REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

B1/B2/B3/B5/B8/B28/B7/B34/B39/B38/B40/B41PA

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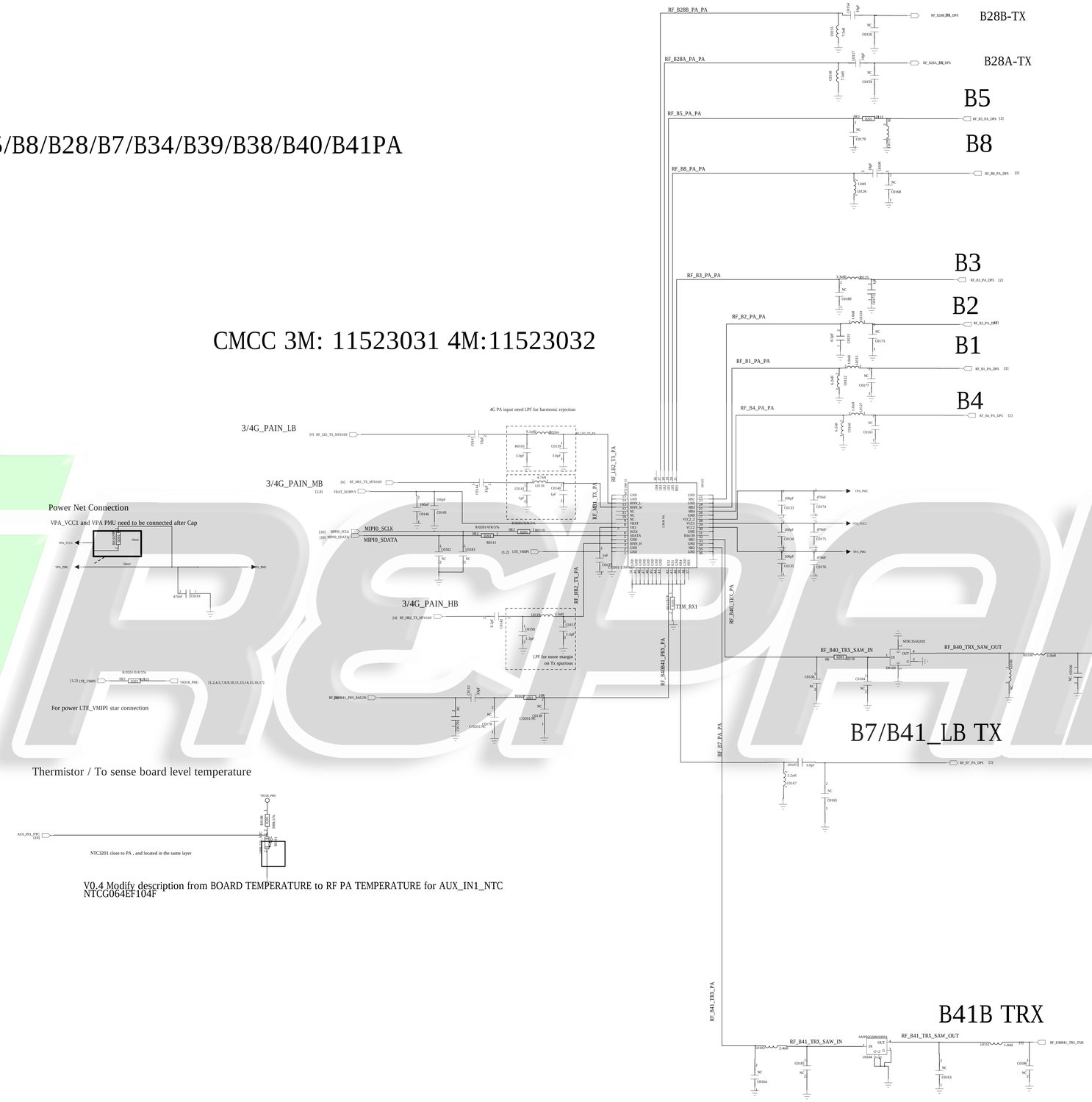

COMPANY:	Shanghai Longcheer		
TITLE:	L3400		
DRAWN: <Drawn By>	DATED: <Drawn Date>		
CHECKED: <Checked By>	DATED: <Checked Date>	CODE: <Code>	SIZE: A0
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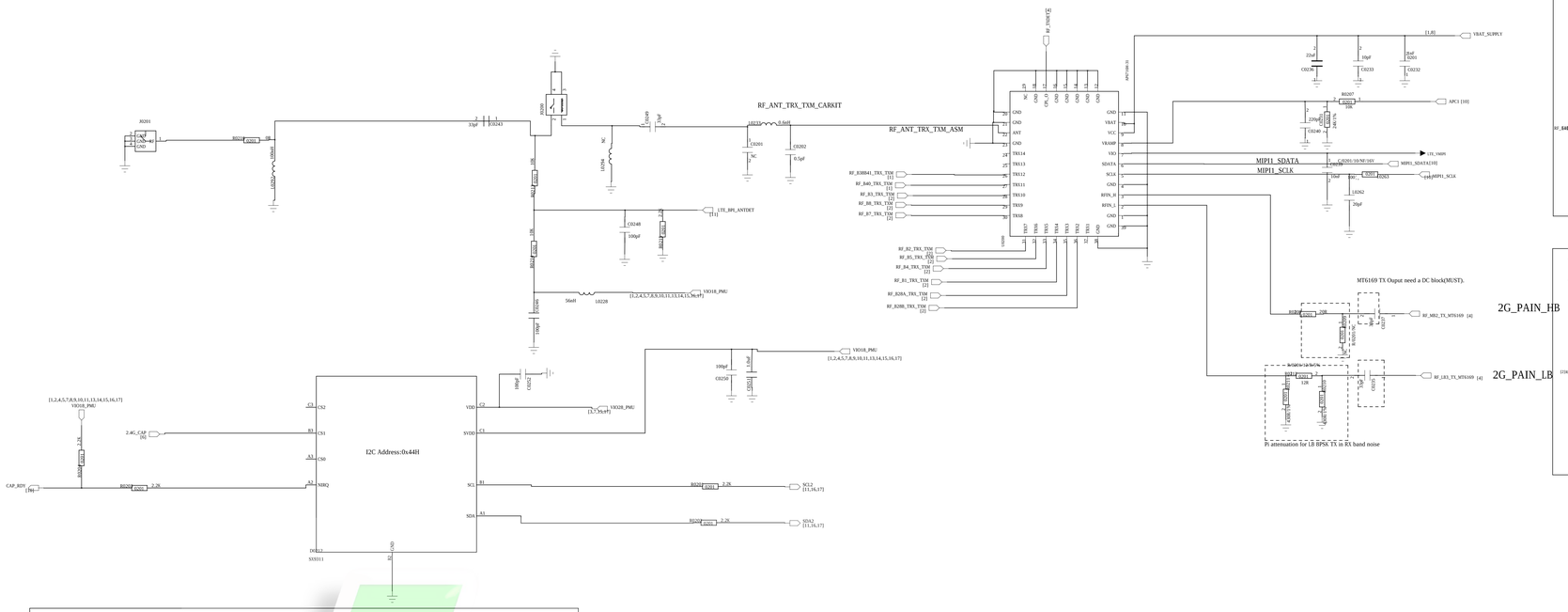
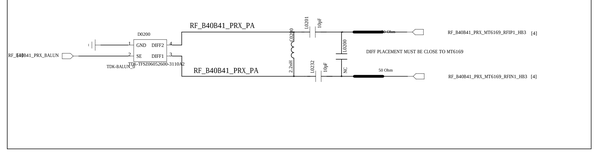
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>	SHEET: 4 of 19

CMCC 3M:11522176 4M:11522178



B38 & B40 PRX



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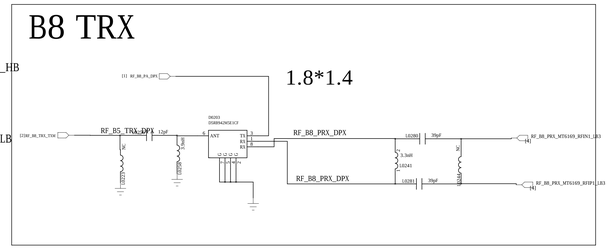

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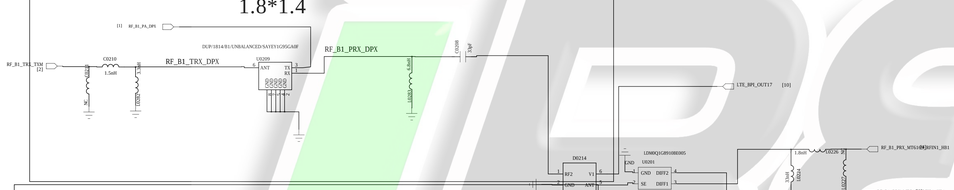

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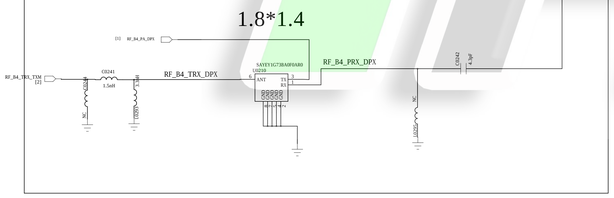

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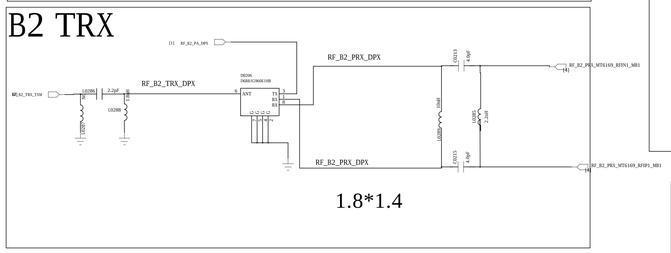

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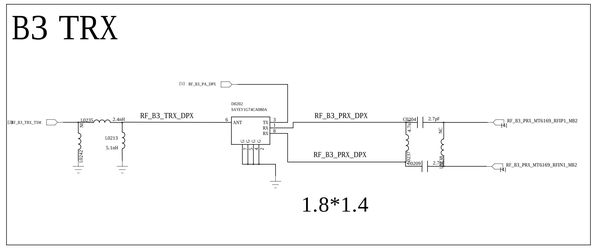

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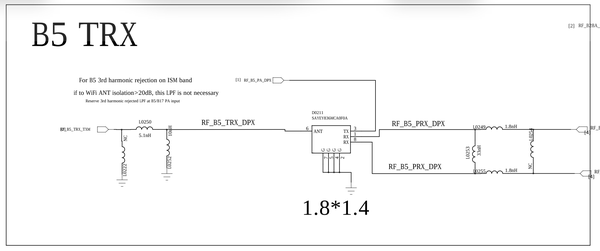
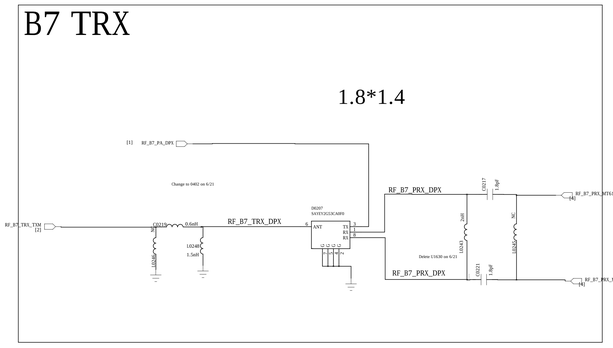
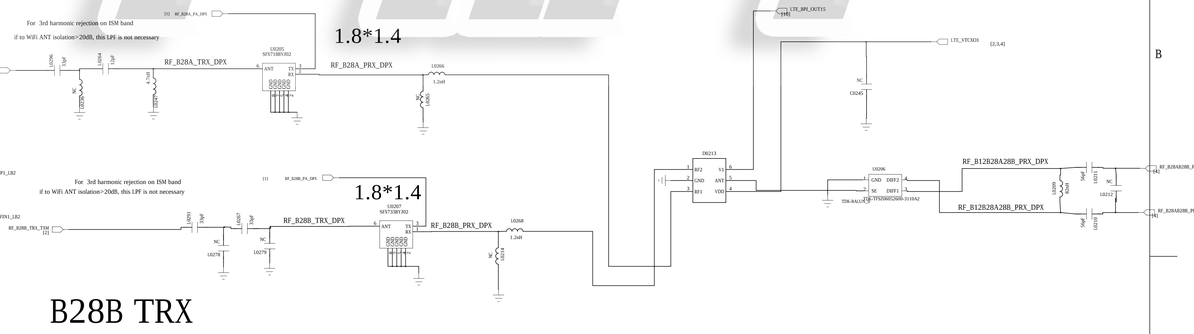


B7 TRX



B28A------8531

B28A TRX



B28B TRX

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CHECKED: <Checked By>	DATED: <Checked Date>	TITLE: L3400	
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RELEASED: <Released By>	DATED: <Release Date>	DRAWING NO: <Drawing Number>	REV: A1
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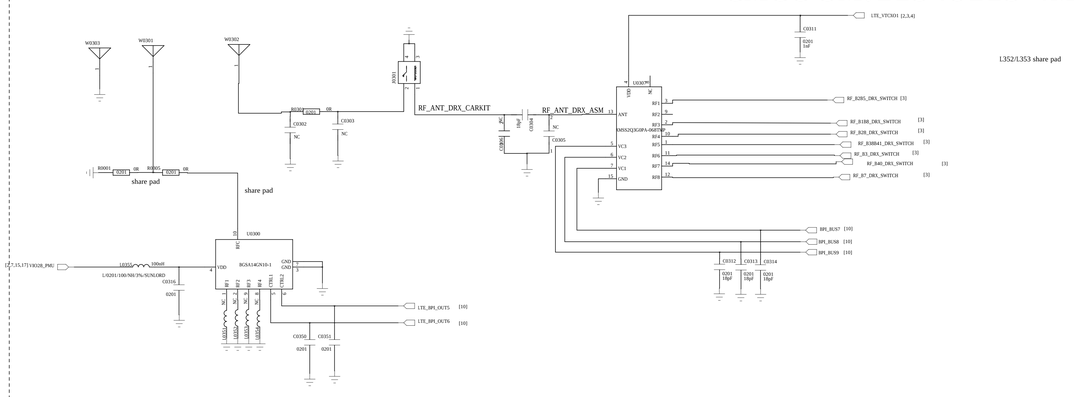
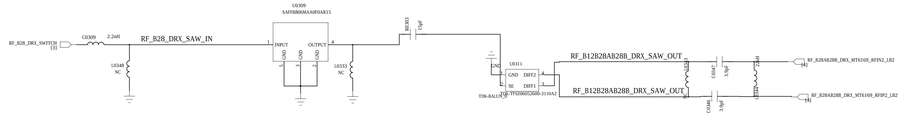


B20/28AB DRX



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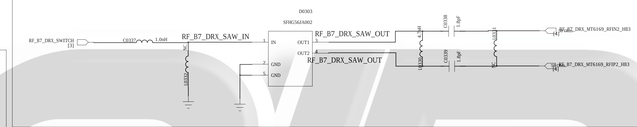
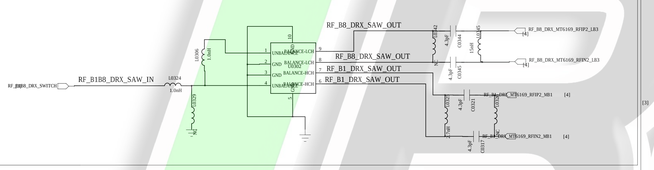


B1/B8 DRX



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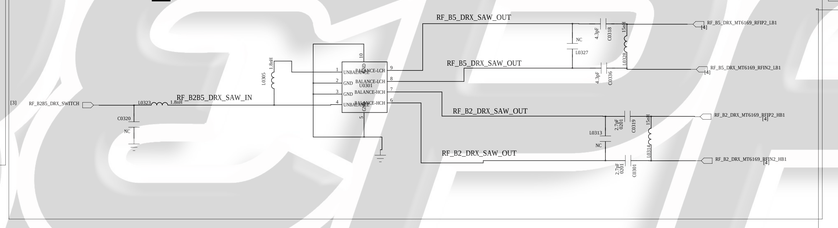
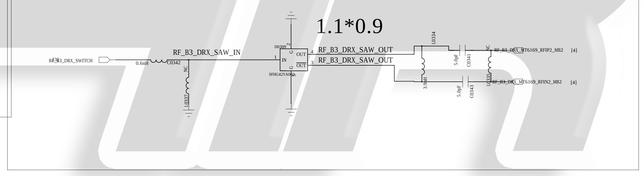
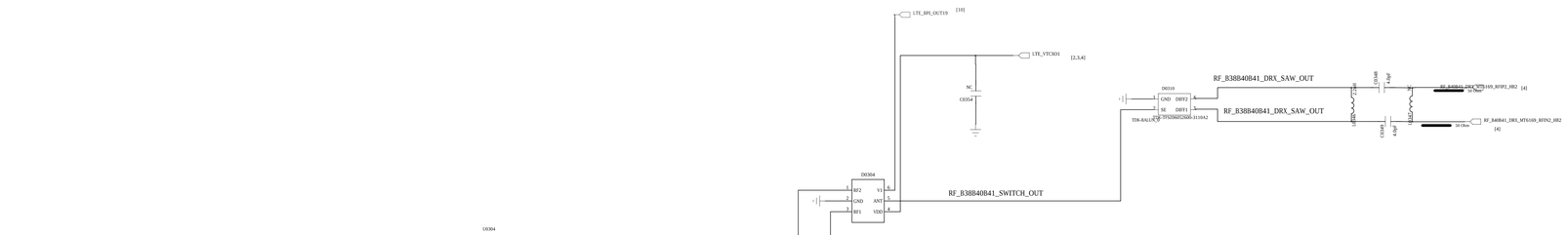


B3

1.1*0.9



B38/41



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		TITLE: L3400			
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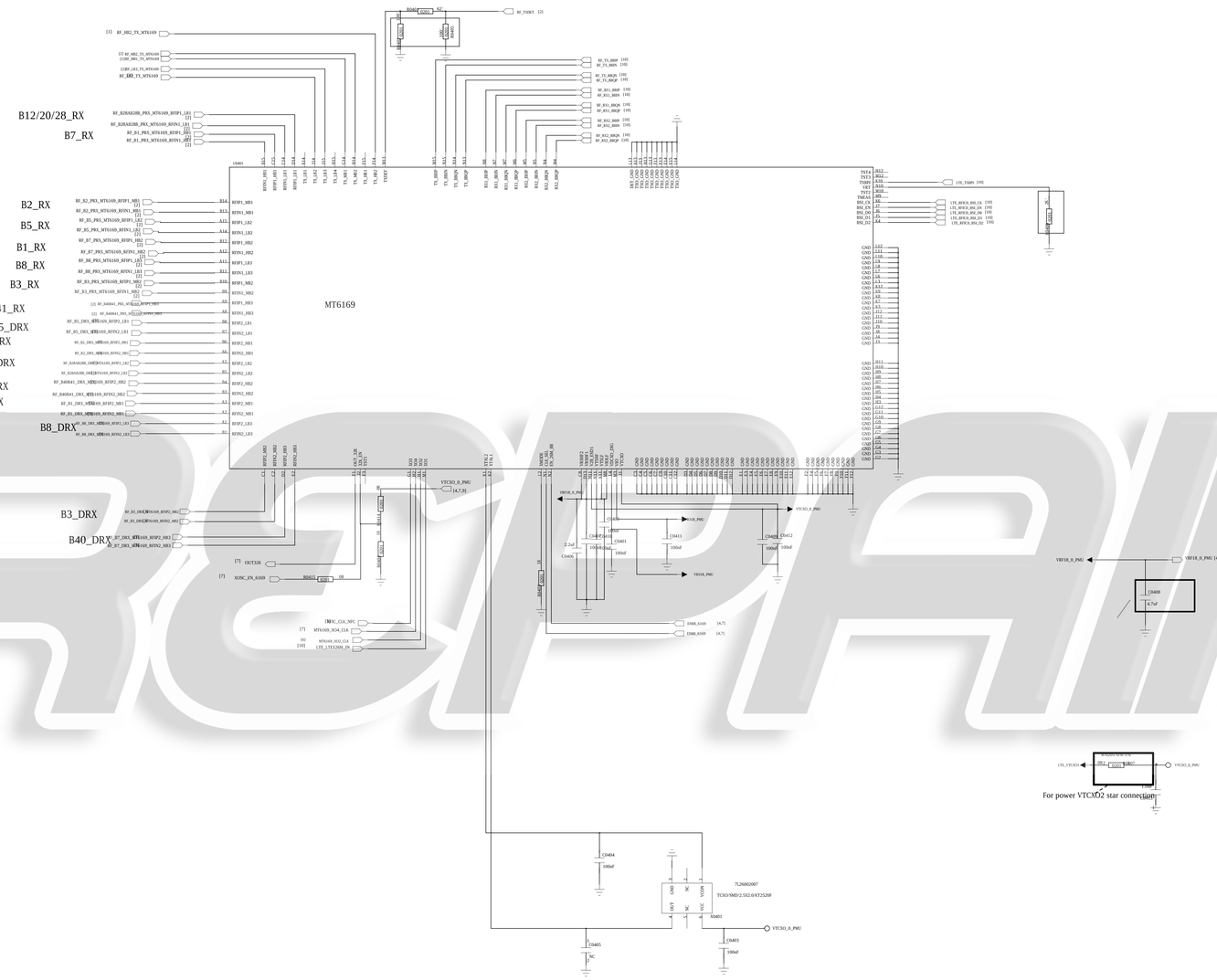
REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:

MT6169



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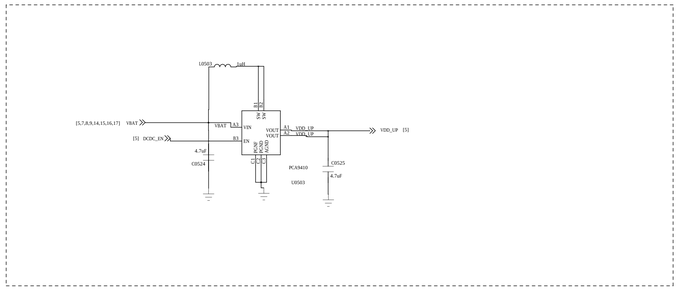
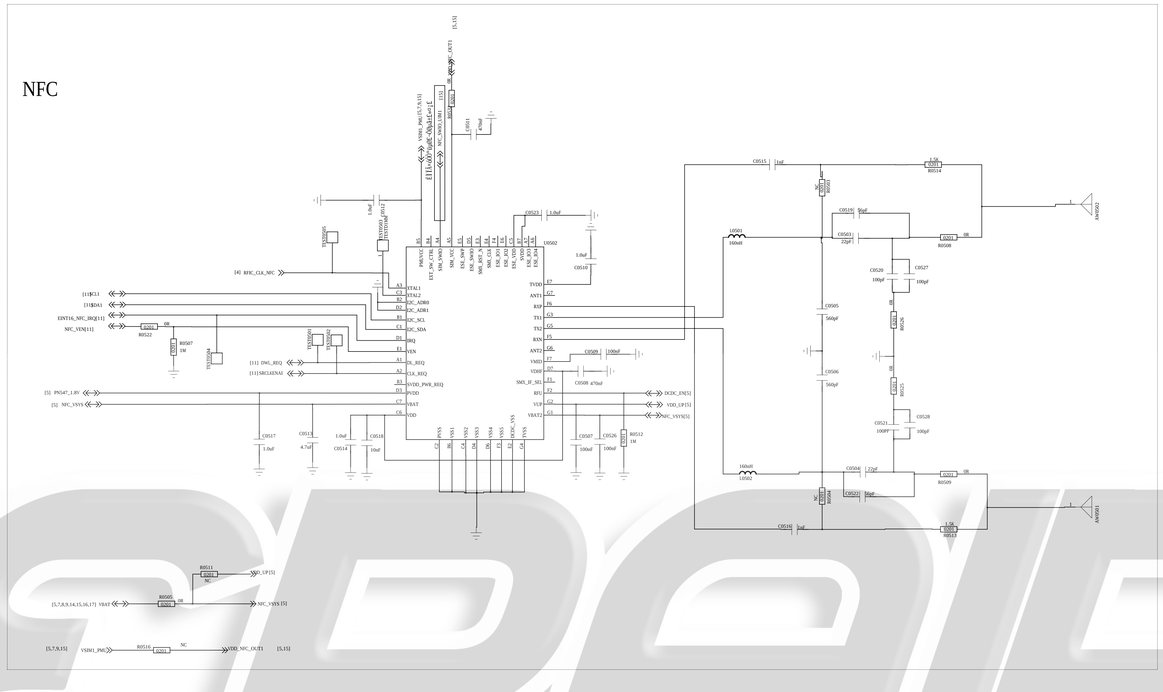
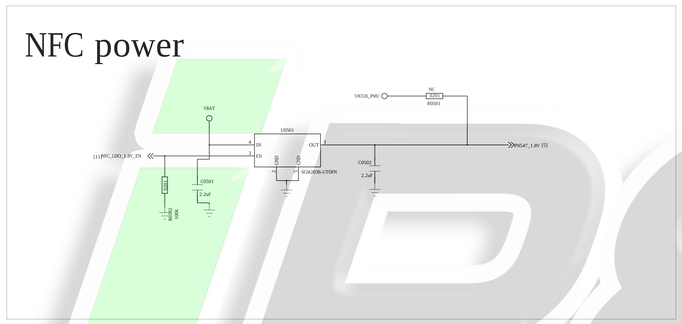


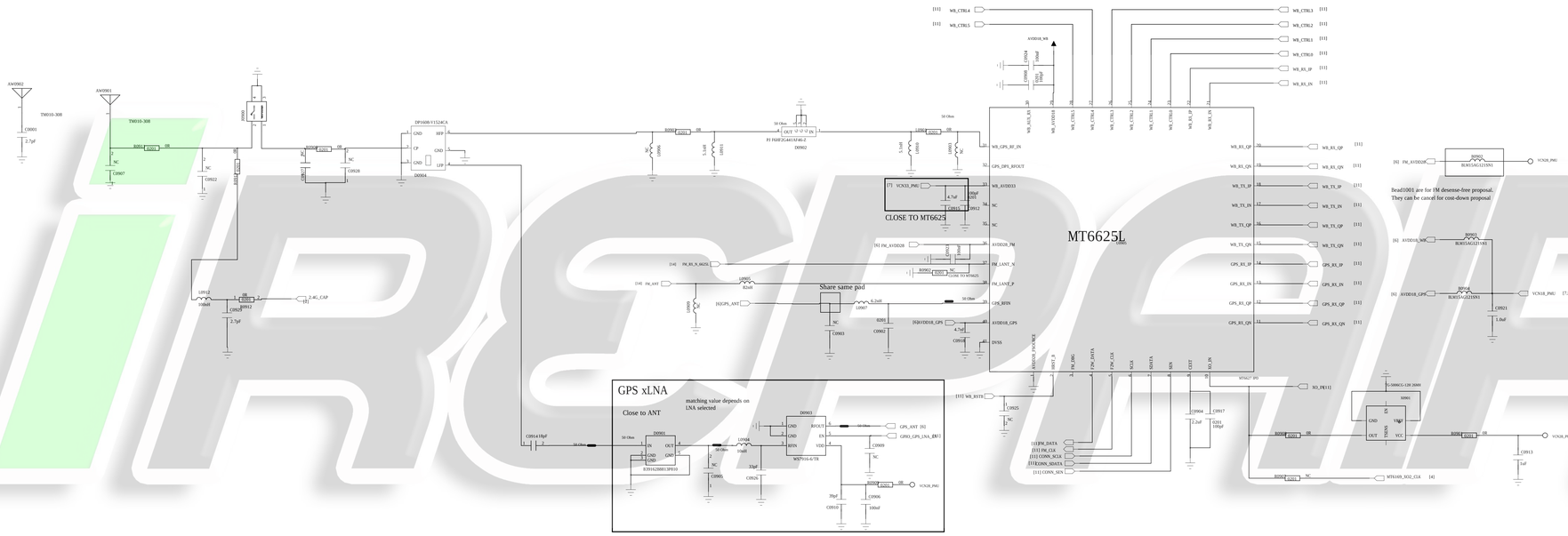




I2C_ADR1	I2C_ADR0	WRITE	READ
0	0	0X50	0X51
0	1	0X52	0X53
1	0	0X54	0X55
1	1	0X56	0X57

REPAIR

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



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TITLE:	L3400		
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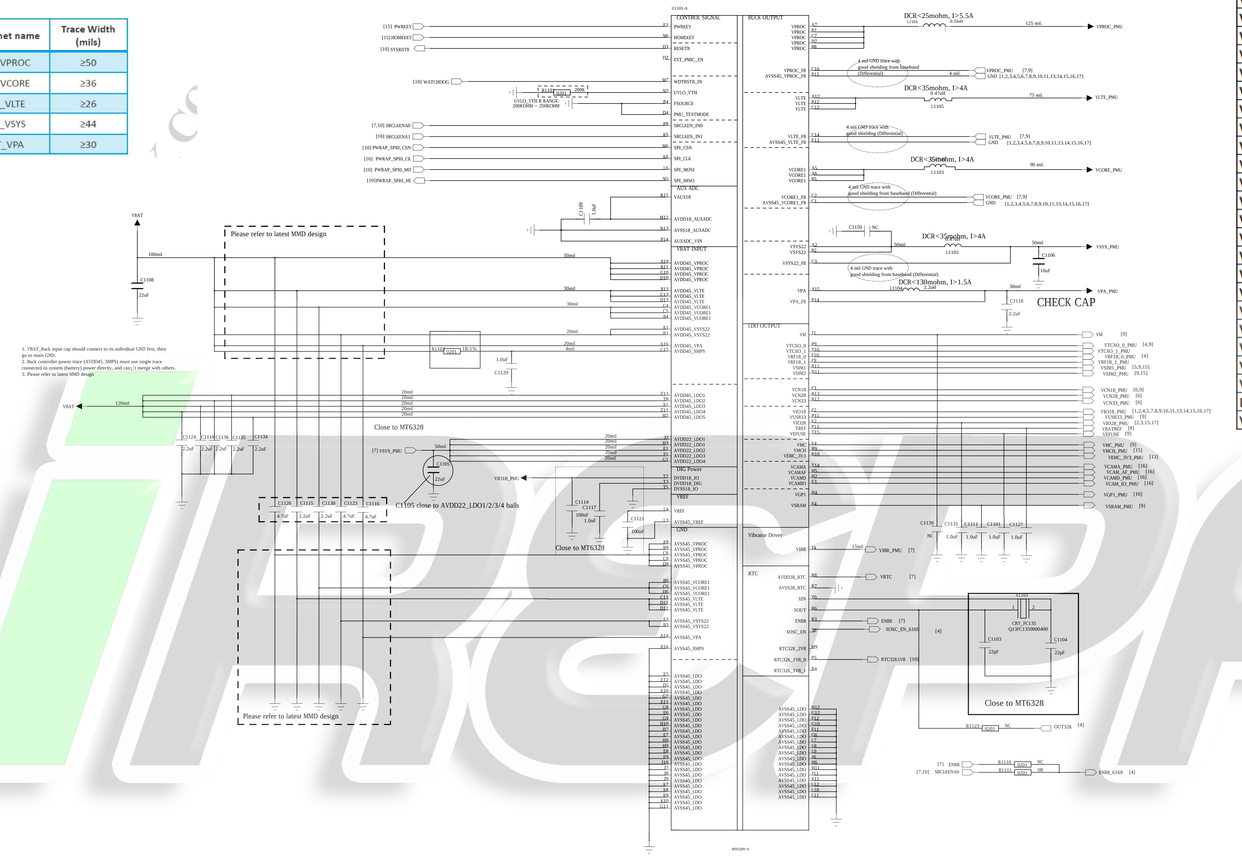
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>	SHEET: 6 of 19

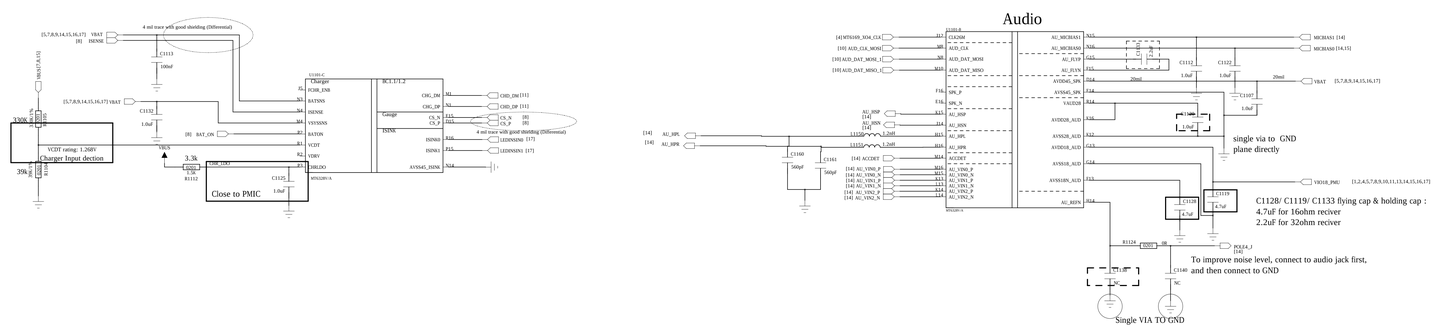
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

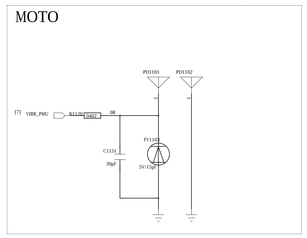
Place input cap. as close to PMICs as
VPROC>VCORE>VLTE>VSYS>VPA

Output net name	Trace Width (mils)
VBAT_VPROC	≥50
VBAT_VCORE	≥36
VBAT_VLTE	≥26
VBAT_VSYS	≥44
VBAT_VPA	≥30



Regulator	Output Voltage Range(V)	Output Current(mA)	Input Decoupling Cap	Output Decoupling	Note
VPROC	0.6~1.31	5000	>2.2uF	0.33uH+47uF*2+22uF	≧125mil
VCORE	0.6~1.31	3500	>2.2uF	0.47uH+47uF*2	≧88mil
VLTE	0.6~1.31	2800	>2.2uF	0.47uH+22uF*3	≧63mil
VSYS	2	1900	>2.2uF	0.47uH+22uF+10uF	≧48mil
VPA	0.5~3.4	600	>4.7uF	2.2uH+2.2uF+2.2uF	≧30mil
VM	1.24/1.39/1.54	1000		9.4uF~10uF	L/W=1500mil/25mil
VTCXO_0	2.8	40		1uF~3uF	L/W=2800mil/6mil
VTCXO_1	2.8	40		1uF~3uF	L/W=2800mil/6mil
VRF18_0	1.825	350		2.2uF~~3.3uF	L/W=2800mil/10mil
VRF18_1	1.2/1.3/1.5/1.825	300		2.2uF~~3.3uF	L/W=2800mil/10mil
VSIM1	1.7/1.8/1.86/2.76/3.0/3.1	50		1uF~3uF	L/W=2800mil/6mil
VSIM2	1.7/1.8/1.86/2.76/3.0/3.1	50		1uF~3uF	L/W=2800mil/6mil
VCN18	1.8	150		1uF~3uF	L/W=2800mil/10mil
VCN28	2.8	40		1uF~3uF	L/W=2800mil/6mil
VCN33	3.0/3.1/3.2/3.3/3.4/3.5/3.6	350		4.7uF~5uF	L/W=2800mil/12mil
VIO18	1.8	600		2.2uF~14uF	L/W=2800mil/20mil
VUSB33	3.3	20		1uF~3uF	L/W=2800mil/6mil
VIO28	2.8	200		2.2uF~6.6uF	L/W=2800mil/10mil
VEFUSE	1.8/1.9/2.0/2.1/2.2	200		1uF~3uF	L/W=2800mil/10mil
VMC	1.8/2.9/3.0/3.3	200		1uF~4.7uF	L/W=2800mil/10mil
VMCH	2.9/3.0/3.3	800		4.7uF~7uF	L/W=2800mil/20mil
VEMC_3V3	2.9/3.0/3.3	400		4.7uF~7uF	L/W=2800mil/12mil
VCAMA	1.5/1.8/2.5/2.8	200		2uF~3.3uF	L/W=2800mil/10mil
VCAMAF	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	200		2uF~3.3uF	L/W=2800mil/10mil
VCAMD	0.9/1.0/1.1/1.22/1.3/1.5	500		4.4uF~13.2uF	L/W=2800mil/16mil
VCAMIO	1.2/1.3/1.5/1.8	200		1uF~3uF	L/W=2800mil/10mil
VGP1	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200		1uF~3uF	L/W=2800mil/10mil
VSRAM	0.6~1.31	400		4.7uF~7uF	L/W=2800mil/12mil
VIBR	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	100		1uF~3uF	L/W=2800mil/8il
VAUX18	1.8	40		1uF~3uF	L/W=2800mil/6il
VAUD28	2.8	40		1uF~3uF	L/W=2800mil/6il
DVDD18_DIG	1.8	20		1uF	L/W=800mil/4il
VRTC	2.8	2		0.1uF	L/W=800mil/4il





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TITLE:	L3400		
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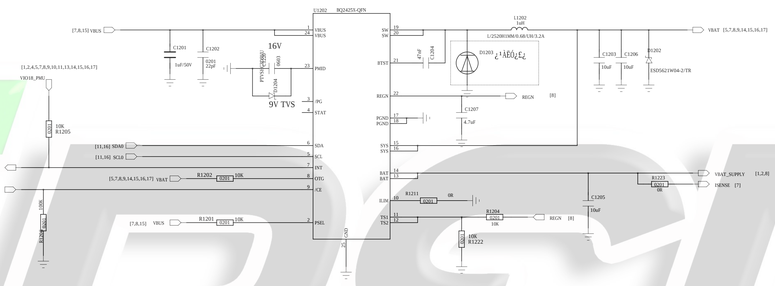
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

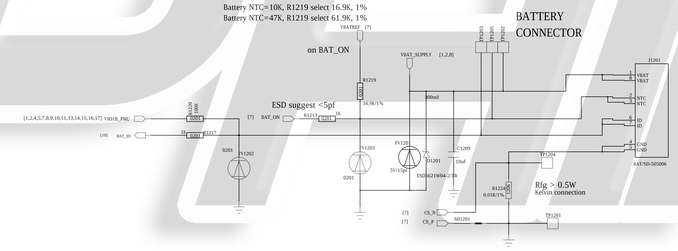
ADDRESS 6BH--24196

ADDRESS



Battery NTC=10K, R1219 select 16.9K, 1%
Battery NTC=47K, R1219 select 61.9K, 1%

BATTERY CONNECTOR



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COMPANY: Shanghai Longcheer				
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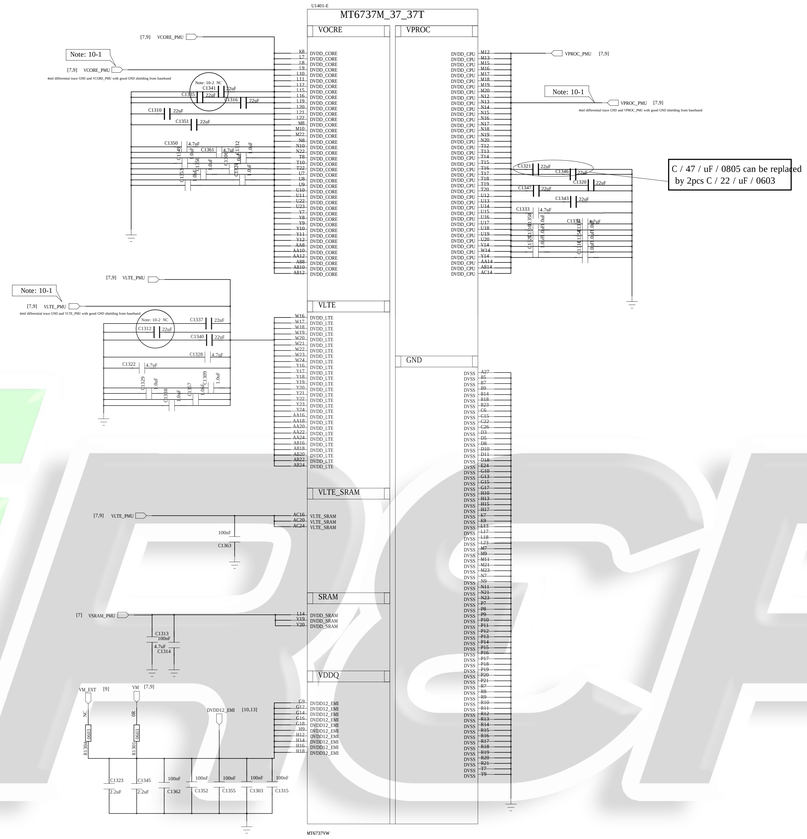
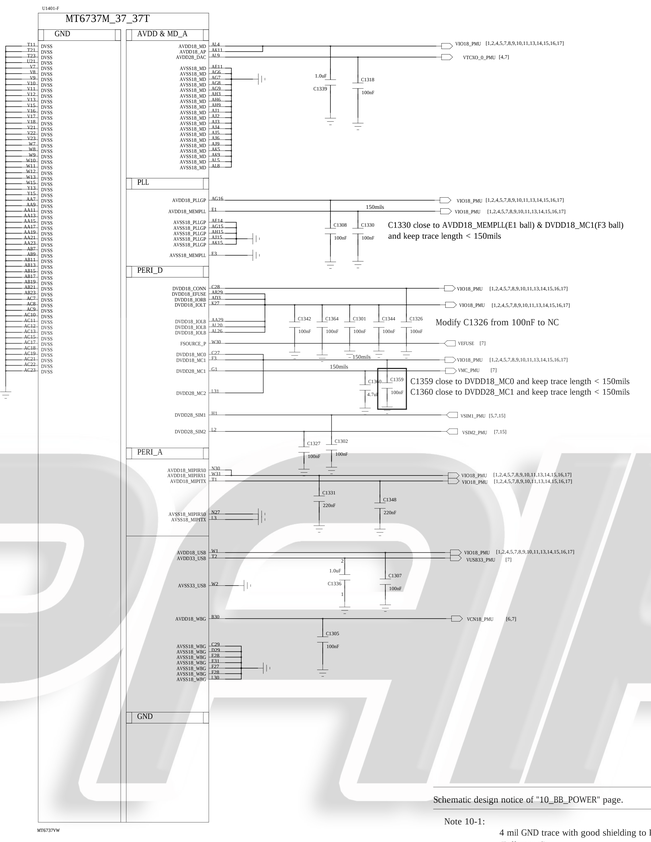




Schematic design notice of "10_BB_POWER" page.

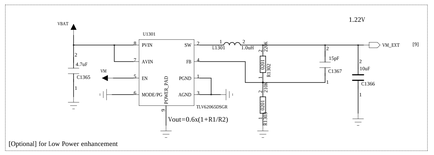
Note 10-1:

4 mil GND trace with good shielding to PMIC (Differential)

Note 10-3:

FSOURCE_P(EFUSE)
(1)FSOURCE_P EFUSE power(VEFUSE) should be only for EFUSE usage(not share with other application)
(2)W/I EFUSE program, VEFUSE need 1uF bypass cap (pls refer to ¡§LDO output voltage/current table¡¨)
(3)W/O EFUSE program, VEFUSE bypass cap should be NC.

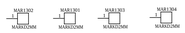
External Buck for DRAM



DRAM Buck Purpose: Reserved for low power performance

If using external buck for DRAM application, please refer to "MT6735_53 DRAM External Buck Design Notice":
1.Please add one more 1uF capacitor on PMIC VM output side (Must)
2.Please turn off Fast Transient Function of PMIC VM LDO (Must)

MARK POINT



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TITLE:	L3400		
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REVISION RECORD			
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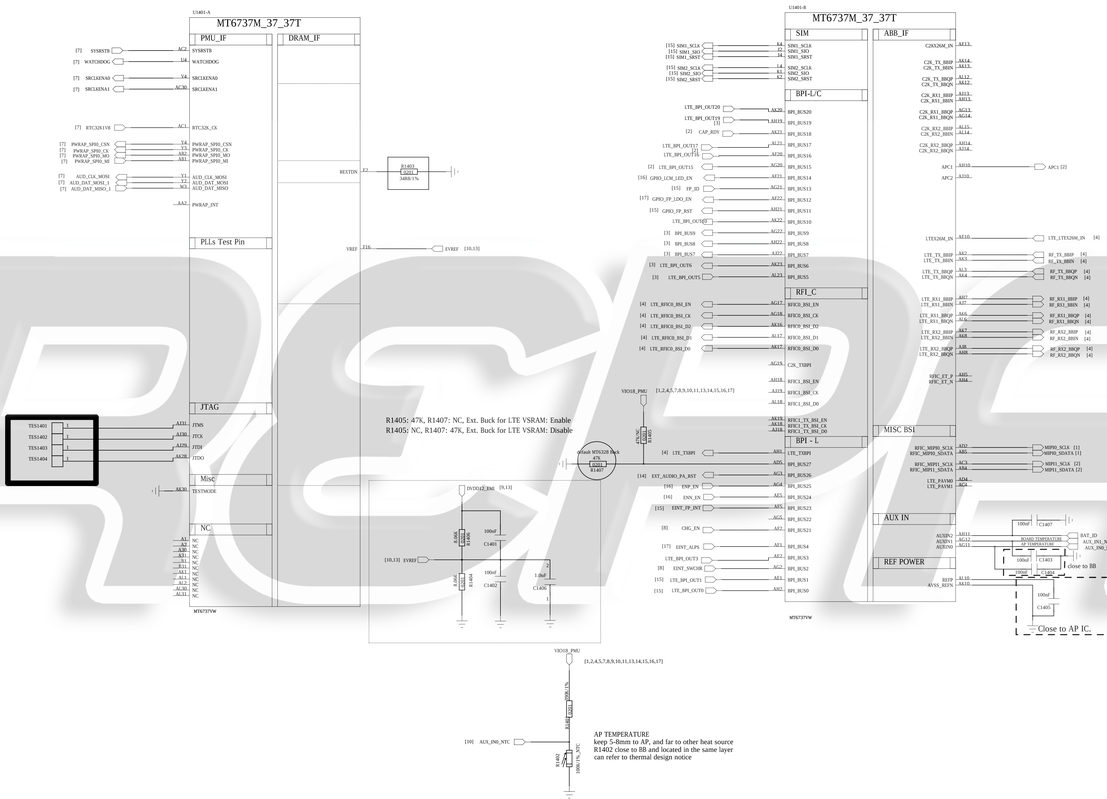
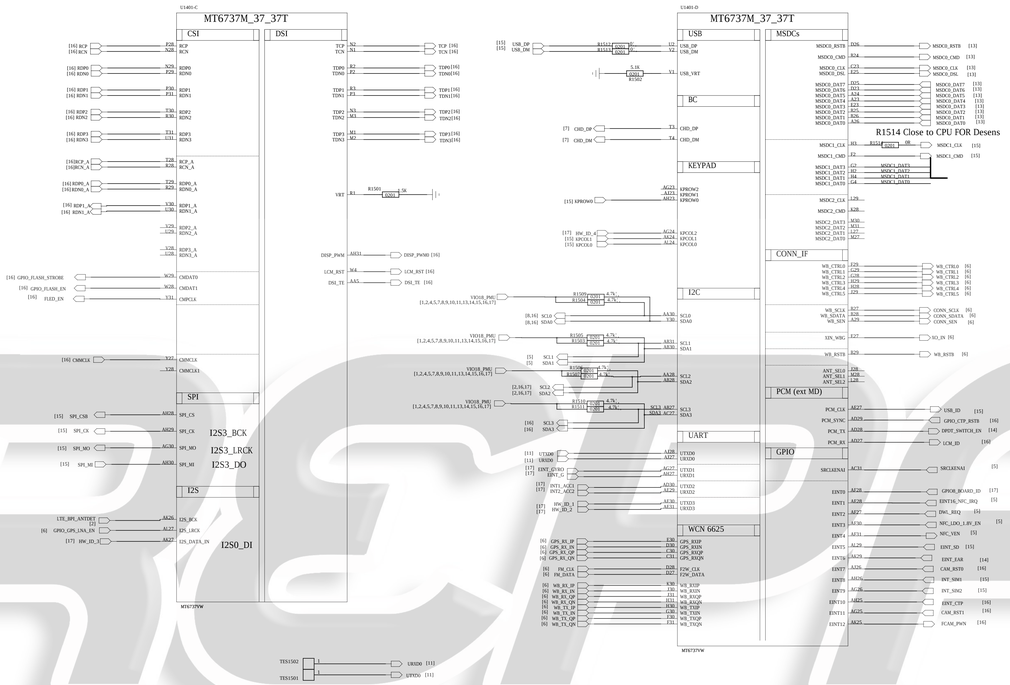


iRepair

DRAWN: <Drawn By>	DATED: <Drawn Date>	COMPANY: Shanghai Longcheer	
CHECKED: <Checked By>	DATED: <Checked Date>	TITLE: L3400	
QUALITY CONTROL: <QC By>	DATED: <QC Date>	CODE: <Code> / SIZE: A0 / DRAWING NO: <Drawing Number>	REV: A1
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>	SHEET: 40 19

REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:



Schematic design notice of "12_BB_2" page.

Note 12-1: MSDC2 Pin should be NC (No Connection) for MT6735M

Note 12-2: MT6735M does Not have CMMCLK1 function

Please refer to MT6735M Design Notice for details

iRepair

COMPANY:	Shanghai Longcheer		
TITLE:	L3400		
DRAWN: <Drawn By>	DATED: <Drawn Date>		
CHECKED: <Checked By>	DATED: <Checked Date>	CODE: <Code>	SIZE: A0
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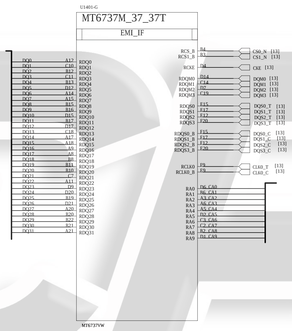

iRepair

		COMPANY:	Shanghai Longcheer		
		TITLE:	L3400		
DRAWN: <Drawn By>	DATED: <Drawn Date>				
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RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>		SHEET: 12 19	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Connect to AP

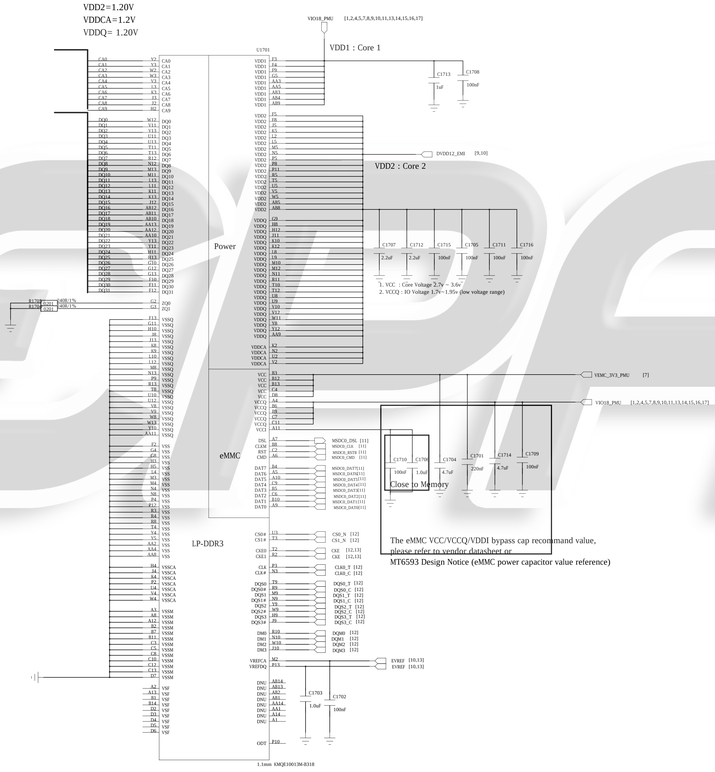
DQ[0..31]	DQ[0..31]
CA[0..9]	CA[0..9]
CS0_N	CS0_N
CS1_N	CS1_N
CKE	CKE
DQM0	DQM0
DQM1	DQM1
DQM2	DQM2
DQM3	DQM3
DQS0_C	DQS0_C
DQS1_C	DQS1_C
DQS2_C	DQS2_C
DQS3_C	DQS3_C
DQS0_T	DQS0_T
DQS1_T	DQS1_T
DQS2_T	DQS2_T
DQS3_T	DQS3_T
CLK0_T	CLK0_T
CLK0_C	CLK0_C
VREF_CA	VREF_CA
VREF_DQ	VREF_DQ
MSDC0_RSTB	MSDC0_RSTB
MSDC0_CMD	MSDC0_CMD
MSDC0_CLK	MSDC0_CLK
MSDC0_DSL	MSDC0_DSL
MSDC0_DAT0	MSDC0_DAT0
MSDC0_DAT1	MSDC0_DAT1
MSDC0_DAT2	MSDC0_DAT2
MSDC0_DAT3	MSDC0_DAT3
MSDC0_DAT4	MSDC0_DAT4
MSDC0_DAT5	MSDC0_DAT5
MSDC0_DAT6	MSDC0_DAT6
MSDC0_DAT7	MSDC0_DAT7

Power I/F

VIO18_PMU	VIO18_PMU
VEMC_3V3_PMU	VEMC_3V3_PMU
DVDD12_EMI	DVDD12_EMI

8GB eMMC + 8Gb LPDDR3
Hynix/H9TQ64A8GTMCUR-KUM

221 Ball, 0.5mm pitch
VDD1=1.8V
VDD2=1.20V
VDDCA=1.2V
VDDQ= 1.20V



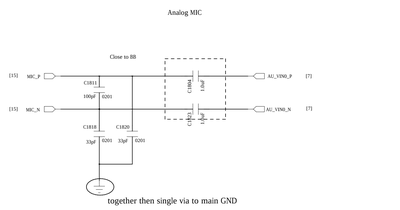
COMPANY:	Shanghai Longcheer		
TITLE:	L3400		
DRAWN: <Drawn By>	DATED: <Drawn Date>		
CHECKED: <Checked By>	DATED: <Checked Date>		
QUALITY CONTROL: <QC By>	DATED: <QC Date>		
RELEASED: <Released By>	DATED: <Release Date>		

CODE:	SIZE:	DRAWING NO:	REV:
<Code>	A0	<Drawing Number>	A1

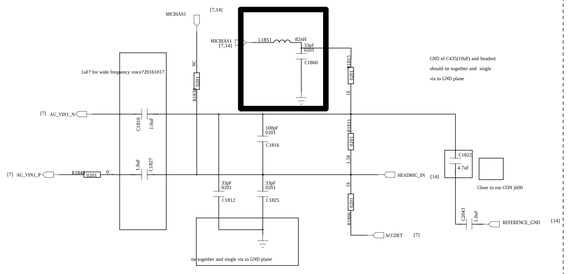
SCALE: <Scale> SHEET: 18 19

REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:

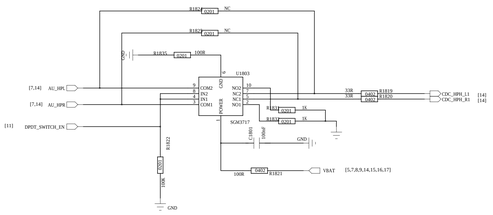
Main microphone



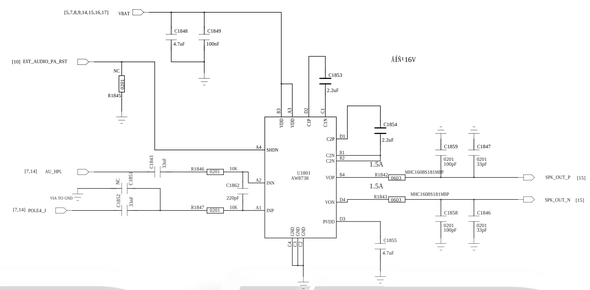
HEAD MIC



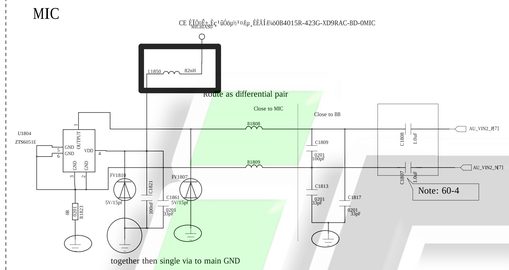
Audio PA



Rintotal = Rex + Rin(6.6K)
F3db =1/2*,D*Rintotal*Cin=502HZ
AVI =159.5k/Rintotal=16.6

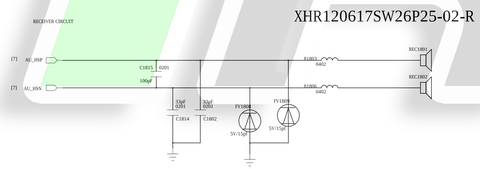


MIC

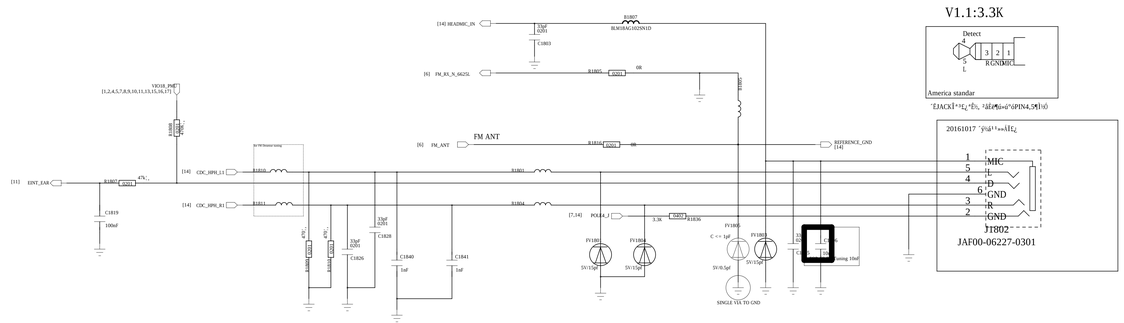


HEAD EAR

REC/SPK



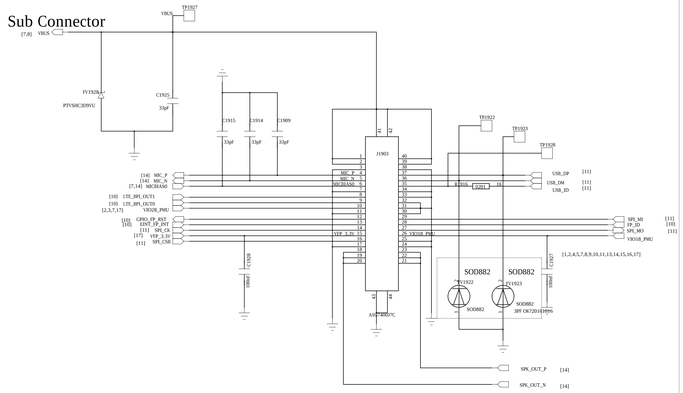
3.5mm Headphone Jack



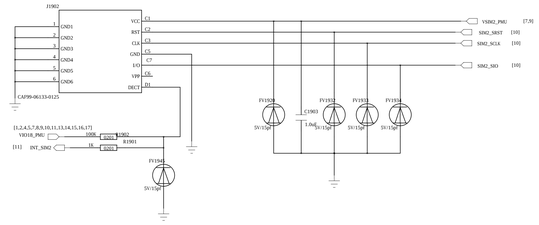
DRAWN: <Drawn By>	DATED: <Drawn Date>	COMPANY: Shanghai Longcheer	
CHECKED: <Checked By>	DATED: <Checked Date>	TITLE: L3400	
QUALITY CONTROL: <QC By>	DATED: <QC Date>	CODE: <Code> / SIZE: A0	DRAWING NO: <Drawing Number> / REV: A1
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>	SHEET: 14 19

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

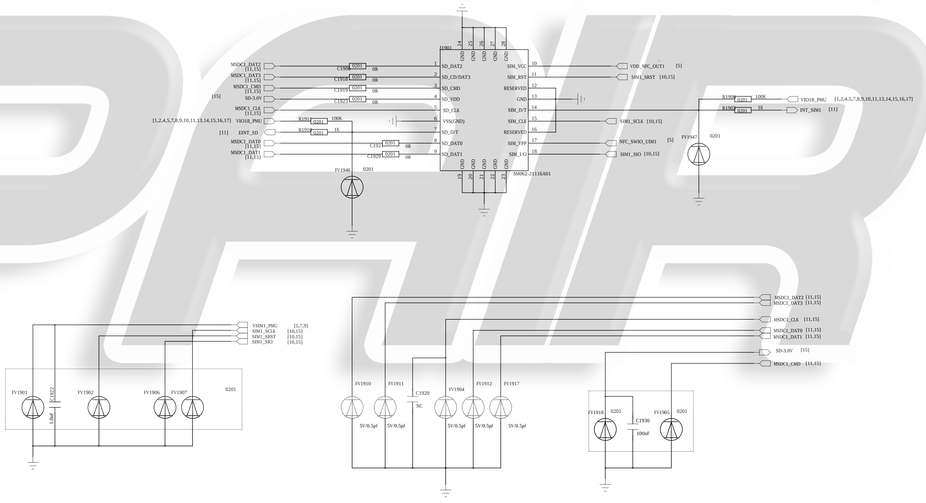
Sub Connector



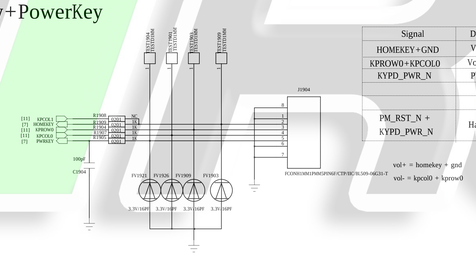
NANOSIM1



NANO SIM+MICRO SD CARD



SideKey+PowerKey



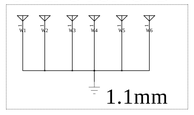
Signal	Description
HOMEKEY+GND	Volume Up
KPROW0+KPCOL0	Volume Down
KYPD_PWR_N	PWER_ON
PM_RST_N + KYPD_PWR_N	Hardware Reset

vol+ = homekey + gnd

vol- = kpcol0 + kprow0

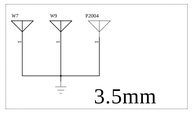
TOP

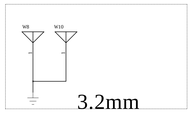
SPRING FOR GND



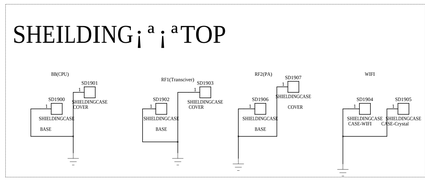
BOT

SPRING FOR GND

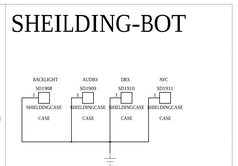




SHEILDING¡ª¡ªTOP



SHEILDING-BOT



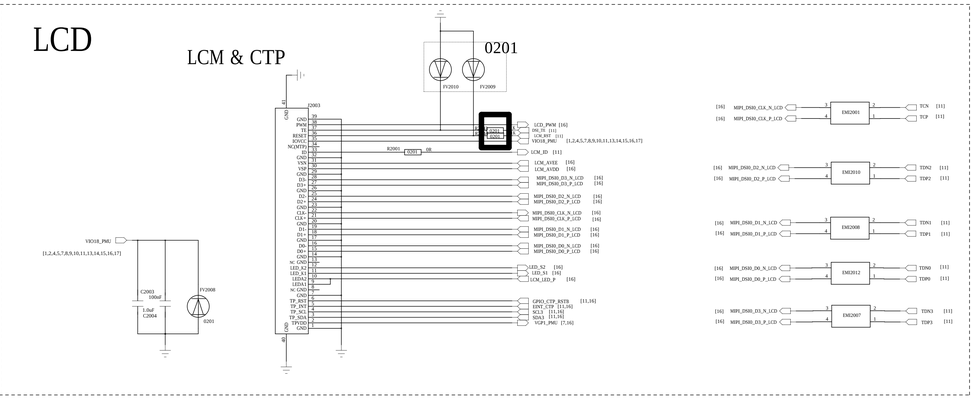
R1923=0 R1924=NC

COMPANY:	Shanghai Longcheer				
TITLE:	L3400				
DRAWN: <Drawn By>	DATED: <Drawn Date>	CODE: <Code>	SIZE: A0	DRAWING NO: <Drawing Number>	REV: A1
CHECKED: <Checked By>	DATED: <Checked Date>				
QUALITY CONTROL: <QC By>	DATED: <QC Date>				
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>		SHEET: 46 19	

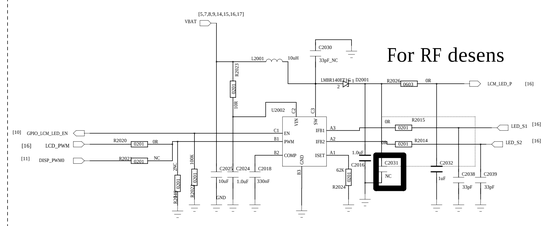
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

LCD

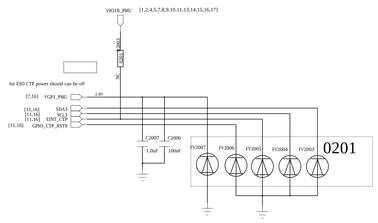
LCM & CTP



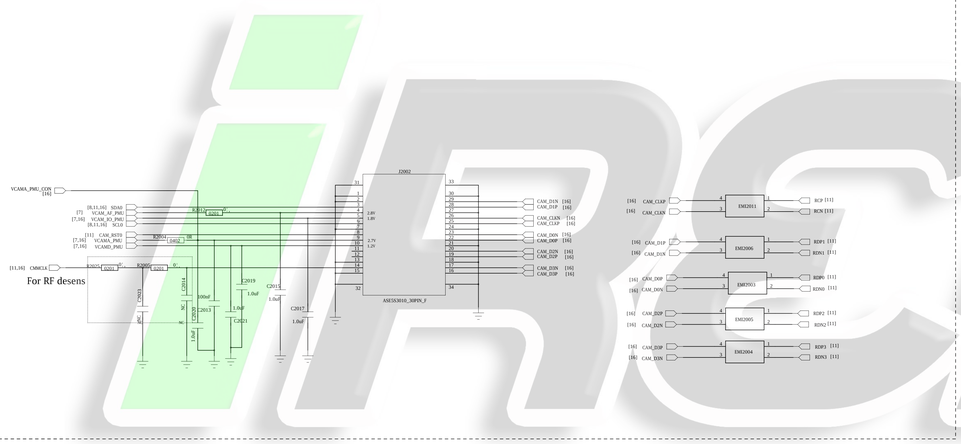
LCD Backlight



TP

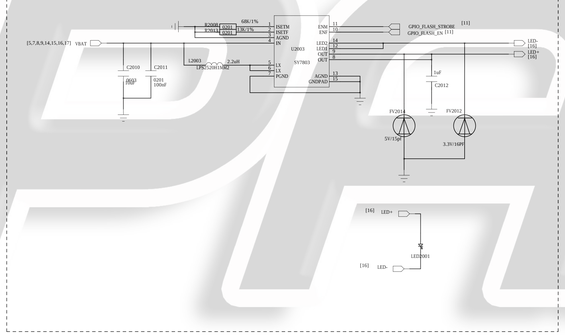


Main Camera A



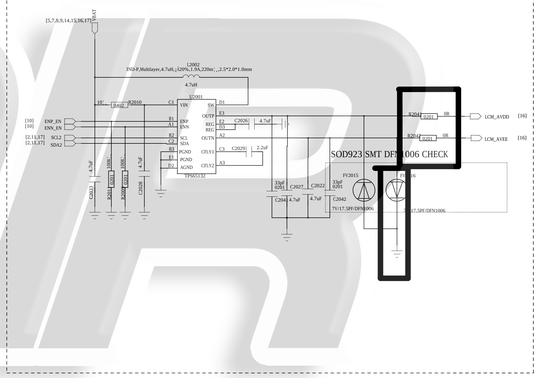
FLASHLIGHT

REARFLASH

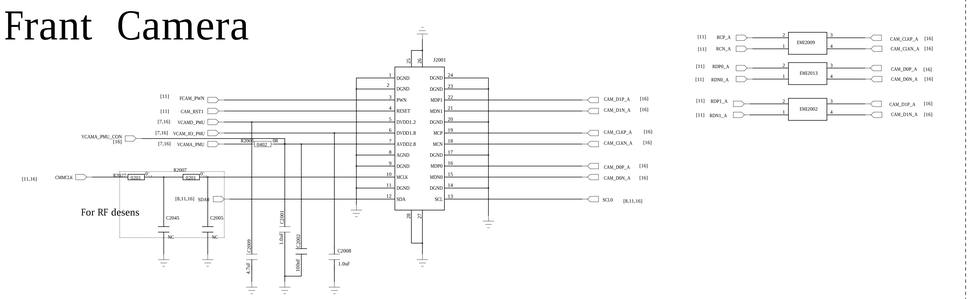


LCDBIAS

TPS65132A0YFFR
ADDR: 0111110b(0x3E)



Frant Camera



Front Flash

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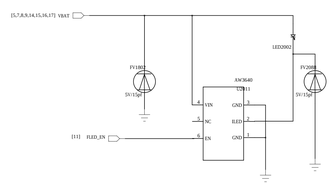
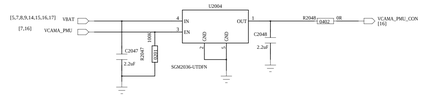




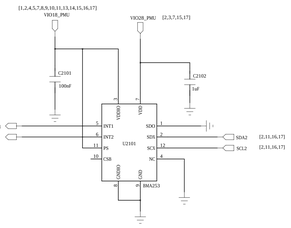
COMPANY:	Shanghai Longcheer		
TITLE:	L3400		
DRAWN: <Drawn By>	DATED: <Drawn Date>		
CHECKED: <Checked By>	DATED: <Checked Date>		
QUALITY CONTROL: <QC By>	DATED: <QC Date>		
RELEASED: <Released By>	DATED: <Release Date>		
CODE: <Code>	SIZE: A0	DRAWING NO: <Drawing Number>	REV: A1
SCALE: <Scale>		SHEET: 16 19	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Accelerometer Sensor

8bit(BMA223) compatible 12bit(BMA253)

ADDR 0011000b(0x18) SDO=0

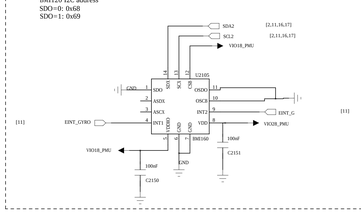


G+Gyro-Sensor

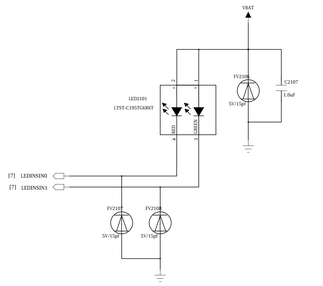
BMI120 I2C address

SDO=0: 0x68

SDO=1: 0x69



RG LED

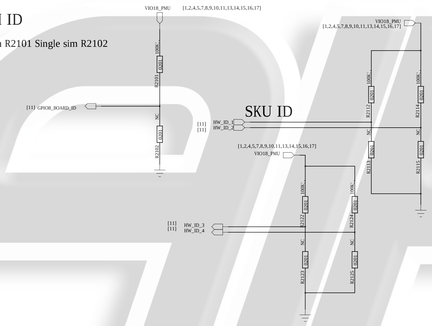


PS Sensor

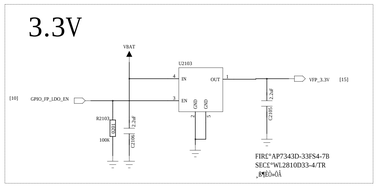
EPL2590KTWJP

I2C address: 0xA6H Write 0xA7H Read

BORAD ID

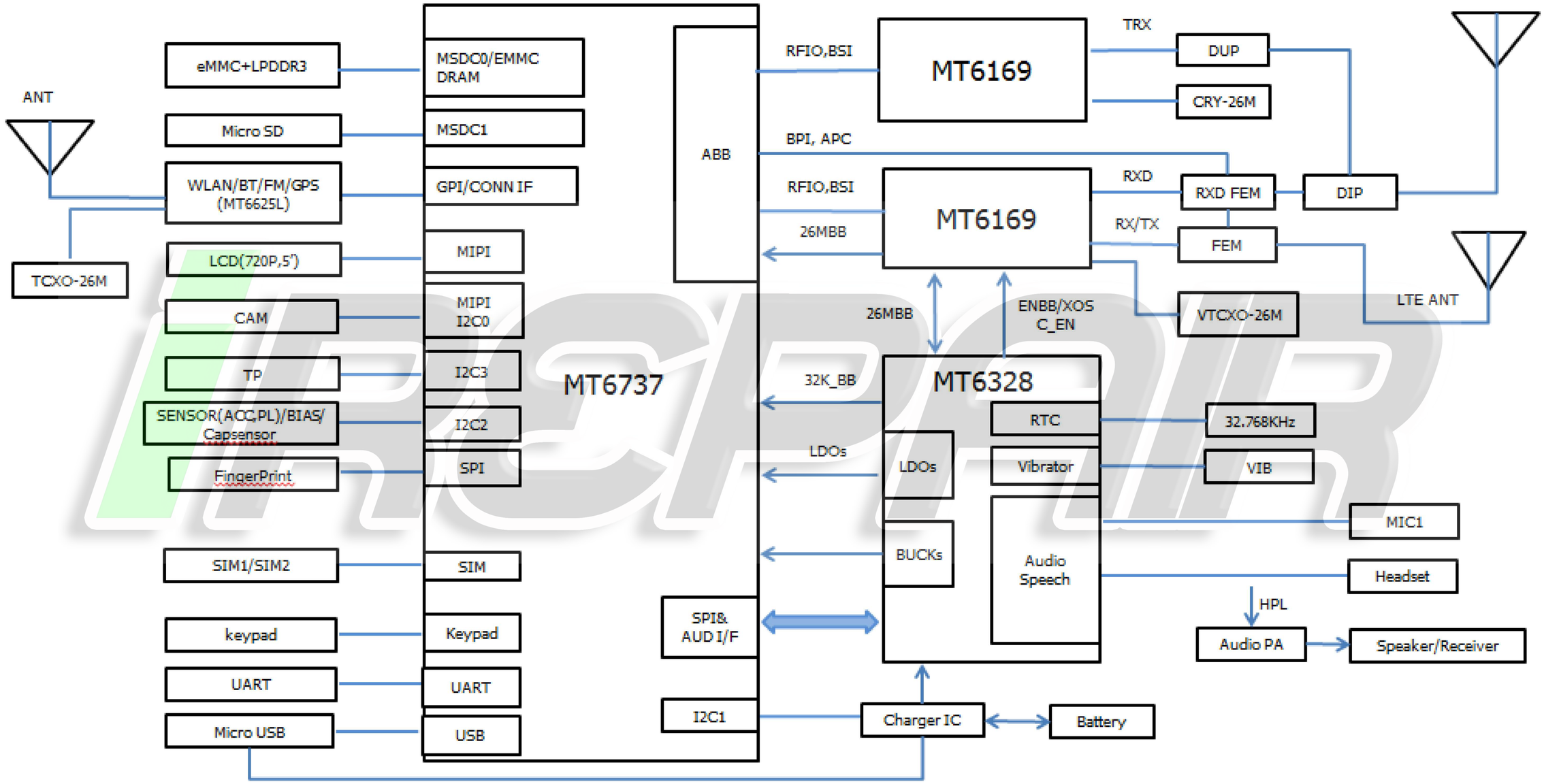


FingerPrint-Sensor



IRSEPAIR

DRAWN: <Drawn By>	DATED: <Drawn Date>	COMPANY: Shanghai Longcheer		
CHECKED: <Checked By>	DATED: <Checked Date>	TITLE: L3400		
QUALITY CONTROL: <QC By>	DATED: <QC Date>	CODE: <Code>	SIZE: A0	DRAWING NO: <Drawing Number> REV: A1
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>	SHEET: 17 19	



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

DRAWN: <Drawn By>	DATED: <Drawn Date>	COMPANY: Shanghai Longcheer	
CHECKED: <Checked By>	DATED: <Checked Date>	TITLE: L3400	
QUALITY CONTROL: <QC By>	DATED: <QC Date>	CODE: <Code>	SIZE: A0
RELEASED: <Released By>	DATED: <Release Date>	DRAWING NO: <Drawing Number>	REV: A1
		SCALE: <Scale>	SHEET: 48 19

I2C	Function	I2C Spec.	Budget Timing	I2C Slave Address (7-bit mode)
I2C-0	Rear Camera - 5M	400 Kbps	Yes.	Rear camera (IMX135) I2C address: 0X10 (Write:0x20, Read:0x21) AF driver (DW9714A) I2C address: 0x0C (Write:0x18 , Read:0x19)
	Front Camera - 2M	400 Kbps	Yes.	Front camera (GC2355) I2C address: 0x3C (Write:0x78, Read:0x79)
I2C-1	CTP	400 Kbps	Yes.	GT1151 / CTP I2C address: 0X5D (Write:0xBA, Read:0xBB) or 0x14 (Write:0x28, Read:0x29)
I2C-2	M Sensor	2.5 Mbps		BM223 / M-Sensor I2C Address: 0x30
	Gyro Sensor	400 Kbps	Yes.	
	Accelerometer	400 Kbps		
	A/PS Sensor	400 Kbps		LTR-553ALS-WA / AS+PS I2C address: 0x46
	NFC	1.2 Mbps	Yes.	
	Flashlight Driver	400 Kbps		
I2C-3				

Note : I2C Spec. : Standard mode (100 kbps) and Fast mode (400 kbps), Fast mode Plus (1 Mbps) and High-speed mode (3.4 Mbps)

iREPAIR