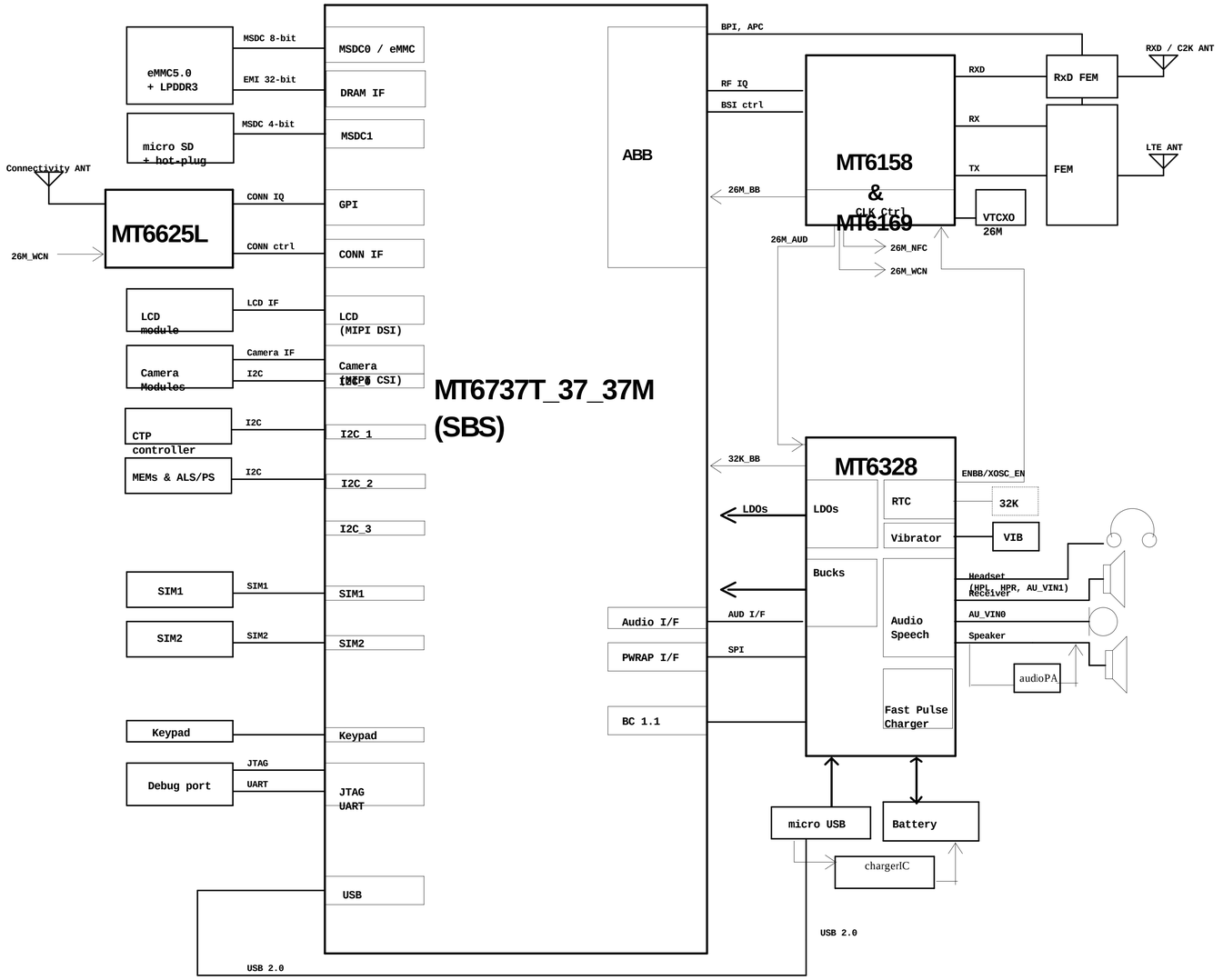
Project : MT6737T_37_37M REF_SCH TOP LEVEL



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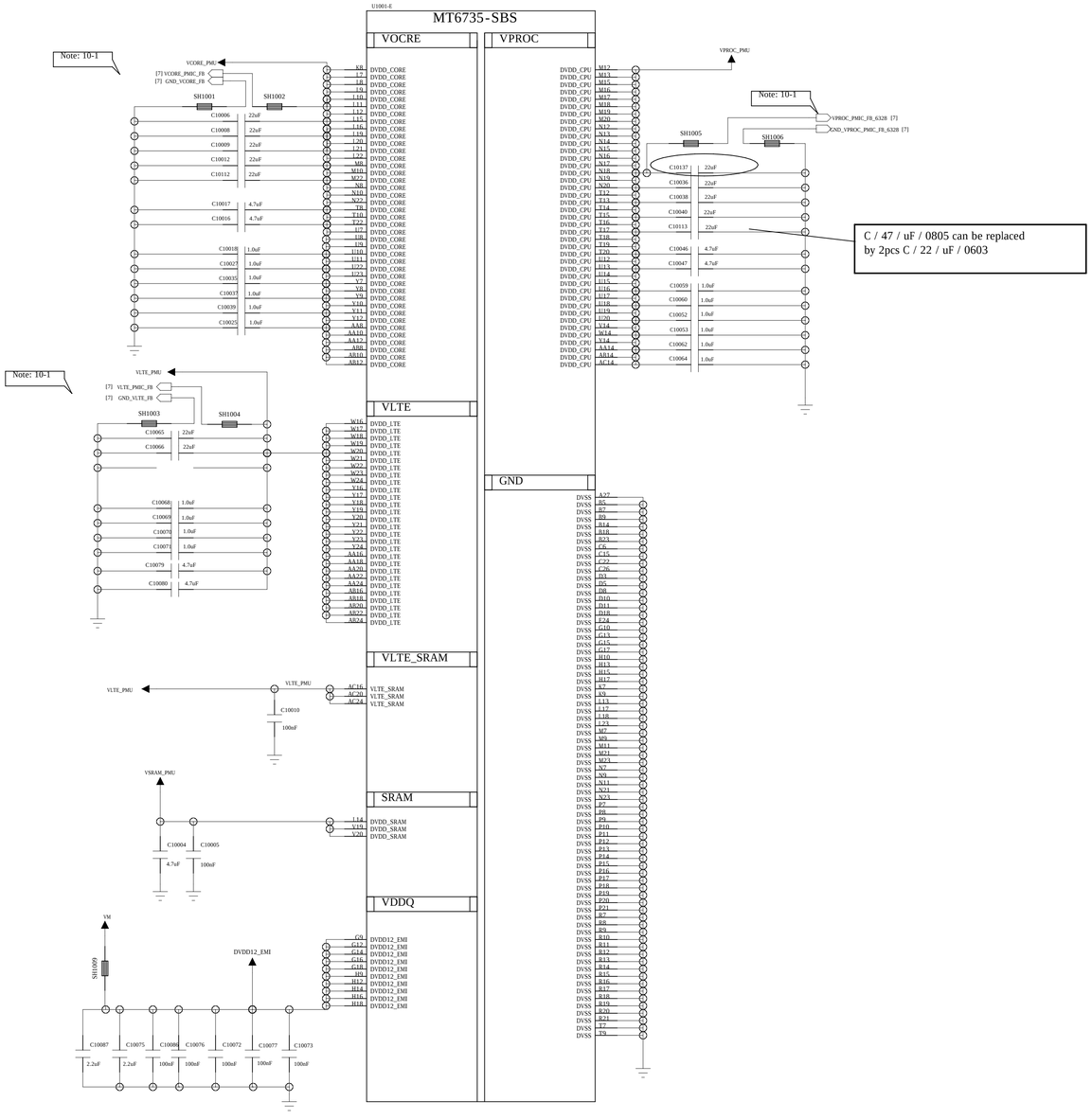
DOCUMENT NO.:	、BLOCK_DIAGRAM	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇ¿Û»	SHEET:	1 OF 21

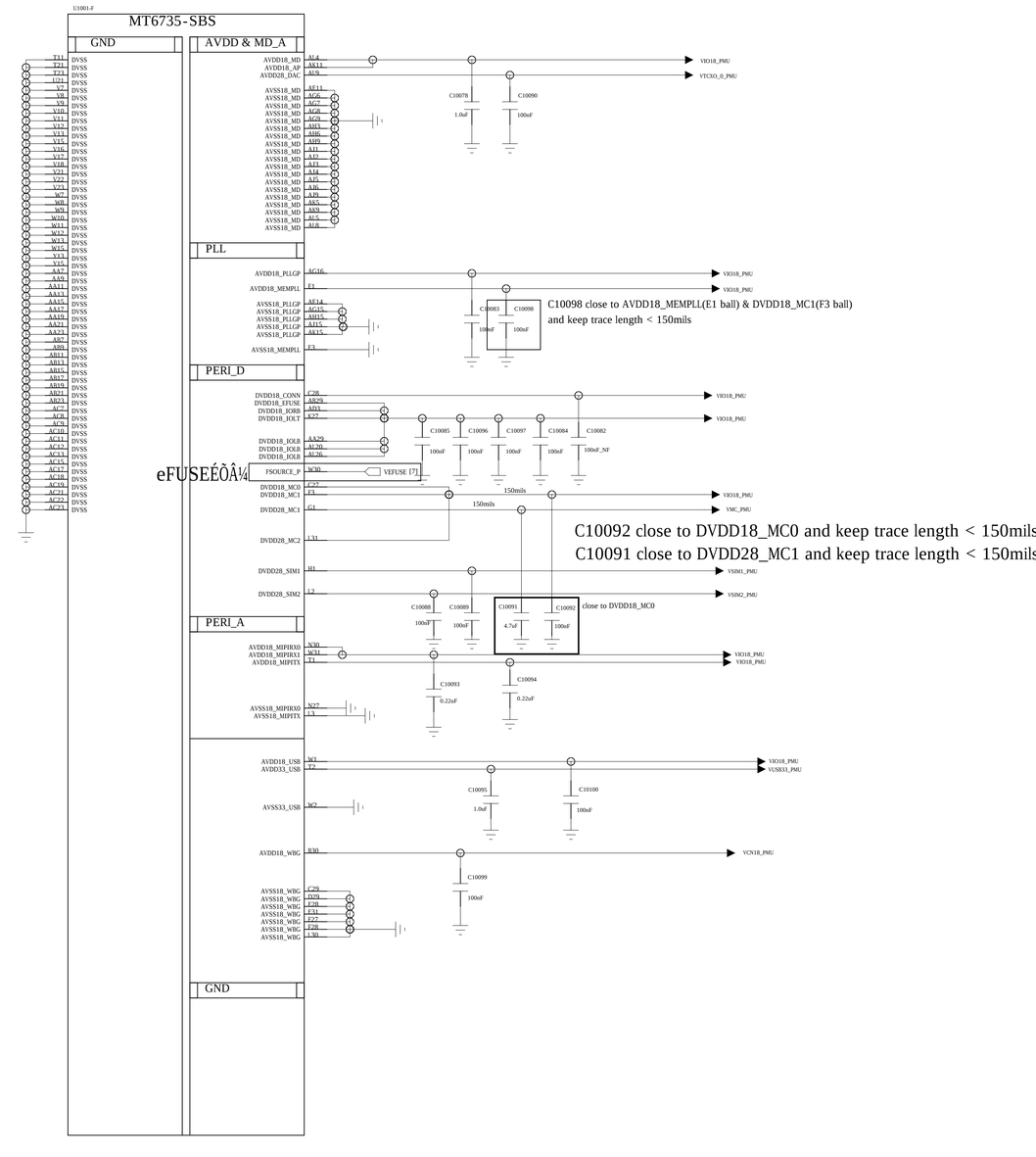
I2C	Function	I2C Spec.	Budget Timing	I2C Slave Address (7-bit mode)
I2C-0	Rear Camera - 8M	400 Kbps	Yes.	**Rear camera (IMX135) I2C address: 0X10 (Write:0x20, Read:0x21)** **AF driver (DW9714A) I2C address: 0x0C (Write:0x18 , Read:0x19)**
	Front Camera-2M	400 Kbps	Yes.	**Front camera (GC2355) I2C address: 0x3C (Write:0x78, Read:0x79)**
	charger IC			charger IC (FAN54015) I2C address: 0x6A (Write:0xD4, Read:0xD5)
I2C-1	CTP	400 Kbps	Yes.	**GT1151 / CTP I2C address: 0X5D (Write:0xBA, Read:0xBB) or 0x14 (Write:0x28, Read:0x29)**
I2C-2	LCD_DC-DC			DC-DC (KTD2151EUO-TR) I2C Address: 0x3E (Write:0x7C, Read:0x7D)
	G-Sensor	400 Kbps	Yes.	G-Sensor (BMA253) I2C Address: 0x18 (Write:0x30, Read:0x31)
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)

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	I2C_ID_OVERVIEW	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÆÚ»
SHEET:	2 OF 21		

MT6737M





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.

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	10_BB_POWER	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
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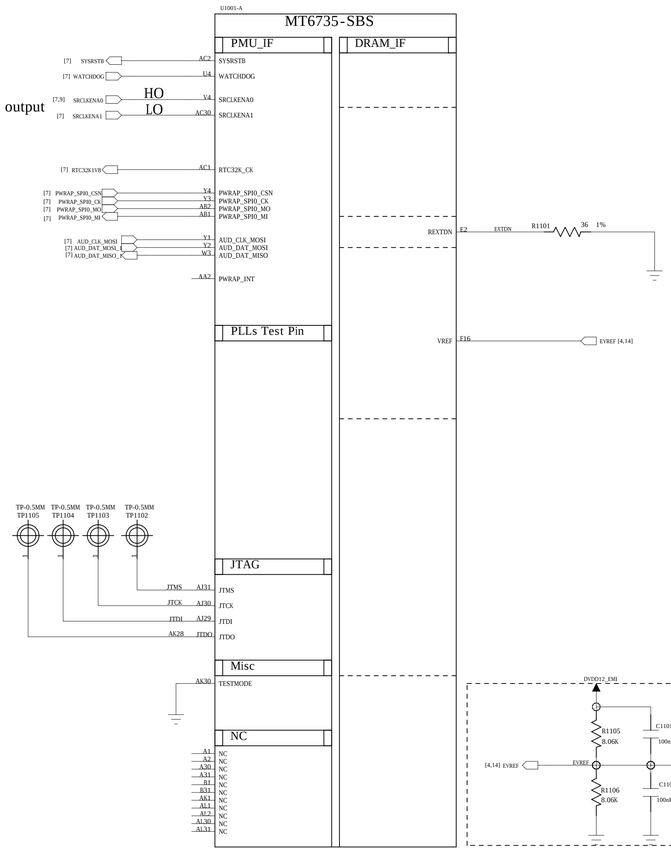
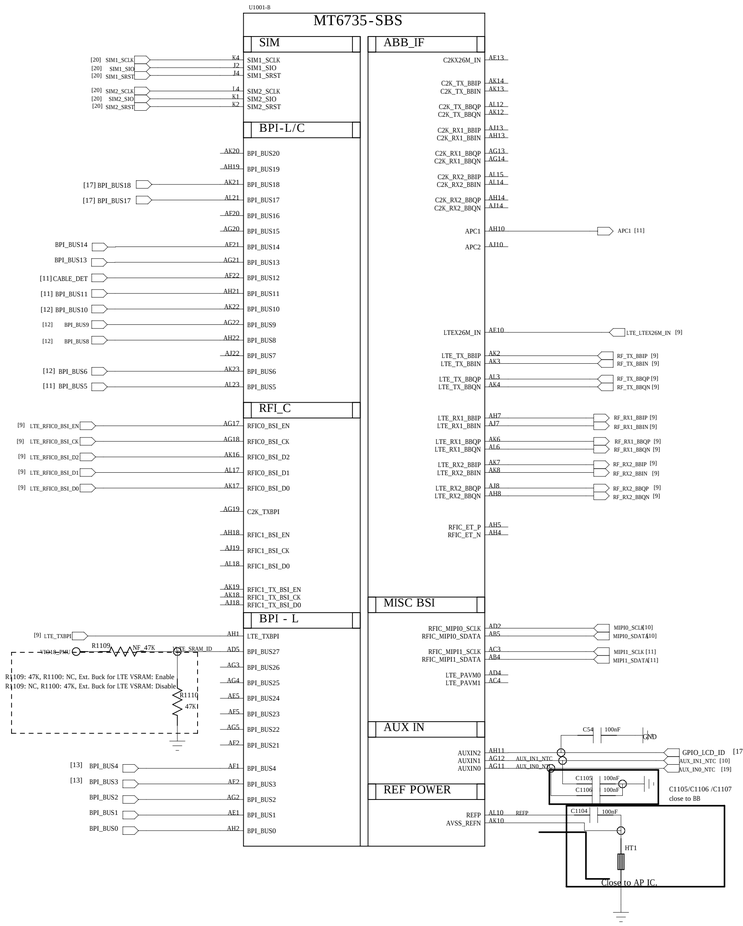
MT6737M





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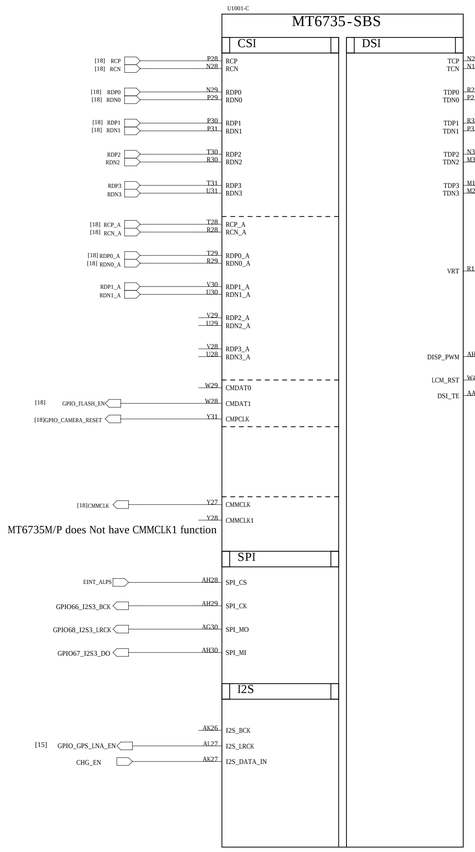
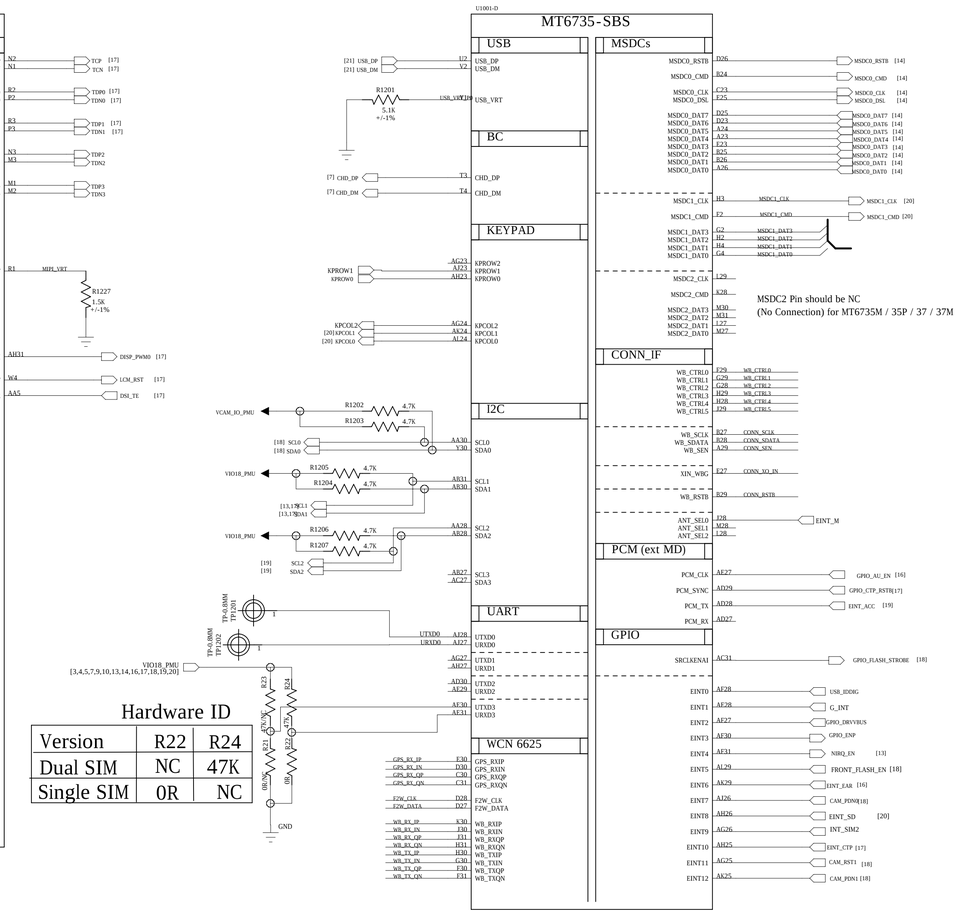
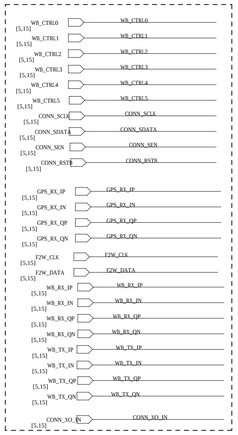
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇ¿ÂÎå»	SHEET: 4 OF 21	

MT6737M





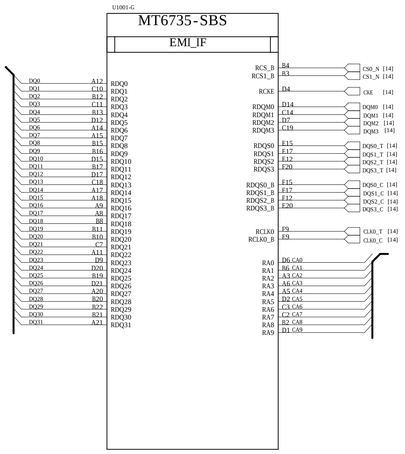


Hardware ID

Version	R22	R24
Dual SIM	NC	47K
Single SIM	0R	NC

TITLE:	<TITTLE>	REV:	<REV>
DOCUMENT NO.:	12_BB_2	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ¶þ	SHEET:	5 OF 21

MT6737M



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DOCUMENT NO.:	13_BB_3	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇ¿Û¨¤	SHEET: 6	OF 21

CONTROL SIGNAL

PWRKEY
HOMEKEY
RESETB
EXT_PMIC_EN
WDTRSTB_EN
UVLO_VTH
FSOURCE
PMU_TESTMODE
SRCLKEN_IN0
SRCLKEN_IN1
SPI_CSN
SPI_CLK
SPI_MOSI
SPI_MISO

AUX ADC

VAUX18
AVDD18_AUXADC
AVSS18_AUXADC
AUXADC_VIN

VBAT INPUT

AVDD45_VPROC
AVDD45_VPROC
AVDD45_VPROC
AVDD45_VPROC
AVDD45_VPROC
AVDD45_VLTE
AVDD45_VLTE
AVDD45_VLTE
AVDD45_VCORE1
AVDD45_VCORE1
AVDD45_VCORE1
AVDD45_VSYS22
AVDD45_VSYS22
AVDD45_VPA
AVDD45_SMPS
AVDD45_LDO1
AVDD45_LDO2
AVDD45_LDO3
AVDD45_LDO4
AVDD45_LDO5

AVDD22_LDO1
AVDD22_LDO1
AVDD22_LDO2
AVDD22_LDO3
AVDD22_LDO4

DIG Power

DVDD18_IO
DVDD18_DIG
DVSS18_IO

VREF

VREF
AVSS45_VREF

GND

AVSS45_VPROC
AVSS45_VPROC
AVSS45_VPROC
AVSS45_VPROC
AVSS45_VPROC
AVSS45_VCORE1
AVSS45_VCORE1
AVSS45_VCORE1
AVSS45_VLTE
AVSS45_VLTE
AVSS45_VLTE
AVSS45_VSYS22
AVSS45_VSYS22
AVSS45_VPA
AVSS45_SMPS

AVSS45_LDO

BUCK OUTPUT

VPROC — L2001 0.33uH — 0.6~1.31 5A 125mil — VPROC_PMU
4 mil GND trace with good shielding from baseband (Differential)
VPROC_FB — VPROC_PMIC_FB_6328 [3]
AVSS45_VPROC_FB — GND_VPROC_PMIC_FB_6328 [3]
4 mil.

VLTE — L2003 0.47uH — 0.6~1.31 2.8A 75mil — VLTE_PMU
4 mil GND trace with good shielding (Differential)
VLTE_FB — VLTE_PMIC_FB [3]
AVSS45_VLTE_FB — GND_VLTE_FB [3]

VCORE1 — L2006 0.47uH — 0.6~1.31 3.5A 90mil — VCORE_PMU
4 mil GND trace with good shielding from baseband (Differential)
VCORE1_FB — VCORE_PMIC_FB [3]
AVSS45_VCORE1_FB — GND_VCORE_FB [3]

VSYS22 — L2008 0.47uH — 1.9A 50mil — VSYS_PMU
4 mil GND trace with good shielding from baseband (Differential)

VPA — L2009 2.2UH — 0.5~3.4 600mA 30mil — VPA_PMU

LDO OUTPUT

VM	1.24/1.39/1.54	1000mA	L/W=1500mil/25mil → VM
VTCXO_0	2.8	40mA	L/W=2800mil/6mil → VTCXO_0_PMU
VTCXO_1	1.825	350mA	L/W=2800mil/10mil → VTCXO_1_PMU
VRF18_0	1.2/1.3/1.5/1.825	300mA	L/W=2800mil/10mil → VRF18_0/1[4]
VRF18_1	1.7/1.8/1.86/2.76/3.0/3.1	300mA	L/W=2800mil/10mil
VSIM1	1.7/1.8/1.86/2.76/3.0/3.1	50mA	L/W=2800mil/6mil → VSIM1_PMU
VSIM2	1.7/1.8/1.86/2.76/3.0/3.1	50mA	L/W=2800mil/6mil → VSIM2_PMU
VCN18	1.8	150mA	L/W=2800mil/10mil → VCN18_PMU
VCN28	2.8	40mA	L/W=2800mil/6mil → VCN28_PMU
VCN33	3.0/3.1/3.2/3.3/3.4/3.5/3.6	350mA	L/W=2800mil/12mil → VCN33_PMU
VIO18	1.8	600mA	L/W=2800mil/20mil → VIO18_PMU
VUSB33	3.3	20mA	L/W=2800mil/6mil → VUSB33_PMU
VIO28	2.8	200mA	L/W=2800mil/10mil → VIO28_PMU
TREF			→ VBATREF
VEFUSE			→ VEFUSE
VMC	1.8/2.9/3.0/3.3	200mA	L/W=2800mil/10mil → VMC_PMU
VMCH	2.9/3.0/3.3	800mA	L/W=2800mil/20mil → VMCH_PMU
VEMC_3V3	2.9/3.0/3.3	400mA	L/W=2800mil/20mil → VEMC_3V3_PMU
VCAMA	1.5/1.8/2.5/2.8	200mA	L/W=2800mil/10mil → VCAMA_PMU
VCAMAF	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	200mA	L/W=2800mil/10mil → VCAM_AF_PMU
VCAMD	0.9/1.0/1.1/1.2/1.3/1.5	500mA	L/W=2800mil/16mil → VCAMD_PMU
VCAMIO	1.2/1.3/1.5/1.8	200mA	L/W=2800mil/10mil → VCAM_IO_PMU
VGP1	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	200mA	L/W=2800mil/10mil → VGP1_PMU
VSRAM	0.6~1.31	400mA	L/W=2800mil/20mil → VSRAM_PMU

DRAM POWER	C2050
MT6328 VM	NF
EXTERNAL BUCK	1UF

C2050 NF_1.0uF, C2047 1.0uF, C2046 1.0uF, C2048 NF_1.0uF, C2056 1.0uF

Vibrator Driver

VIBR — J4 1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3 — 100mA L/W=2800mil/8mil → VIBR_PMU

RTC

AVDD28_RTC — R8 2.8 — 2mA — L/W=800mil/4mil → VRTC
AVSS28_RTC — R7
XIN — T6
XOUT — R6
ENB — R3 — ENB_6169 [9]
XOSC_EN — T1 — XOSC_EN_6169
RTC32K_2V8 — M9
RTC32K_1V8_0 — P5 — RTC32K1V8 [4]
RTC32K_1V8_1 — R4

output

X2001 XTAL-32.768K-KYOCERA 32.768k/NC
C2033 22pF/NC, C2034 0R
R2027 0R
Close to MT6328
32K_OUT [9]

C2032 100nF, R2026 1K
C44 2.2uF, C45 2.2uF, C46 47pF, C14 47uF/NC, C15 47uF/NC
U7 CPH3225A

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1. VBAT_Buck input cap should connect to its individual GND first, then go to main GND.
2. Buck controller power trace (AVDD45_SMPS) must use single trace connected to system (battery) power directly, and can¡¯t merge with others.
3. Please refer to latest MMD design

Please refer to latest MMD design

VBAT — 100mil — C2007 22uF
SH2009, SH2010, SH2011, SH2012, SH2013, SH2014
BAT_VPROC 50mil, BAT_VLTE 30mil, BAT_VCORE1 30mil, BAT_VSYS 30mil
R2005 1R — C2043 1.0uF — SH2015 — GND_SMPS [7]
SCH&PCB A11 Ba Removed

VBAT — 120mil — 20mil
C2019 2.2uF, C2016 2.2uF, C2017 2.2uF, C2018 2.2uF, C2020 2.2uF
C2011 4.7uF, C2012 2.2uF, C2014 2.2uF, C2015 4.7uF, C2013 4.7uF
Close to MT6328

VSYS_PMU — 50mil — 20mil
C2040 22uF
VIO18_PMU — C2031 100nF, C2057 1.0uF, C2030 10nF, HT2
Close to MT6328

GND_VPROC, GND_VCORE1, GND_VLTE, GND_VSYS
SH2001, SH2002, SH2003, SH2004, SH2005
Please refer to latest MMD design

C2040 close to AVDD22_LDO1/2/3/4 balls

C2054 100nF
[8] BATSNS, [8] ISENSE
R2032 330K +/-1%, R2033 39K +/-1%
VCDT rating: 1.268V
C2051 1.0uF
[8] BAT_ON, [8] VDRV, CHR_LDO
C2041 1.0uF
Close to PMIC

U2-C
Charger: IC, FCHR_ENB, N3 BATSNS, N4 ISENSE, M4 VSYSSNS, P2 BATON, R1 VCDT, R2 VDRV, P3 2IBLDO
BC1.1/1.2: CHG_DM M1 — CHD_DM [5]; CHG_DP N1 — CHD_DP [5]
Gauge: CS_N E15 — CS_N [8]; CS_P D15 — CS_P [8]
4 mil trace with good shielding (Differential)
ISINK: ISINK0 R16 — KEYPAD_LED_SUB; ISINK1 P15 — LED_GREEN
AVSS45_ISINK N14
U / MT6328E1

Audio

U2-B

[9]MT6169_XO4_CLK	H12	CLK26M	
[4] AUD_CLK_MOSI	M8	AUD_CLK	
[4] AUD_DAT_MOSI	N8	AUD_DAT_MOSI	
[4]AUD_DAT_MISO_1	M10	AUD_DAT_MISO	
AU_SPK1P	F16	SPK_P	
AU_SPK1N	F16	SPK_N	
[16] AU_HSP	K15	AU_HSP	
[16] AU_HSN	H14	AU_HSN	
[16] AU_HPL	H15	AU_HPL	
[16] AU_HPR	H16	AU_HPR	
[16] ACCDET	M14	ACCDET	
[16] AU_VIN0_P	M16	AU_VIN0_P	
[16]AU_VIN0_N	M15	AU_VIN0_N	
[16]AU_VIN1_P	K13	AU_VIN1_P	
[16]AU_VIN1_N	L13	AU_VIN1_N	
[16] AU_VIN2_P	K14	AU_VIN2_P	
[16]AU_VIN2_N	L14	AU_VIN2_N	
AU_MICBIAS1	N15		→ MICBIAS1
AU_MICBIAS0	N16		→ MICBIAS0
AU_FLYP	G15		
AU_FLYN	F15		
AVDD45_SPK	D14		
AVSS45_SPK	E14		
VAUD28	K14		
AVDD28_AUD	K16		
AVSS28_AUD	K12		
AVDD18_AUD	G13		→ VIO18_PMU
AVSS18_AUD	G14		
AVSS18N_AUD	F13		
AU_REFN	H14		

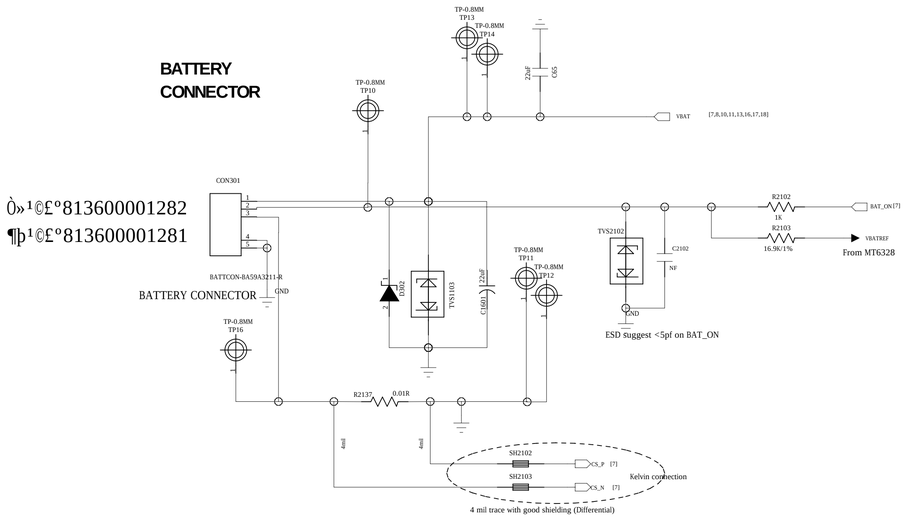
C2038 2.2uF, 30mil; C2044 1.0uF, C2042 1.0uF, C2022 1.0uF; VBAT 25mil
C2036 1.0uF
C2058 4.7uF
C2027 4.7uF
SH3, SH4, SH5
GND, C57 1nF, AU_REFN [16]
GND shielding

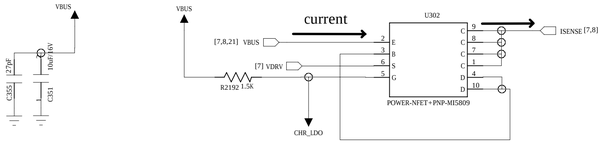
single via to GND plane directly

C2027/ C2038/ C2058 flying cap & holding cap :
4.7uF for 16ohm reciver
2.2uF for 32ohm reciver

To improve noise level, connect to audio jack first, and then connect to GND

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	、20_POWER_MT6328	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÆÚ¶þ
SHEET:	7 OF 21		





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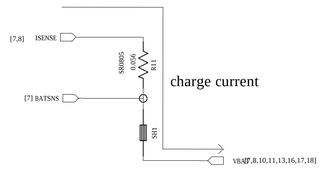

Charger

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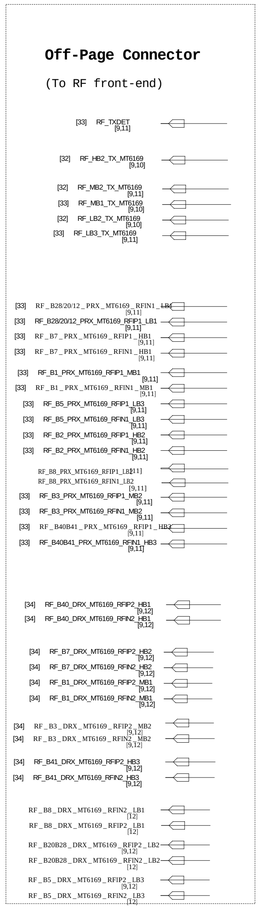
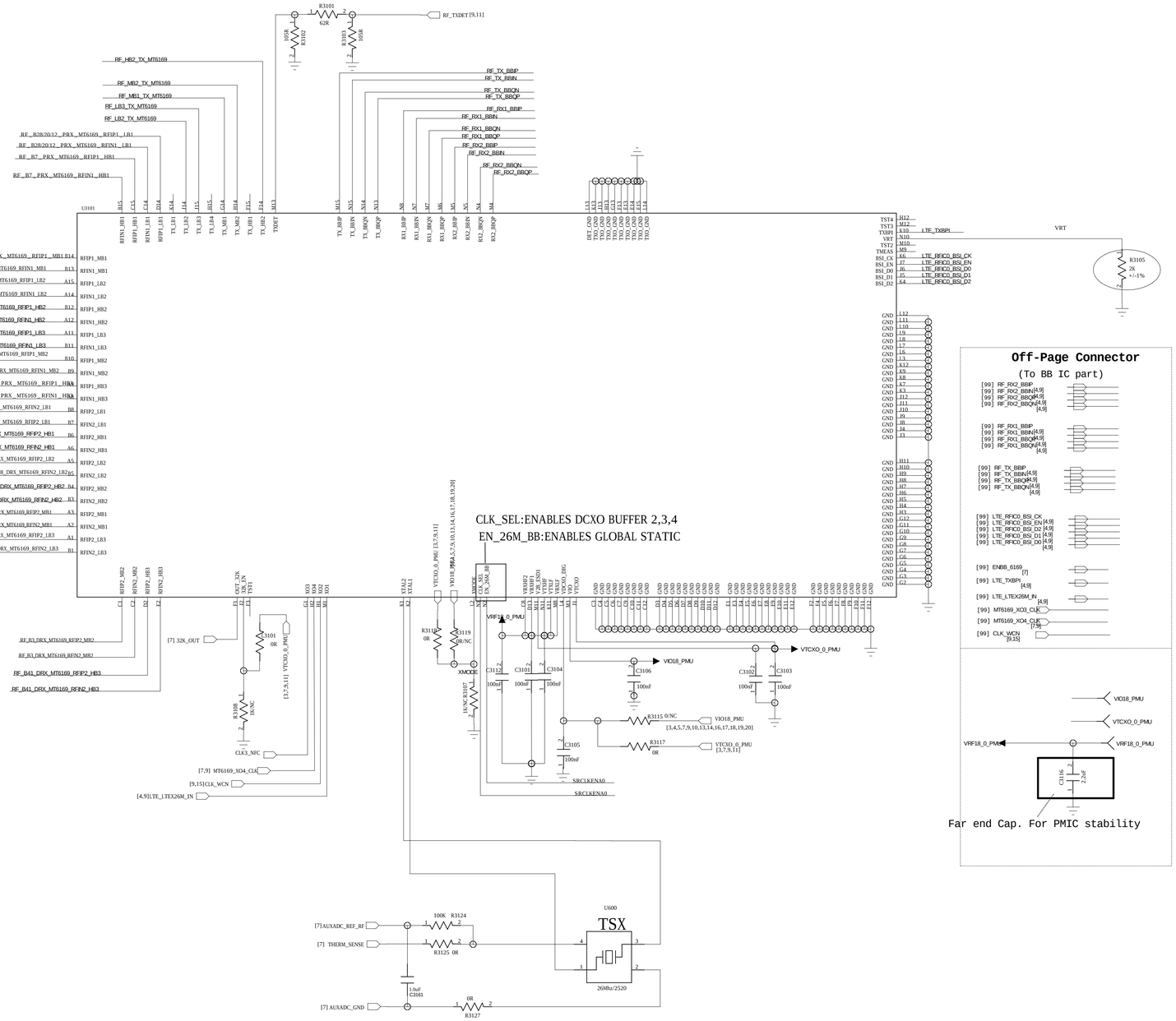
DOCUMENT NO.:	21_POWER_BATCON_CHARGER	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ»	SHEET: 8 OF 21



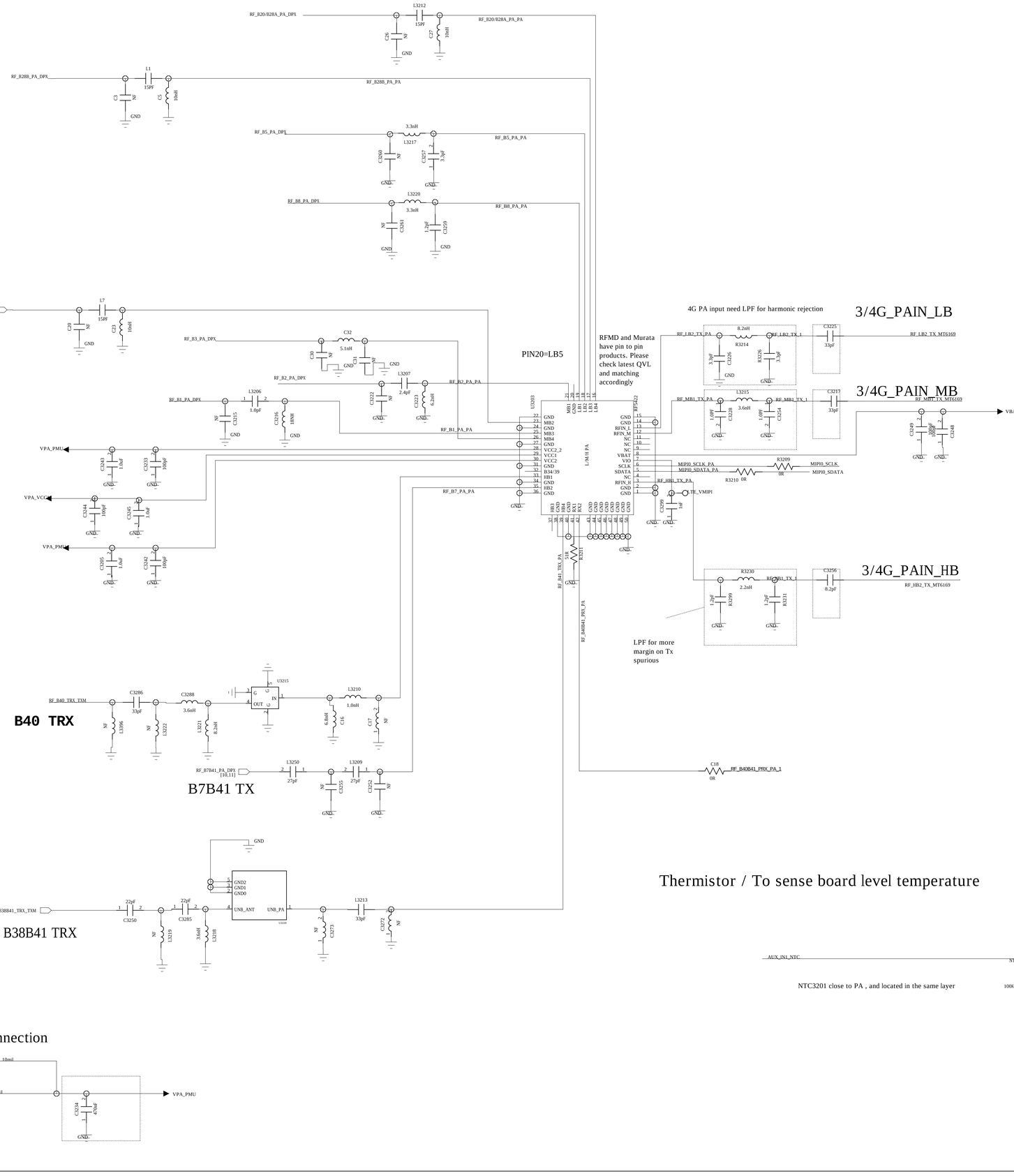


Case	MT6169 Control Pin					MT6169 CLK Output			Clock scheme
	XMODE	32K_EN	VDXCO_DIG	EN_26M_BB	CLK_SEL	OUT_32K	XO1	XO2-4	
1	0	0	VIO18	0	0	Off	Off	Off	VCTXO 32K XO
2	0	0		1	1	Off	26M Out	26M Out	
3	VIO18	0		0	0	Off	Off	Off	26M XO
4		0		1	1	Off	26M Out	26M Out	32K XO
5	VTCXO28	VTCXO28	VTCXO28	0	0	On	Off(LPM)	Off	26M XO
6				1	1	On	26M Out	26M Out	32K Less

CLOCK:CO-TSX+32K LESS

Clock Scheme	32K Crystal Component				32K_EN			XMODE			VDCXO_DIG	VCTCXO / TSX Component										MT6628 AuxADC			VTCXO2 Power
	R2027	C2033	C2034	X2001	R3116	L3101	R3108	R3119	R3118	R3107	R3115	R3117	R3114	R3126	R3124	R3125	R3127	X3102	U3103	C3113	C3114	C3115	C3161	C2024	C2023	R2007	VTCXO2 Power Connection
VCTXO + 32K Exist	NC	22pF	22pF	32K X'tal	NC	NC	1K	NC	NC	1K	0R	NC	0R	0R	NC	NC	NC	NC	VCTCXO	100nF	100nF	NC	NC	0R	1uF	0R	Connect to VTCXO_0_PMU
TSX + 32K Exist	NC	22pF	22pF	32K X'tal	NC	NC	1K	0R	NC	NC	0R	NC	NC	NC	100K	0R	0R	TSX	NC	NC	NC	NC	NC	1nF	1uF	Bead	Connect to VTCXO_0_PMU
TSX + 32K Less	0R	NC	0R	NC	NC	0R	NC	NC	0R	NC	NC	0R	NC	NC	100K	0R	0R	TSX	NC	NC	NC	NC	NC	1nF	1uF	Bead	Connect to VTCXO_1_PMU

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	31_RF_MT6169_PIN_OUT	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÈÕ»
		SHEET:	9 OF 21



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DOCUMENT NO.:	32_RF_MT6169_RF_TX	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ¶	SHEET:	10 OF 21

TRX3,4,5,8,9不能走低频信号

Main_ANT_704~2690MHz

Ò»¹©£º813000004291

Ò»¹©£º813000001916

ASM_Main

SP14T

Pi attenuation for LB 8PSK TX in RX band noise

MT6169 TX Ouput need a DC block(MUST).

2G_PAIN_HB

2G_PAIN_LB

B2 TRX

B5 TRX

B40/B41 PRX

此处有跳线

B8 TRX

B7 TRX

B4 TRX for LA

B1 TRX

LANA B4双工器 SAYEY1G73CA0F0A

B3 TRX

BAND28A

BAND28B/Band20

For power VTCXO2 star connection

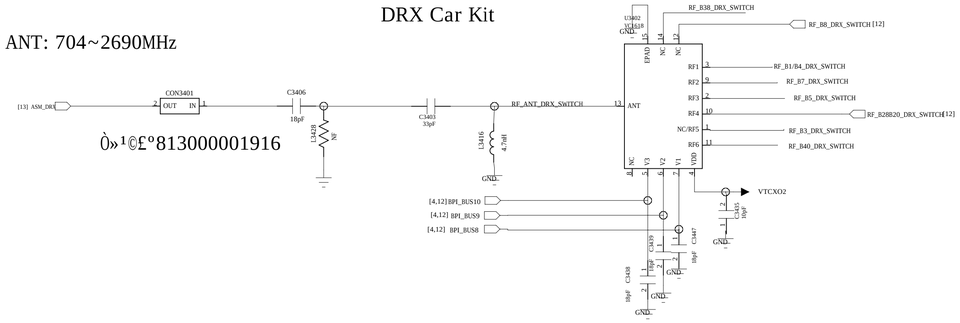
C3383 is power capacitor of PMU.

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	33_RF_MT6169_RF_PRX	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÆÚ¶þ
SHEET:	11 OF 21		

DRX ANT: 704~2690MHz

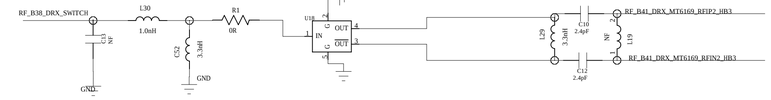
SP8T

DRX Car Kit

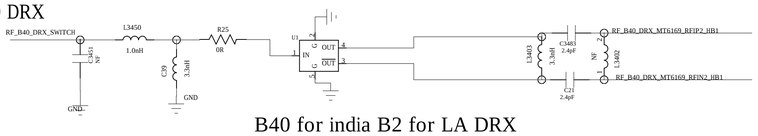


0»¹©£°813000001916

B38 DRX

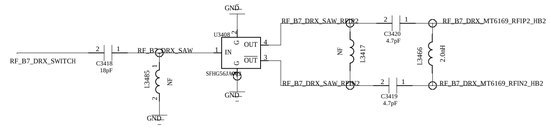


B40 DRX

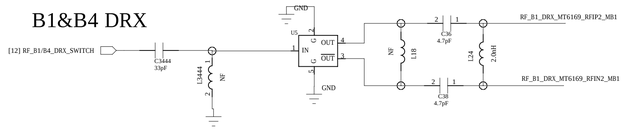


B40 for india B2 for LA DRX

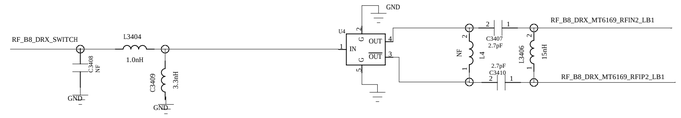
B7 DRX



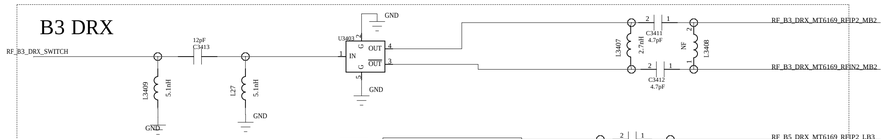
B1&B4 DRX



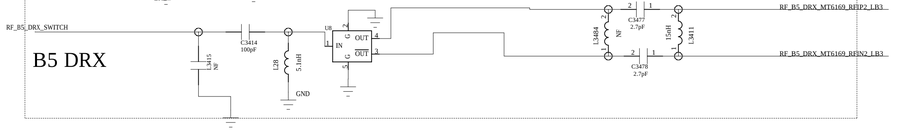
B8 DRX



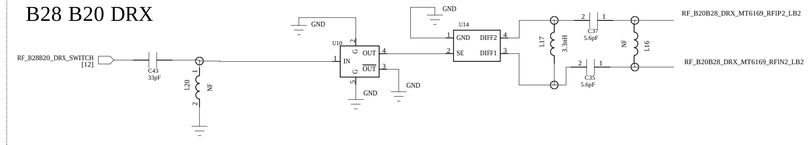
B3 DRX



B5 DRX



B28 B20 DRX



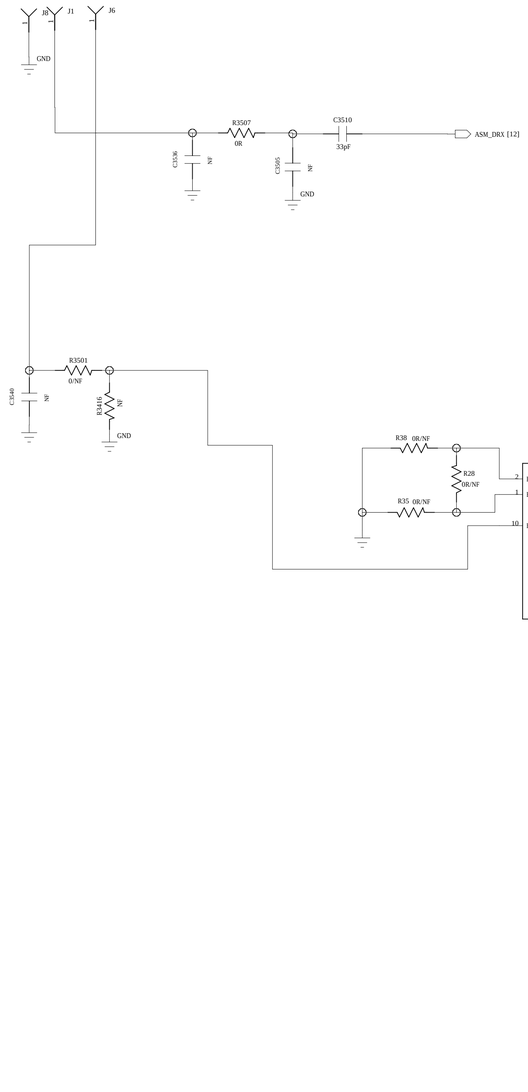
[9,12] RF_B3_DRX_MT6169_RFIP2_MB2
[9,12] RF_B3_DRX_MT6169_RFIN2_MB2
[31] RF_B20B28_DRX_MT6169_RFIP2_LB2 [9,12]
[31] RF_B20B28_DRX_MT6169_RFIN2_LB2 [9,12]
[31] RF_B7_DRX_MT6169_RFIP2_HB2 [9,12]
[31] RF_B7_DRX_MT6169_RFIN2_HB2 [9,12]
[31] RF_B40_DRX_MT6169_RFIP2_HB1 [9,12]
[31] RF_B40_DRX_MT6169_RFIN2_HB1 [9,12]
[31] RF_B41_DRX_MT6169_RFIP2_HB3 [9,12]
[31] RF_B41_DRX_MT6169_RFIN2_HB3 [9,12]
[31] RF_B1_DRX_MT6169_RFIP2_MB1 [9,12]
[31] RF_B1_DRX_MT6169_RFIN2_MB1 [9]
[31] RF_B5_DRX_MT6169_RFIP2_LB3 [9,12]
[31] RF_B5_DRX_MT6169_RFIN2_LB3 [9,12]
[31] RF_B8_DRX_MT6169_RFIP2_LB1 [9,12]
[31] RF_B8_DRX_MT6169_RFIN2_LB1 [9,12]

[99] BPI_BUS8 [4,12]
[99] BPI_BUS9 [4,12]
[99] BPI_BUS10 [4,12]
[99] BPI_BUS6 [4]
[99] DRX_ANT

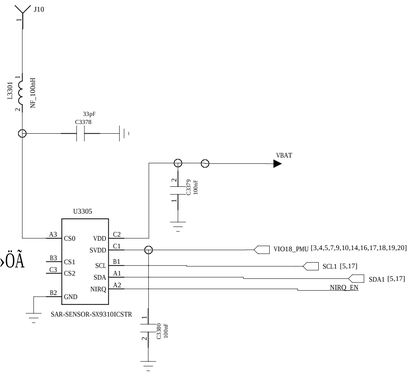
TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	34_RF_MT6169_RF_DRX	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÈÙ»¤
SHEET:	12 OF 21		

È ç ¹ û DRX Õ » Ô Ð ¸ ß £ µ £ ¬ ´ Ë 13489 ¿ É Ô Ô ² » Ó Å Ô ¤ Á ô ¡ £

DRX ANT: 734~960MHz + 1805~2690MHz



Ô¤ÁôSAR sensorÎ»ÖÃ



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DOCUMENT NO.:	36_RF_AT	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ»	SHEET: 13	OF 21

eMMC+LPDDR3

221 Ball, 0.5mm pitch

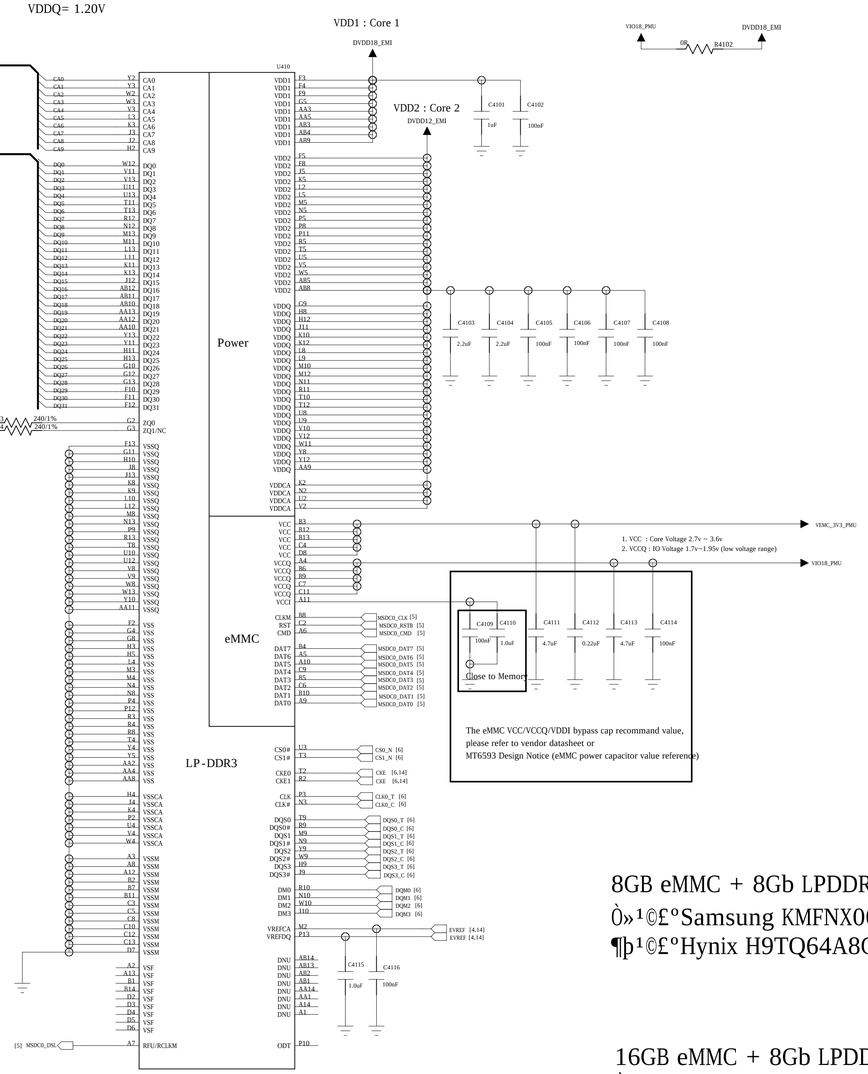
VDD1=1.8V
VDD2=1.20V
VDDCA=1.2V
VDDQ= 1.20V

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
Ò»¹©£ºSamsung KMFNX0012M-B214 806700000431
¶þ¹©£ºHynix H9TQ64A8GTBCUR-KUM

16GB eMMC + 8Gb LPDDR3
Ò»¹©£ºSamsung KMFE10012M-B214 806700000291
¶þ¹©£ºHynix H9TQ17A8GTACUR-KUM

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	41_MEMORY_EMMC_LPDDR3	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ¶	SHEET: 14 OF 21

WIFI/BT/GPS Single ANT Ref.

MT6625L / QFN40

C5001 1uF
VCN28_PMU
0.5ppm
U5002
4 VCC
3 OUTPUT
GND 1
GND 2
26MHz/NC
0R/NC R5001
0R R2
[5,15] CONN_XO_IN
[9] CLK_WCN

3490 J5
50 Ohm
R5004 0R
C5001 NF
L5004 NF
50 Ohm
50 Ohm
F5001
GND 6
GND 4
ANT 5
GND 1
WIFI 2
GND 3
GPS
RF-SAW-DP1608-V1524CAT
L5008 NF
L5007 NF
R5014 0R
GND
10pF C5004
L5006 2n
L5005 50ohm
NF
[15] WB_AVDD18
100nF C5002
1000pF C5005
U5001
WB_CTRL4 [5]
WB_CTRL5 [5]
WB_CTRL3 [5]
WB_CTRL2 [5]
WB_CTRL1 [5]
WB_CTRL0 [5]
WB_RX_IP [5]
WB_RX_IN [5]
NC 30
WB_AVDD18 29
WB_CTRL5 28
WB_CTRL4 27
WB_CTRL3 26
WB_CTRL2 25
WB_CTRL1 24
WB_CTRL0 23
WB_RX_IP 22
WB_RX_IN 21
WB_RF_2G 31
NC 32
VCN33_PMU[7,15] WB_AVDD33 33
50 Ohm WIFI5G_RF 34
NC 35
FM_AVDD28 [15] AVDD28_FM 36
FM_LANT_N 37
FM_LANT_P 38
50 Ohm GPS_RFIN 39
GPS_AVDD18 [15] AVDD18_GPS 40
DVSS 41
WB_RX_QP 20
WB_RX_QN 19
WB_TX_IP 18
WB_TX_IN 17
WB_TX_QP 16
WB_TX_QN 15
GPS_RX_IP 14
GPS_RX_IN 13
GPS_RX_QP 12
GPS_RX_QN 11
WB_RX_QP [5]
WB_RX_QN [5]
WB_TX_IP [5]
WB_TX_IN [5]
WB_TX_QP [5]
WB_TX_QN [5]
GPS_RX_IP [5]
GPS_RX_IN [5]
GPS_RX_QP [5]
GPS_RX_QN [5]
AVDD28_ISOURCE 1
HRST_B 2
FM_DRG 3
F2W_DATA 4
F2W_CLK 5
SCLK 6
SDATA 7
SDN 8
CEXT 9
XO_IN 10
MT6625 IPD

HT3,HT4,C1006 close to MT6625L
[15] GPS_AVDD18
WB_AVDD18 [15]
HT5012
HT5013
VCN18_PMU
Star Conn for WB/GPS/WBG 1V8
C5015 1.0nF

Based on your system level design , if better WiFi TX performance is needed on your system, please refer to WiFi performance enhance proposal

FM
[16] FM_RX_N
[16] FM_ANT
FM_RX_N
FM_LANT_P
L5002 82nH
NF L5012
NF R5006

refer to FM desense performance enhance proposal
FM_AVDD28
82nH/0402
VCN28_PMU
C5008 0.01nF

GPSÍâ¼ÓLNA(ÞÔÀÜÔÅ»¯)
U5003
RF-SAW-SAFFB1G58KA0F0A
UNBL1
UNBL2
GND GND GND GND
C5010 18pF
L5003 5.6nH
C5011 NF
U5004
GND 1
GND 2
BFIN 3
RFOUT 6
EN 5
VDD 4
GPS-LNA-RDALN16
R5022 NF
R5032 0R
1.0uF C5012
0R R5040
VCN28_PMU [7,15]
GPIO_GPS_LNA_EN [5]
470PF C5009

Close to MT6625
[7,15]VCN33_PMU
CONN_XO_IN [5,15]
100pF C5006
4.7nF C5007
VCN33_PMU

CONN_RSTB [5]
C5028 NF
F2W_DATA [5]
F2W_CLK [5]
CONN_SCLK [5]
CONN_SDATA [5]
CONN_SEN [5]
1.0uF C5013
100pF C5014

Based on your system level design , if better GPS performance is needed on your system, please refer to GPS performance enhance proposal

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	50_CONNECTIVITY_MT6625	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÆÚ¶
SHEET:	15 OF 21		

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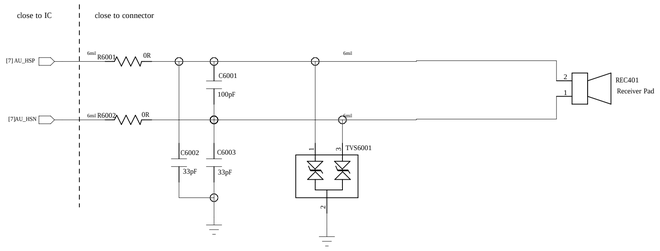
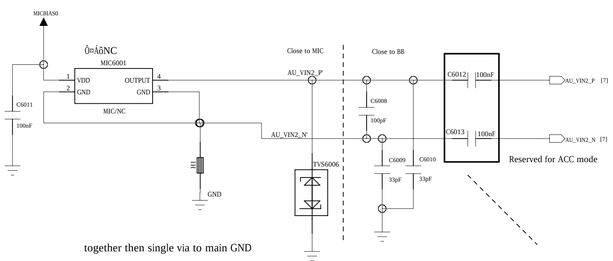
Receiver



MAIN MIC

Handset Microphone 1

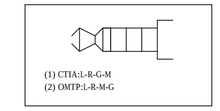
¸¨MIC



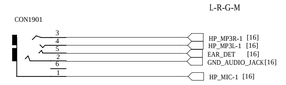
together then single via to main GND

Schematic design notice of "60_PERI_AUDIO_IO" page.	
Note 60-1:	The equivalent capacitance of audio and speech ESD protection device must be <=330pF. choose bi-directional device only
Note 60-2:	The equivalent capacitance of FM ANT. ESD protection device must be <=1pF.
Note 60-3:	TVS Stand off voltage for speaker should >=5V

Earphone Audio



L-R-G-M



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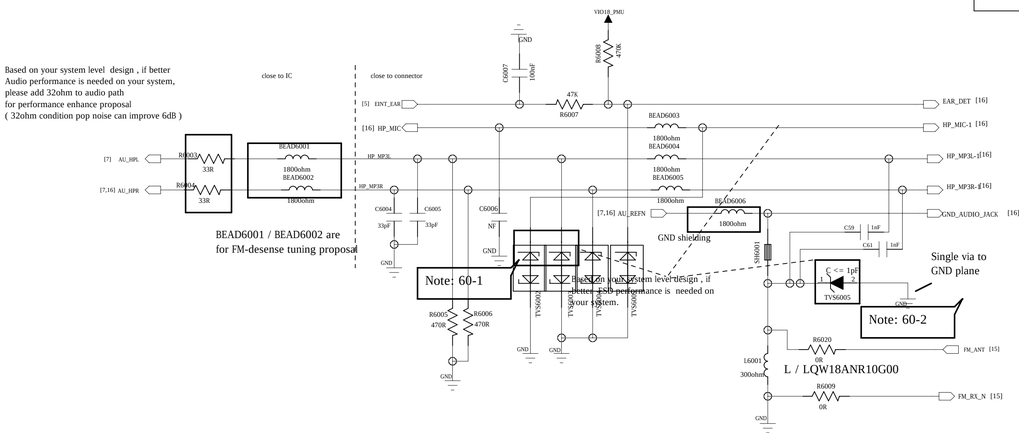
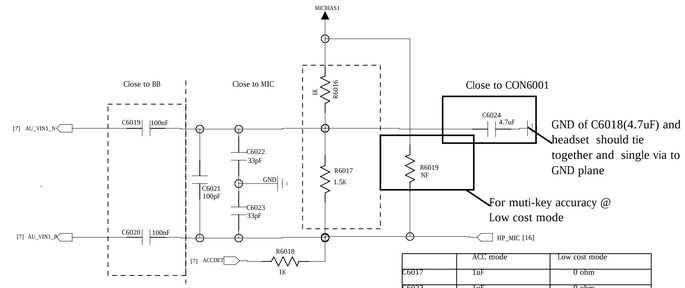
¶þ¹©£º813400000835

Based on your system level design , if better Audio performance is needed on your system, please add 32ohm to audio path for performance enhance proposal (32ohm condition pop noise can improve 6dB)

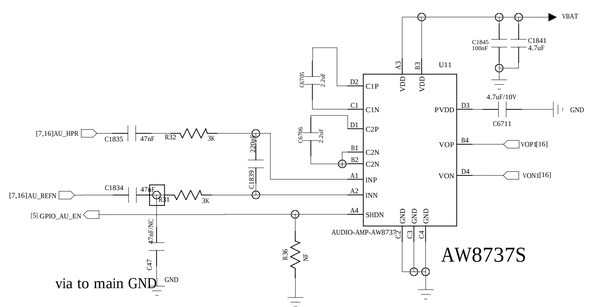


Earphone MICPHONE

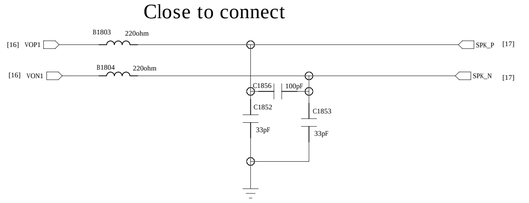


	ACC mode	Low cost mode
C6017	1uF	0 ohm
C6022	1uF	0 ohm
R6009	1K	NC
R6010	1.5K	NC
R6019	NC	2.5K
C6018	4.7uF	0 ohm

Audio PA

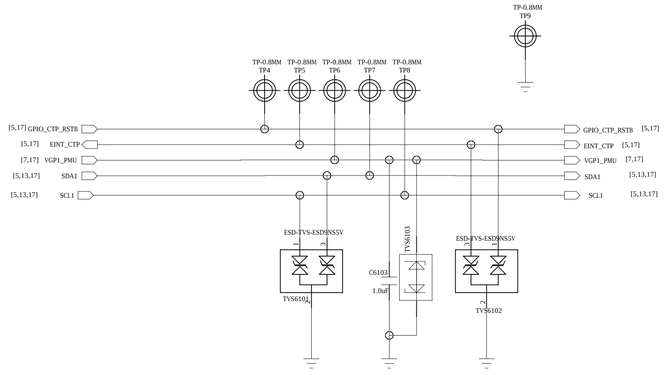


Close to connect

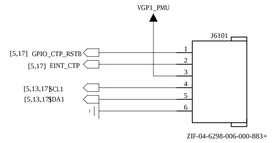


TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	60_PERI_AUDIO	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ¶	SHEET: 16 OF 21

CTP



CTP Connector



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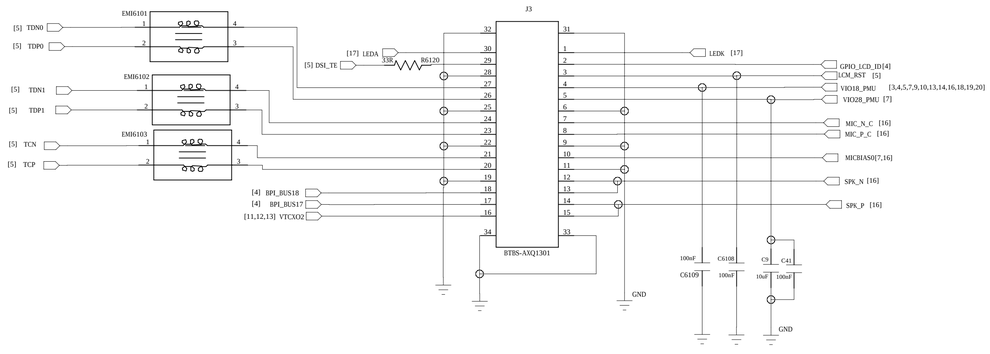
¶þ¹©£º813200000192

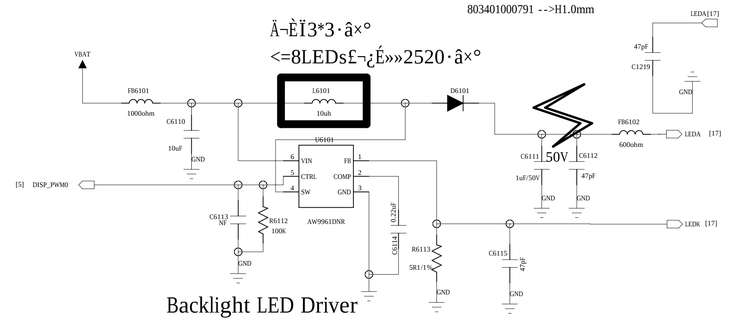
Main LCM



803401000791 -->H1.0mm

Ä¬ÈÏ3*3·â×°

<=8LEDs£¬¿É»»2520·â×°



Backlight LED Driver

Ò»¹©£ºAW9961DNR 807300000551

¶þ¹©£ºSGM3756YTDI6G/TR 807300000651

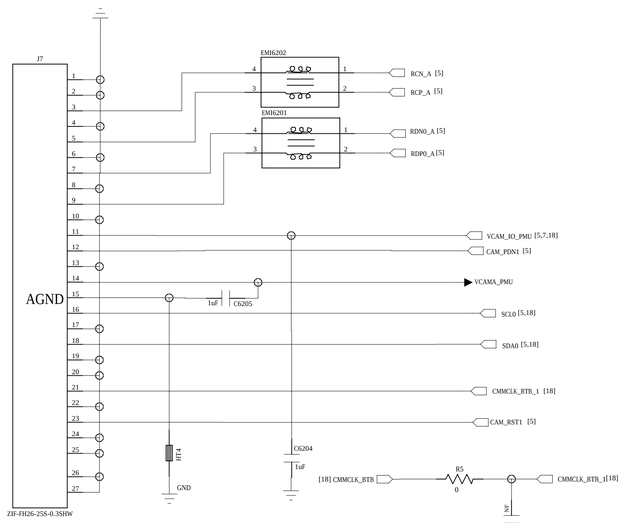
Schematic design notice of "61_PERI_LCD_CTP" page.

Note 61-1: GT1151 I2C address: 0X5D (Write:0xBA, Read:0xBB)
or 0x14 (Write:0x28, Read:0x29)

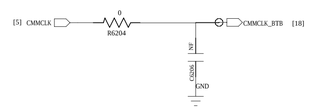
TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	、61_PERI_LCD/CTP	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/DÇ¿Ü»
SHEET:	17 OF 21		

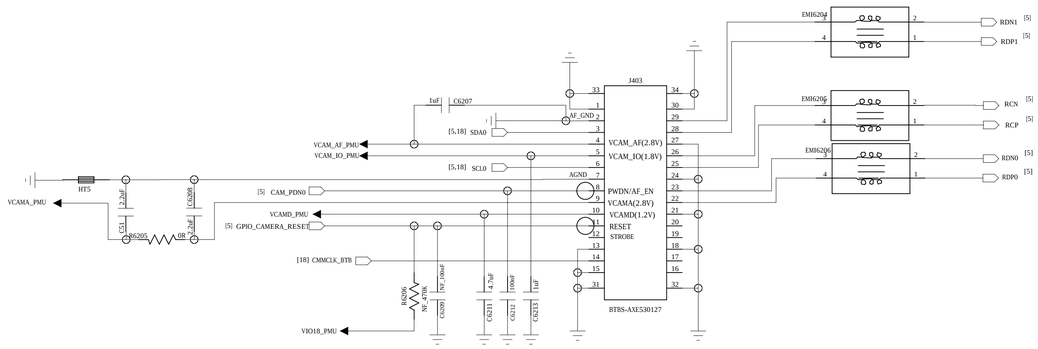
Front Camera 2M_FF

DOVDD=1.8V
AVDD=2.8V



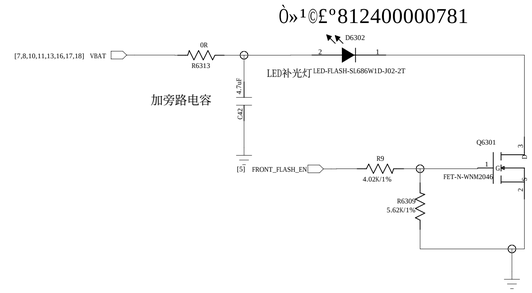
Main Camera 5M_AF



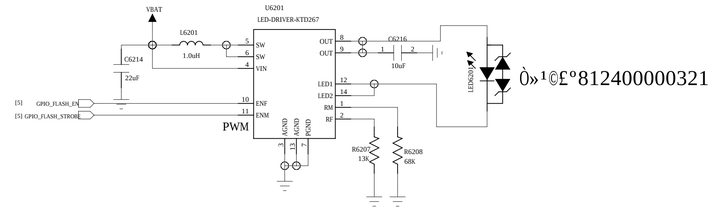


FLASH LED

Front



Back



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¶þ¹©£ºSYWT78DUC 807300000461

flashing:lled1=lled2=6800/9.1k
torch:lled1=lled2=6800/68k

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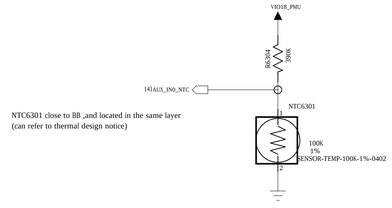
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ»	SHEET: 18 OF 21	

M-Sensor

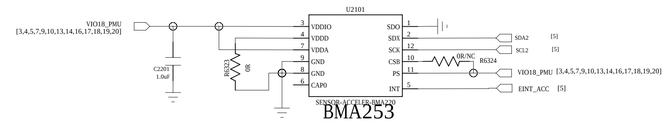
Accerometer

Thermistor



Thermistor / To sense board level temperature

G-Sensor



BMA: R6323 0 R6324 NF
BMC156: R6323 0 R6324 0
KXTJ2-1009: R6323 NF R6324 0

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¶þ¹©£º821100000041

ALS+PS+IR

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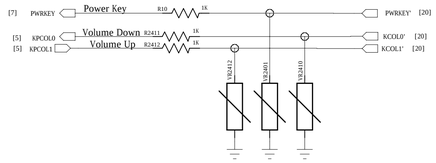
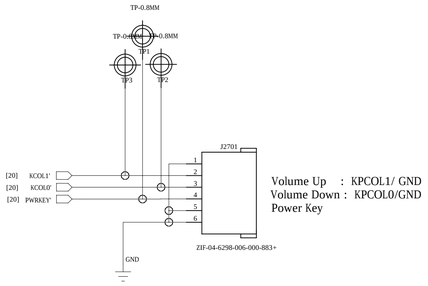
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2017/1/16/ÐÇÆÚ¶þ	SHEET:	19 OF 21





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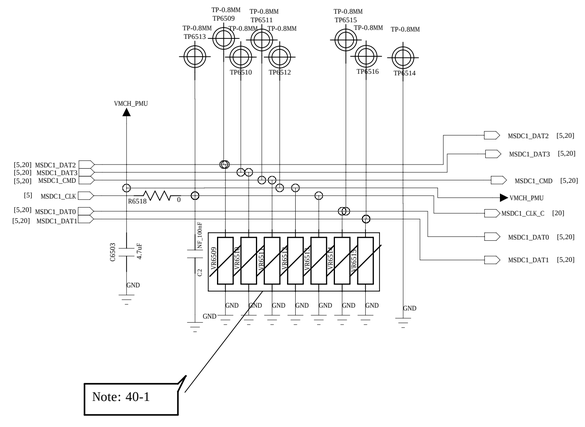

Based on your system level design , if better ESD/desense performance is needed on your system.

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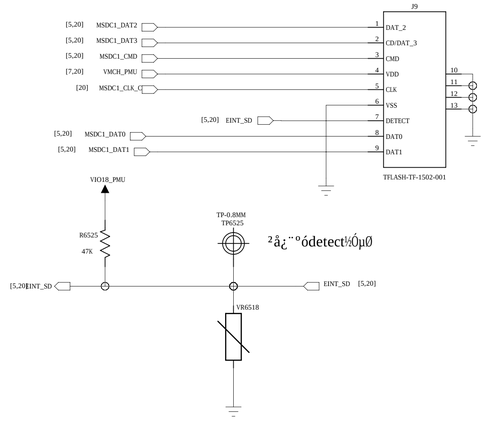
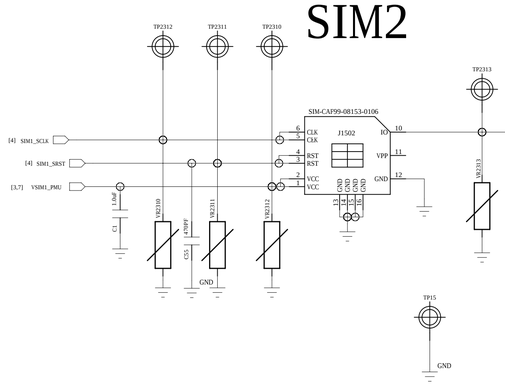
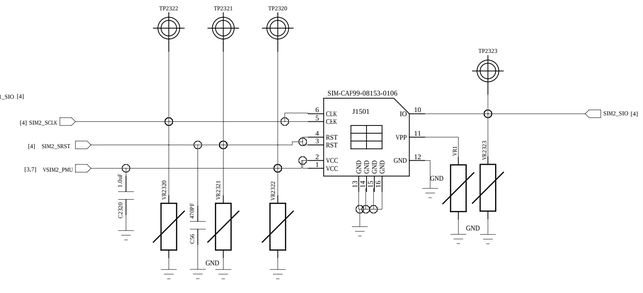


Schematic design notice of "40_MEMORY_SD Card" page.	
Note 40-1:	The equivalent capacitance of MSDC ESD protection device must be <=10pF. But for NFC app. equivalent capacitance of MSDC_NFC_SWPIO and MSDC_NFC_VCCSWP should <=0.5pF.

SIM2



SIM1



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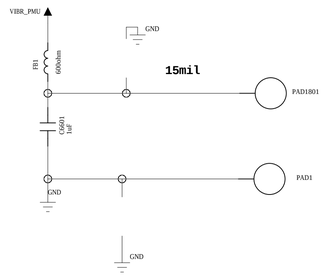
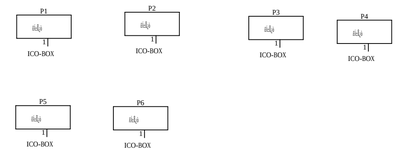
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÆÚ»
SHEET:	20 OF 21		

VIBRATOR

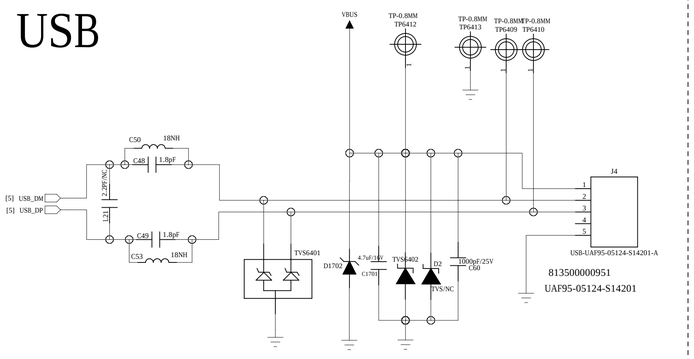


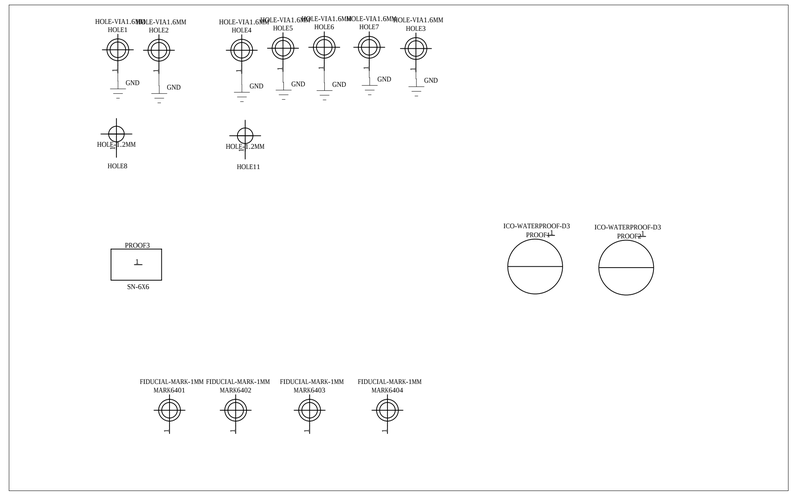
MOTO

sheildings



USB





TITLE:	<TITLE>	REV:	<REV>
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DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2017/1/16/ÐÇÈÙ»
SHEET:	21 OF 21		