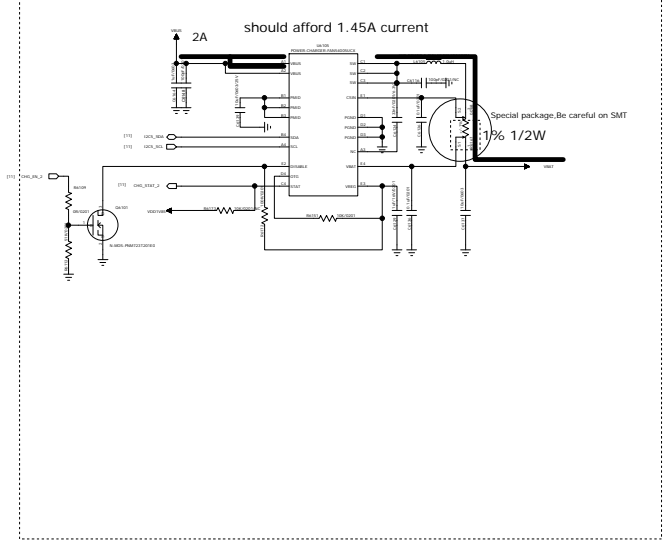
BATTERY



Main Charger



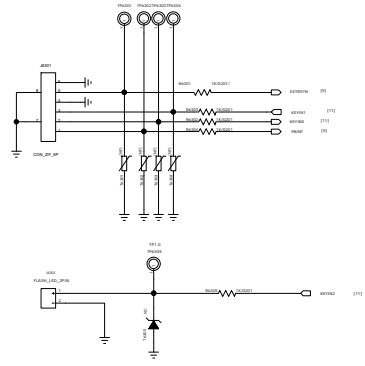
Switching charger II



TITLE & REV.			
DESCRIPTION NO.			
DESIGNER	DATE	CONTRACT	
		Hardware DEPT	
		Company	
		Spreadtrum communications, Inc.	
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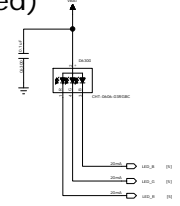
REVISION HISTORY			
REV.	DATE	DESCRIPTION	BY

Volume Key

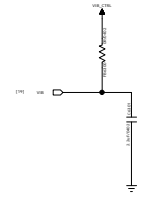


support two keys 7S reset. also support single key 7S reset with UMP510G
 Two keys :EXTRSTN+RSTN

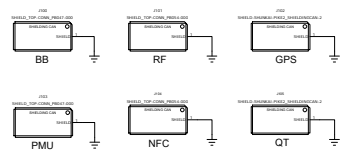
KEYPAD LED(Reserved) RGB



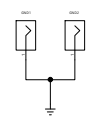
VIBRATOR



SHIELDING



Grounding shrapnel



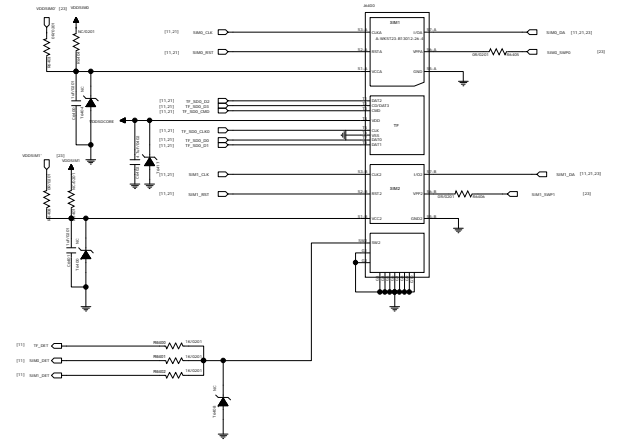
TITLE & REV.			
REVISION HISTORY			

DESIGNER	DATE	APPROVED	

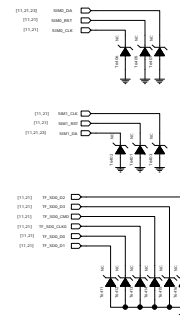
TITLE & REV.	
REVISION HISTORY	

REVISION HISTORY			
REV.	REV. NO.	DESCRIPTION	DATE

SIMO & SIM1 & T_Flash



*R6403 *R6404 *R6406 *R6407 *R6405 *R6406							
With NFC	OR	NF	OR	NF	OR	NF	OR
No NFC	NF	OR	NF	OR	NF	OR	NF

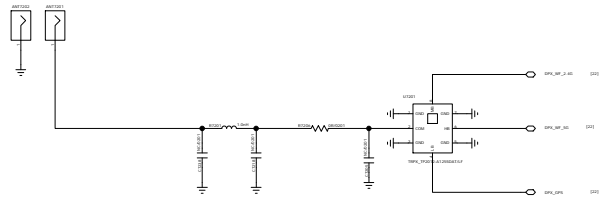


Reserve 0402 CAP for ESD defense and test point

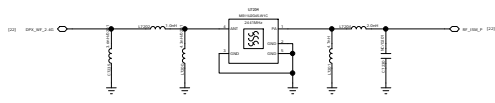
Tray	Tray DET Value
Without Tray	L
Tray Inserted	H

TITLE & REV.		REVISION NO.	
DESIGNER	DATE	APPROVED	
CHK	DATE		
APPROVED	DATE	CONFIDENTIAL AND PROPRIETARY	

WIFI&BT ANT



WIFI/BT SAW

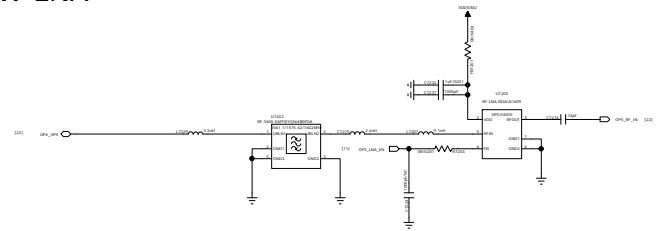


C7205 R7220
 Default: KCT8553C 10pF NF
 Option for R7217: 10pF 3.9k

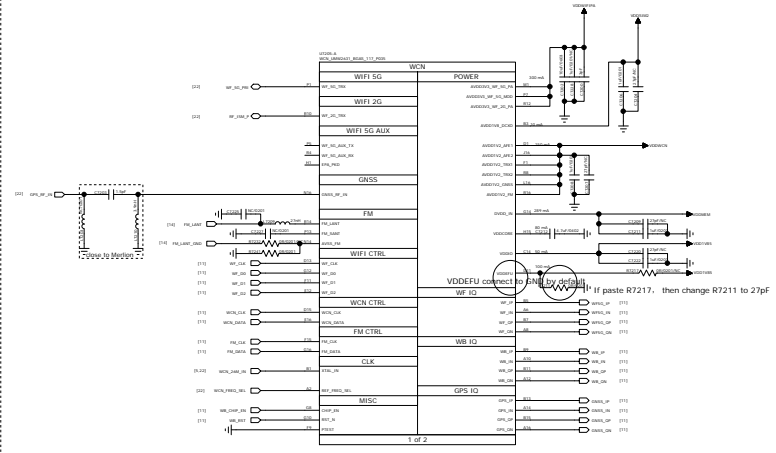
5G WIFI



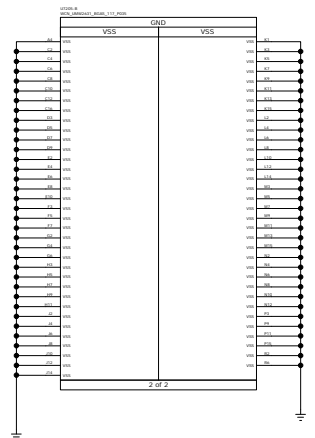
GNSS SAW LNA



WCN



VDDEFU connect to GND by default. If paste R7217, then change R7211 to 27pF



Bonding Option

FREQ_SEL---Internal Pull-up	
0	52MHz
1	26MHz



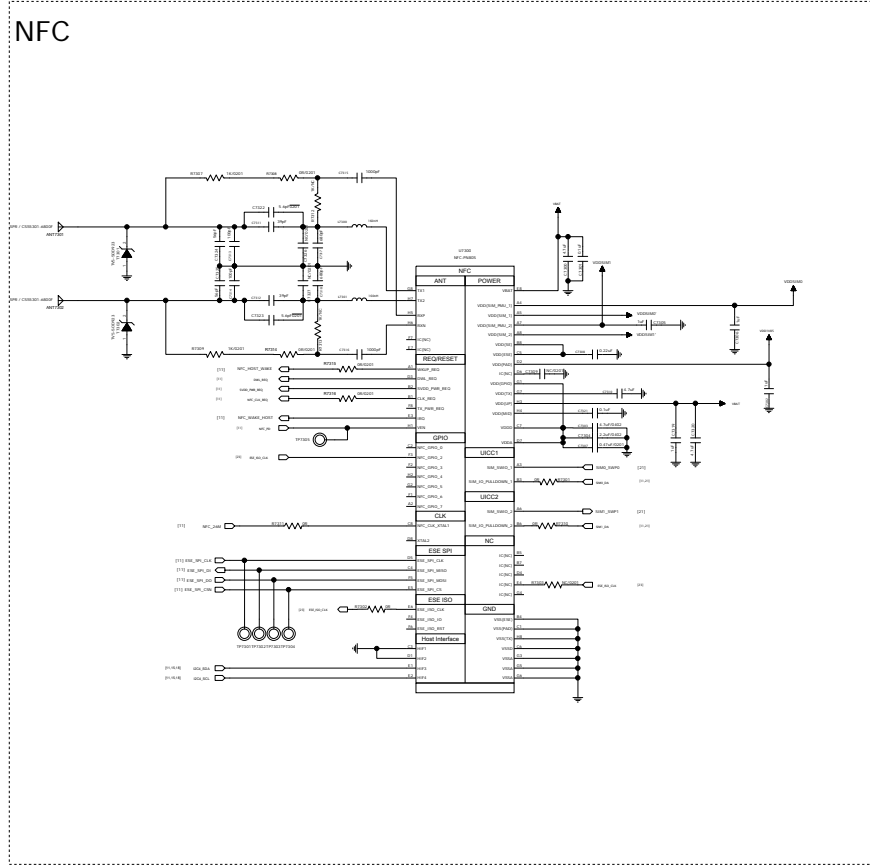
TSX (PMU) Only

	X7200	R7220	R7238	R7218	C7244	C7201	R7245	R0227
TSX (PMU) Only	NF	NF	NF	NF	NF	NF	NF	OR
TCXO(WCN) + DCXO(PMU)	TCXO	NF	OR	OR	22pF	1uF	OR	NF
TCXO(WCN) + 32K(PMU)	TCXO	OR	OR	NF	22pF	1uF	OR	NF



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DESIGNER	DATE	APPROVED	DATE
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REV.	DESCRIPTION	DATE	BY



TITLE & REV.			
DESCRIPTION			
DESIGNED	DATE	APPROVED	DATE

