BLOCK DIAGRAM

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

TITLE & REV: UMS9230_3_IRD_A_SCH_V1.0.0_Informal		
DOCUMENT NO.:		
DESIGNER: Hongyu.Yang	DATED: 2020-09-28	DEPARTMENT: HWE
EQA: Leiwen.Ma	DATED: 2020-09-28	COMPANY: UNISOC
APPROVED: Gang.Xu	DATED: 2020-09-28	CONFIDENTIAL AND PROPRIETARY

RF BLOCK DIAGRAM

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GPIO Configuration For UMS9230_3_IRD_A_SCH_V1.0.0_Informal

GPIO_1	PCC_RFSDA	GPIO_51	LCM_FMARK	GPIO_101	EMMC_D7	GPIO_151	TF_SD0_D0		
GPIO_2	PCC_RFSCK	GPIO_52	BB_U2TXD	GPIO_102	EMMC_CLK	GPIO_152	TF_SD0_D1		
GPIO_3	PCC_RFSEN	GPIO_53	BB_U2RXD	GPIO_103	EMMC_D5	GPIO_153	TF_SD0_CLK0		
GPIO_4		GPIO_54	BOARD_ID2	GPIO_104	EMMC_D4	GPIO_154	I2C4_SCL		
GPIO_5		GPIO_55	MIPI_SWITCH_EN	GPIO_105	EMMC_RCLK	GPIO_155	I2C4_SDA		
GPIO_6	WF_SD1_D3	GPIO_56	BT_PCM_OUT	GPIO_106	EMMC_D3	GPIO_156	AUDIO_PA_MCLK		
GPIO_7	COEXIST_LTE_GPS	GPIO_57	BT_PCM_IN	GPIO_107	EMMC_RST	GPIO_157	SIM0_CLK		
GPIO_8	MIPI_SWITCH_SEL	GPIO_58	BT_PCM_CLK	GPIO_108	EMMC_D1	GPIO_158	SIM0_DA		
GPIO_9	SIM1_DET	GPIO_59	BT_PCM_SYNC	GPIO_109	EMMC_D2	GPIO_159	SIM0_RST		
GPIO_10	WB_WCI_2_RXD	GPIO_60	WCN_U0RXD	GPIO_110		GPIO_160	SIM1_CLK		
GPIO_11	WB_WCI_2_TXD	GPIO_61	WCN_U0TXD	GPIO_111		GPIO_161	SIM1_DA		
GPIO_12	SCC_RFSDA	GPIO_62	WCN_U0RTS	GPIO_112		GPIO_162	SIM1_RST		
GPIO_13	SCC_RFSCK	GPIO_63	WCN_U0CTS	GPIO_113					
GPIO_14	SCC_RFSEN	GPIO_64	WF_SD1_CLK	GPIO_114					
GPIO_15	TOF_XSHUT	GPIO_65	WF_SD1_CMD	GPIO_115					
GPIO_16	TOF_GPIO	GPIO_66	WF_SD1_D0	GPIO_116	AUDIO_PA_PWDN				
GPIO_17	GPS_U1RXD	GPIO_67	WF_SD1_D1	GPIO_117					
GPIO_18	GPS_U1TXD	GPIO_68	WF_SD1_D2	GPIO_118					
GPIO_19	RFCTL_0	GPIO_69		GPIO_119					
GPIO_20	RFCTL_1	GPIO_70	BB_U1TXD	GPIO_120					
GPIO_21	RFCTL_2	GPIO_71	BB_U1RXD	GPIO_121	WF_WAKE_HOST				
GPIO_22	RFCTL_3	GPIO_72		GPIO_122	LCM_ID				
GPIO_23	RFCTL_4	GPIO_73		GPIO_123	WF_HOST_WAKE				
GPIO_24	RFCTL_5	GPIO_74	I2C1_SCL	GPIO_124	KEYIN0				
GPIO_25	RFCTL_6	GPIO_75	I2C1_SDA	GPIO_125	CHG_STAT				
GPIO_26	RFCTL_7	GPIO_76		GPIO_126	USBID_CRTL				
GPIO_27	RFCTL_8	GPIO_77	LCM_BL_PWM	GPIO_127	I2C2_SCL				
GPIO_28	RFCTL_9	GPIO_78	TF_DET	GPIO_128	I2C2_SDA				
GPIO_29	RFCTL_10	GPIO_79	BUA_BAT_DET	GPIO_129	CON_32K_IN				
GPIO_30	RFCTL_11	GPIO_80	I2C6_SCL	GPIO_130	FTID_INT				
GPIO_31	SIM0_DET	GPIO_81	I2C6_SDA	GPIO_131	FTID_RSTN				
GPIO_32	WB_TX_REQ	GPIO_82	MTCK	GPIO_132	LCM_SOURCE_AVDDEN				
GPIO_33	VDDCAMA_EN	GPIO_83	MTMS	GPIO_133	LCM_SOURCE_AVEEEN				
GPIO_34	GPS_U1RTS	GPIO_84	I2C7_SCL	GPIO_134	UCP1301_RSTN				
GPIO_35	GPS_U1CTS	GPIO_85	I2C7_SDA	GPIO_135	FS_DUALCAM				
GPIO_36	PCC_RFFE_SCK0	GPIO_86	EAR_CTL1	GPIO_136	CAMERA_FLASH_CHIPEN				
GPIO_37	PCC_RFFE_SDA0	GPIO_87	EAR_CTL2	GPIO_137	CAMERA_FLASH_EN				
GPIO_38	BB_U5TXD	GPIO_88	VDDCAMCORE_EN	GPIO_138	CAMERA_FLASH_SYNC				
GPIO_39	BB_U5RXD	GPIO_89		GPIO_139	CAMERA_TORCH_EN				
GPIO_40	CAM_PWDN2	GPIO_90	FTID_SPI_CS	GPIO_140					
GPIO_41	CAM_RST2	GPIO_91	FTID_SPI_DI	GPIO_141					
GPIO_42	CMMCLK0	GPIO_92	FTID_SPI_DO	GPIO_142					
GPIO_43	CMMCLK1	GPIO_93	FTID_SPI_CLK	GPIO_143	WB_CHIP_EN				
GPIO_44	CAM_RST0	GPIO_94	PDM_CLK0	GPIO_144	CTP_INT				
GPIO_45	CAM_RST1	GPIO_95	PDM_DATA0	GPIO_145	CTP_RST				
GPIO_46	CAM_PWDN0	GPIO_96	WB_INT	GPIO_146	CTP_SDA				
GPIO_47	CAM_PWDN1	GPIO_97	WB_RST	GPIO_147	CTP_SCL				
GPIO_48	I2C0_SCL	GPIO_98	EMMC_D0	GPIO_148	TF_SD0_D3				
GPIO_49	I2C0_SDA	GPIO_99	EMMC_CMD	GPIO_149	TF_SD0_D2				
GPIO_50	LCM_RSTN	GPIO_100	EMMC_D6	GPIO_150	TF_SD0_CMD				

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Change_Note

V1.0.0_Informal

UMS9230_3_IRD_A_SCH_V1.0.0_Informal

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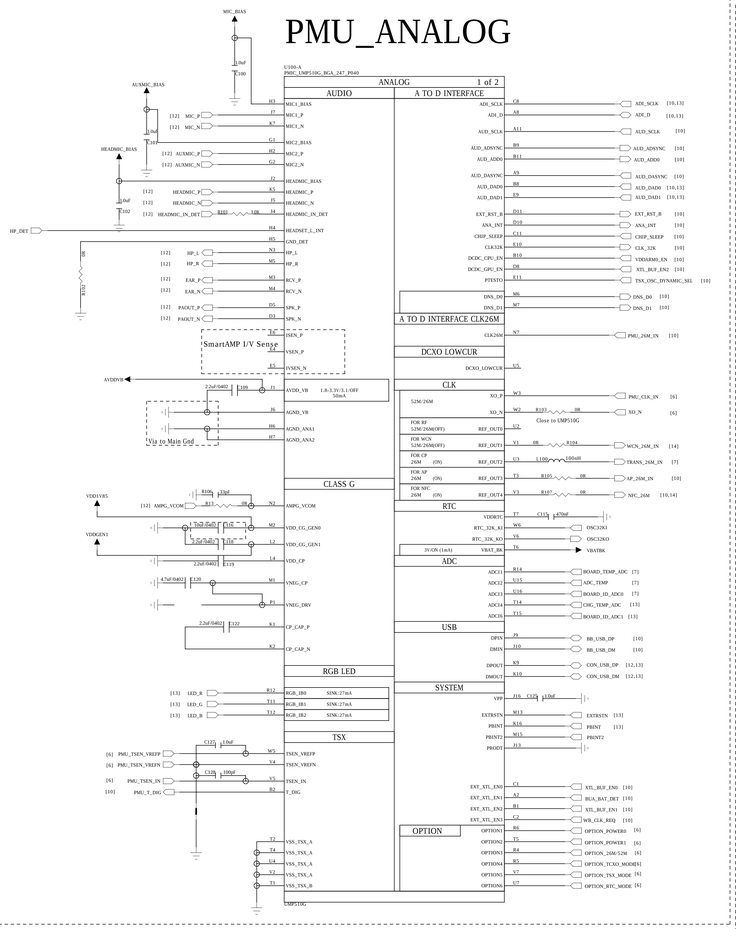
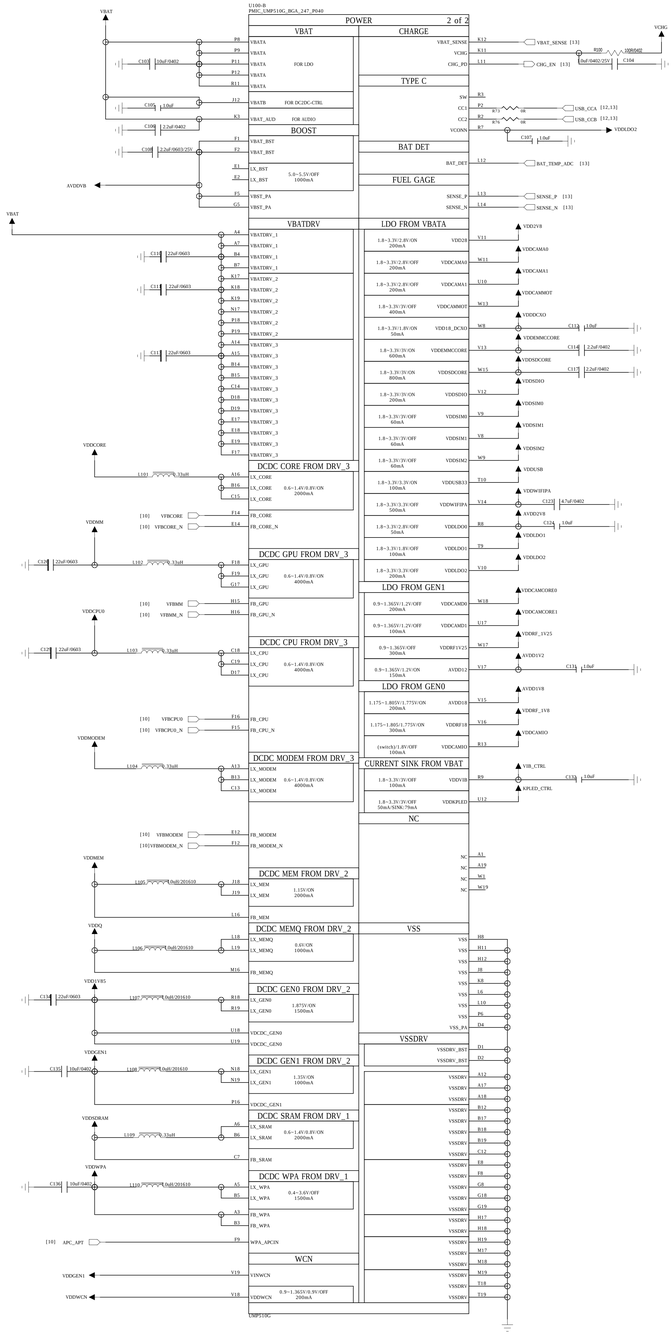
PMU_ANALOG



PMU_POWER



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
	VDDEMMCCORE	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
	AVDD12	1.0-1.25	150	1.2	ON
GEN0	AVDD18	1.2-1.8	200	1.8	ON
	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

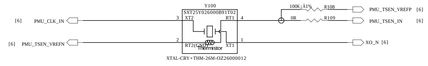
BKBT

RTC

Solution	X0200	C0201	C0202
32K	Crystal	8.2pF	8.2pF
32K-less	NF	NF	NF

-->

TSX £ ¨ PMU £ ©Only



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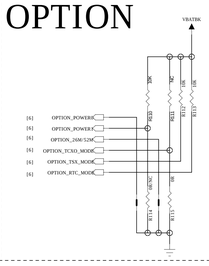
		Y0200	R0227	R0213	R0215	R0205	R0202	R0214	R0226	C0215	C0216	R0208
PMU	TSX		0R	NF	0R	NF	0R	100K	0R	NF	NF	NF
	DCXO		NF	NF	0R	0R	NF	NF	NF	0R	NF	NF

OPTION



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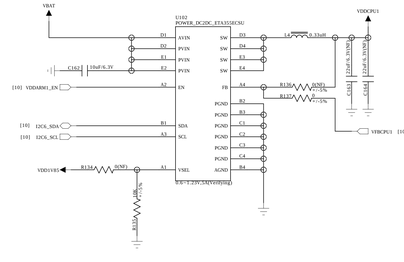
Item	Scenario	Option1	Option2
0	Qogir L6+UMP510G	0	0
1	Qogir L6+UMP510G+DCDC	0	1
2			
3			

-->

Scenario	Option3(26M/52M)	Option4(TCXO_MODE)	Option5(TSX_MODE)	Option6(RTC_MODE)
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

EXT DCDC CPU1



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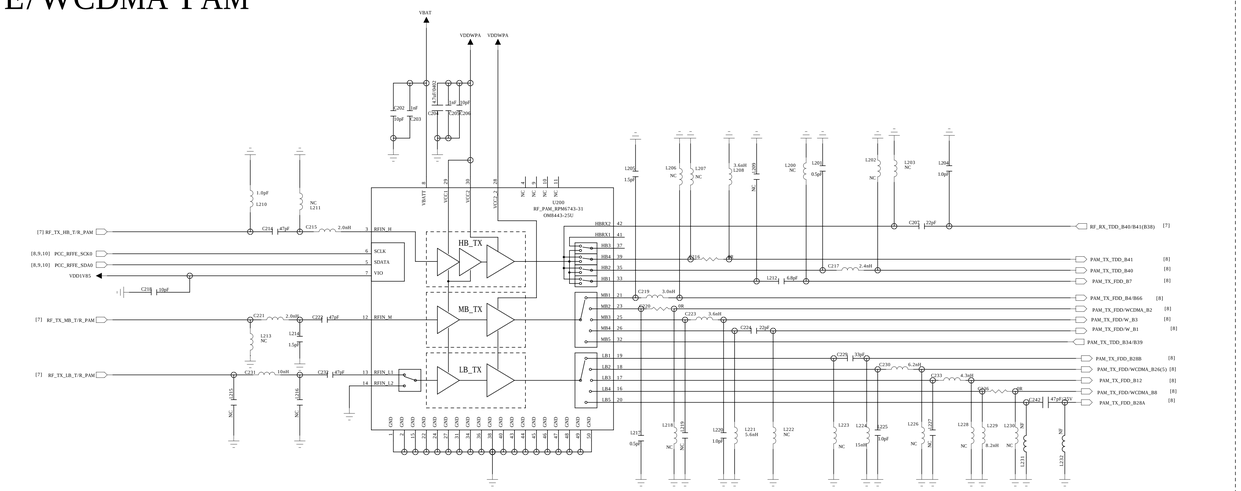
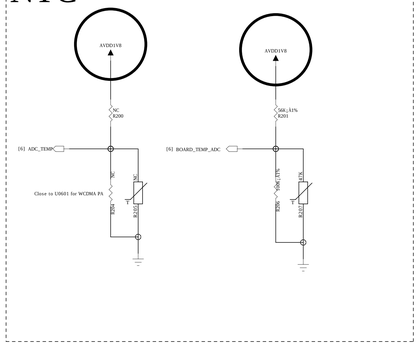
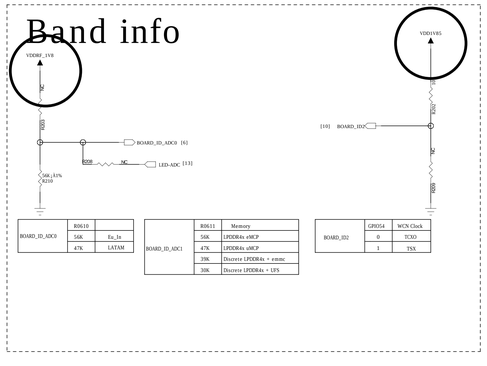
LTE/WCDMA PAM



NTC



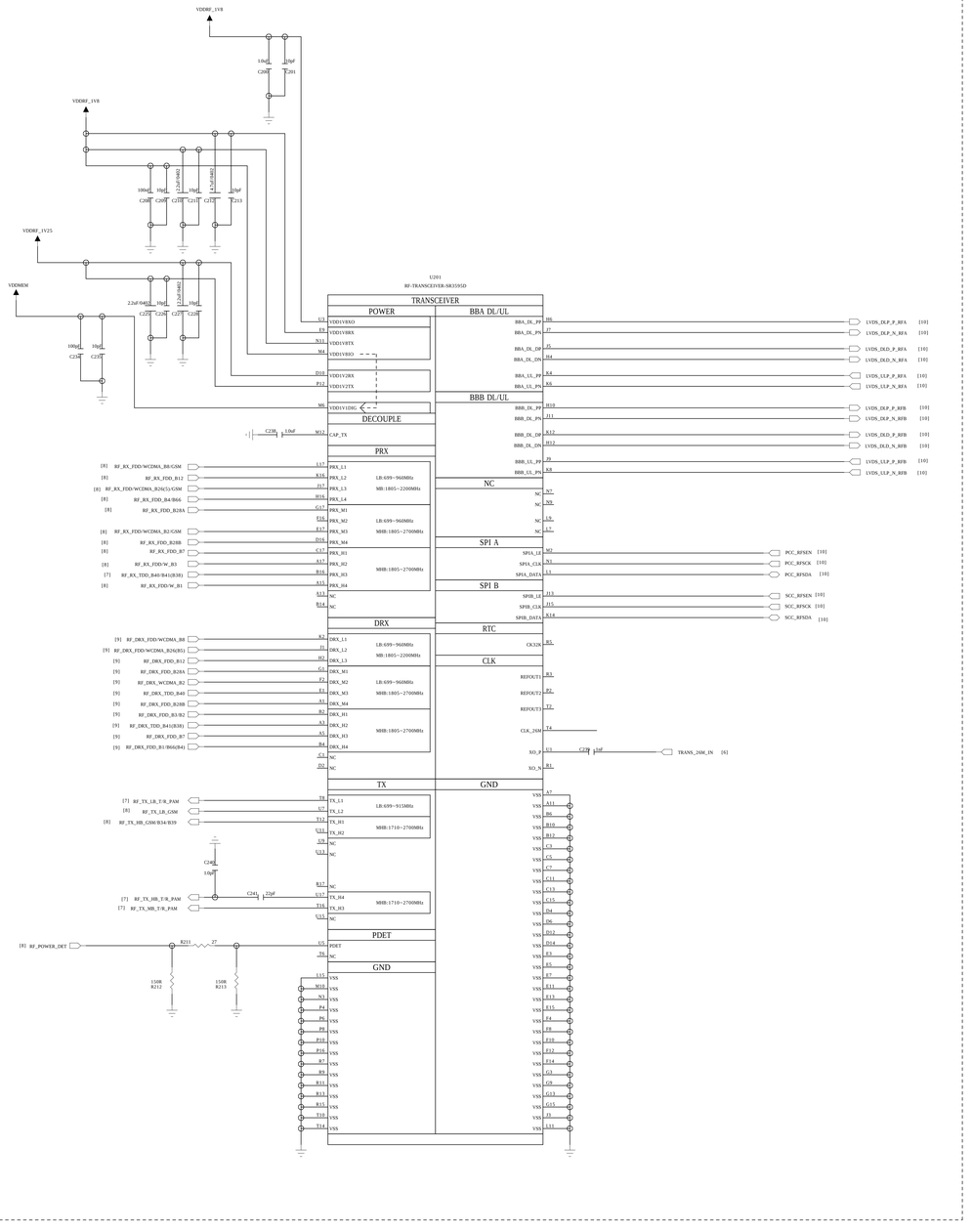
Band info



BOARD_ID_ADC0		
	B0610	
	56K	Ea_Ia
	47K	LATAM

BOARD_ID_ADC1		
	B0611	Memory
	56K	LPDDR4x eMCP
	47K	LPDDR4x eMCP
	39K	Discrete LPDDR4x + emmc
	30K	Discrete LPDDR4x + UFS

BOARD_ID2		
	GP0554	WCN Clock
	0	TCXO
	1	YSX



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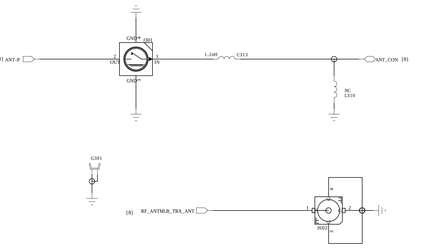
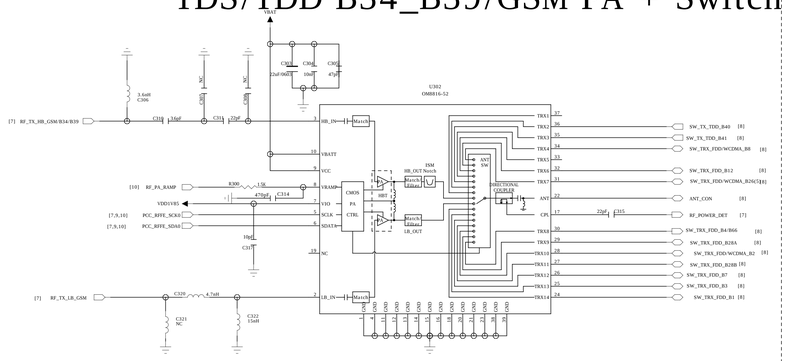
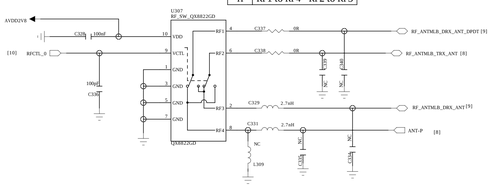
Primary LMB Antenna



TDS/TDD B34_B39/GSM PA + Switch

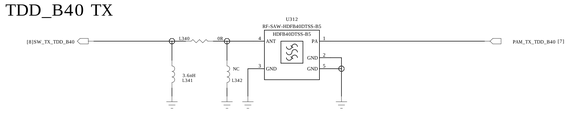




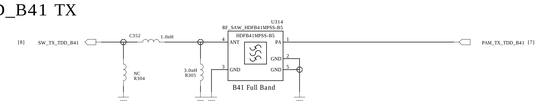
VCTL	Operation Mode
L	RF1 to RF3 RF2 to RF4
H	RF1 to RF4 RF2 to RF3

TDD LTE Parts

TDD_B40 TX

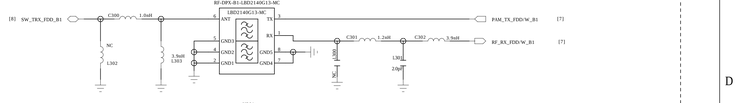


TDD_B41 TX

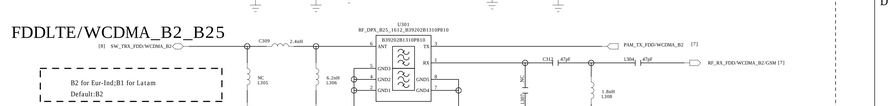


PRIMARY TRX Path

FDD LTE_B1

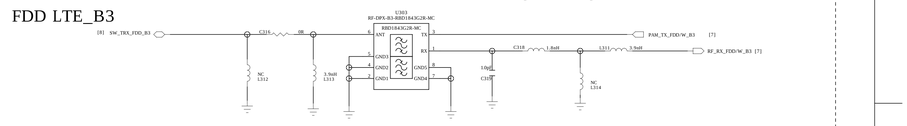


FDDLTE/WCDMA_B2_B25

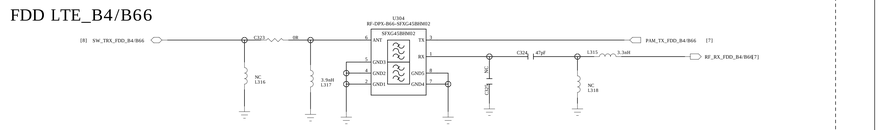


B2 for Eur-Ind;B1 for Latam
Default:B2

FDD LTE_B3



FDD LTE_B4/B66



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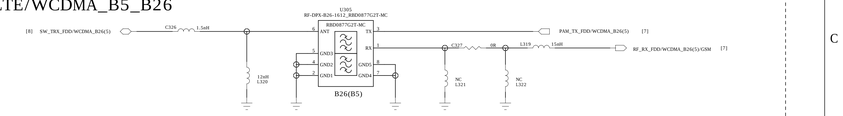
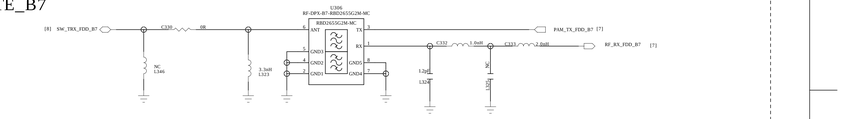
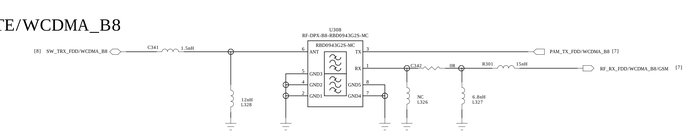


FDDLTE_B7

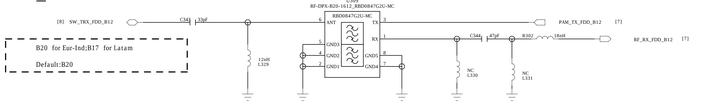


FDDLTE/WCDMA_B8



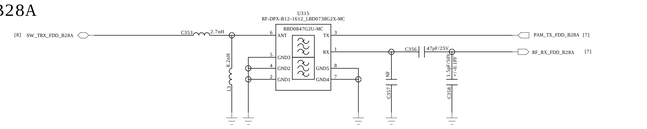
È¥°²1612_B12/17Ł°LBD0738G2X-MC

FDDLTE_B12

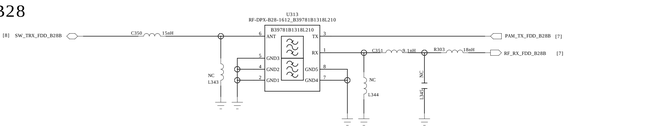


B20 for Eur-Ind;B17 for Latam
Default:B20

FDDLTE_B28A



FDDLTE_B28



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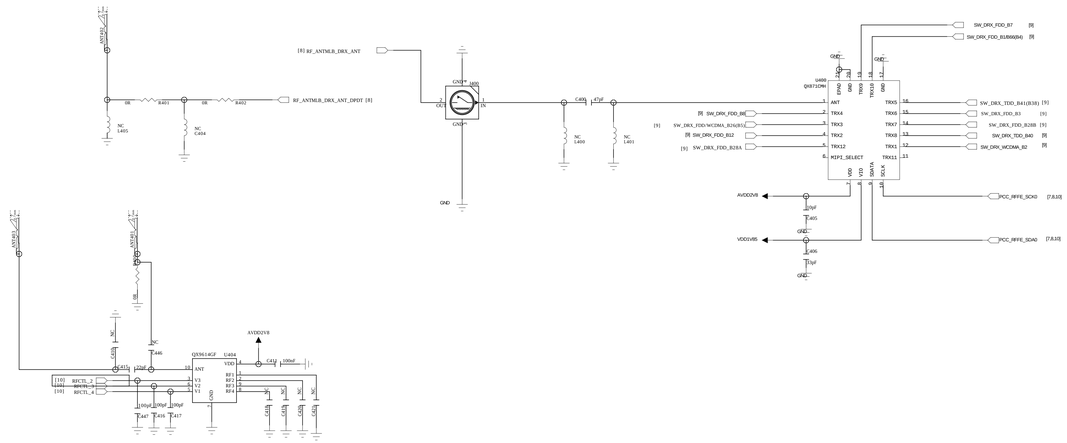
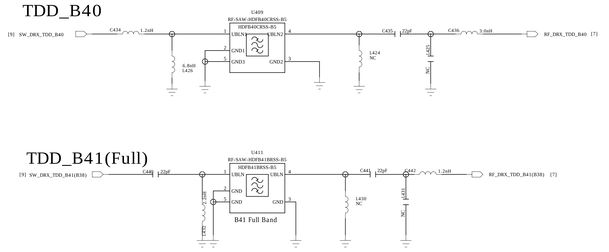
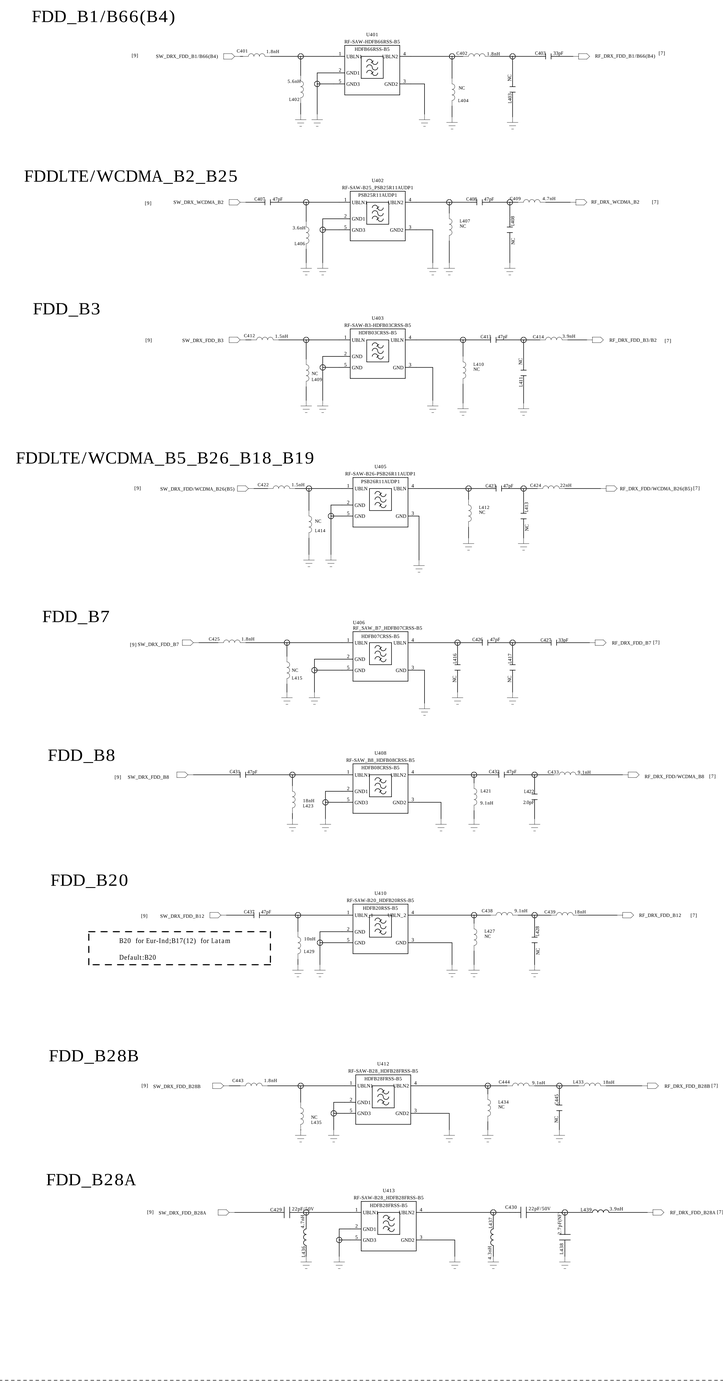
Diversity LTE LMB Path



Diversity RX Path



Diversity RX Path



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EQA:	DATED:	COMPANY: Spreadtrum communications, Inc.
APPROVED:	DATED:	CONFIDENTIAL AND PROPRIETARY

DIGITAL

U603-A
BB_UMS9230_BGA5_704_P040

DIGITAL 1 of 7

RF SPI 0

[7] PCC_RFSCK	AB8	RFSCK0/GPIO2	
[7] PCC_RFSDA	AB6	RFSDA0/GPIO1	
[7] PCC_RFSEN	AC5	RFSEN0/GPIO3	

RF SPI 1

[7] SCC_RFSCK	AE5	RFSCK1/GPIO13	
[7] SCC_RFSDA	AF4	RFSDA1/GPIO12	
[7] SCC_RFSEN	AE3	RFSEN3/GPIO14	

RF CTRL

[8] RFCTL_0	AK8	RFCTL0/GPIO19	
RFCTL_1	AN7	RFCTL1/GPIO20	
[9] RFCTL_2	AM8	RFCTL2/GPIO21	
[9] RFCTL_3	AL7	RFCTL3/GPIO22	
[9] RFCTL_4	AN5	RFCTL4/GPIO23	
[12] RFCTL_5	AM6	RFCTL5/GPIO24	
[12] RFCTL_6	AL5	RFCTL6/GPIO25	
RFCTL_7	AK5	RFCTL7/GPIO26	
[12] LCM_ID	AJ5	RFCTL8/GPIO27	
RFCTL_9	AH6	RFCTL9/RF_LVDS0_ADC_ON/GPIO28	
RFCTL_10	AN3	RFCTL10/RF_LVDS0_DAC_ON/GPIO29	
[14] EINT_SHC_IRQ	AM4	RFCTL11/EXTINT8/G1-GPIO30	
[13] SIM0_DET	AL3	GPIO31/RGA_SDW_DET0	
	AJ3	GPIO32/PWM4	
[12] PROX_INT	AK4	GPIO33/CM4_GPIO6G8	
[12] AG_INT0	AH4	RFCTL16/CM4_GPIO1G0/GPIO7	
	AK2	RFCTL17/WIFI_COEXIST/GPIO8	
[13] SIM1_DET	AJ1	GPIO9/RGA_SDR_DET1	
[12] GPIO110_HAC_CTRL	AH2	RFCTL19/U3TXD/GPIO10	
[13] VIDCAMCORED_EN	AF6	RFCTL20/U3RXD/GPIO11	

RFFE

[7,8,9] PCC_RFFE_SCK0	AD4	RFFE0_SCK/GPIO36	
[7,8,9] PCC_RFFE_SDA0	AD6	RFFE0_SDA/GPIO37	
	AG3	RFFE1_SCK/RF_LVDS1_ADC0N/GPIO15	
	AG5	RFFE1_SDA/RF_LVDS1_DAC0N/GPIO16	

BT RFCTRL

[7] BOARD_ID2	J1	BT_RFCTL0-1/I2C0_SCL/I2S3/GPIO73	
	J3	BT_RFCTL1/I3S4DO/SDA9/GPIO174	
	J7	BT_RFCTL2/I3S4CLK/CM4_GPIO5G1/GPIO175	
[12] FTID_ID	K8	BT_RFCTL3/I3S4LRCK/CM4_GPIO6G1/GPIO176	

WCN

WCN_RFCTL_0	A7	WCN_RFCTL0/I3S0CLK/GPIO58	
WCN_RFCTL_1	B6	WCN_RFCTL1/I3S0DO/GPIO57	
WCN_RFCTL_2	C7	WCN_RFCTL2/I3S0DI/GPIO56	
[14] WCN_CLK	D36	WCN_CLK/SD1_D2/GPIO68	
[14] WCN_DATA	D38	WCN_DATA/SD1_D3/GPIO6	
[14] WB_CHIP_EN	G1	WCN_A_EN/GPIO116	
[14] WB_RST	H2	WCN_A_RST/SE_GPIO5G0/GPIO177	
[6] WB_CLK_REQ	AM14	WCN_XTLEN/GPIO164	

WF

[14] WF_CLK	E35	WF_CLK/SD1_CLK/GPIO64	
[14] WF_D0	G33	WF_D0/SD1_CMD/GPIO65	
[14] WF_D1	D34	WF_D1/SD1_D0/GPIO66	
[14] WF_D2	F34	WF_D2/SD1_D1/GPIO67	

FM

[14] FM_CLK	J33	FM_CLK/U4TXD/FM_CLK_DBG/GPIO17	
[14] FM_DATA	E33	FM_DATA/U4RXD/FM_DATA_DBG/GPIO18	

GNSS

[14] GPS_LNA_EN	A9	GNSS_LNA_EN/I3S0LRCK/GPIO59	

I2C

[12] I2C2_SCL	G7	SCL2/GPIO127	FOR SENSOR
[12] I2C2_SDA	F8	SDA2/GPIO128	
[14] I2C7_SCL	G5	SCL7/GPIO84	FOR NFC
[14] I2C7_SDA	F4	SDA7/GPIO85	

CTP/EXTINT

[13] I2C3_SCL	P6	SCL3/GPIO147	
[13] I2C3_SDA	E5	SDA3/EXT_XTL_EN0/GPIO146	
[12] CTP_INT	H4	EXTINT6/KEYOUT5-SE_GPIO14/GPIO144	
[12] CTP_RST	G3	EXTINT1/KEYOUT6-SE_GPIO15/GPIO145	

EXTINT

[13] TP_DET	F10	EXTINT4/KEYOUT3/RGA_TP_DET/GPIO78	
[6] BUA_BAT_DET	H10	EXTINT10/KEYOUT4/BAT_DET/GPIO79	
[12] FTID_INT	H6	EXTINT13/SE_GPIO0/GPIO168	
[12] FTID_RSTN	H8	EXTINT14/SE_GPIO1/CM4_GPIO3G0/GPIO169	

DMIC

[12] TP_CSN	L1	DMIC_CLK0/SPI3_CSN/CM4_GPIO2G0/GPIO94	
[12] TP_SPI_D0	K2	DMIC_DAT0/SPI3_D0/MGPL1_SWITCH/GPIO95	
[12] TP_SPI_CLK	AE1	DMIC_CLK1/SPI3_CLK/U4TXD/GPIO96	
[12] TP_SPI_DI	AD2	DMIC_DAT1/SPI3_DO/U4RXD/GPIO97	
[12] GPIO165_BP_INT	AG1	DMIC_CLK2/CM4_GPIO4G1/SEGPIO11G1/GPIO165	
[12] GPIO166_BP_INT	AF2	DMIC_DAT2/EXTINT15/G0-SE_GPIO12G1/GPIO166	

NOTE:EXINT[x]:all 4 mode), GPIO marked (H) will be set HIGH after power-on.

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KEYPAD

KEYIN0	K6	KEYIN0	[13]
KEYIN1	L5	KEYIN1	[13]
KEYIN2/EXTINT4/GPIO126	J5	KEYIN2	[13]
KEYOUT0/EXTINT11/CM4_GPIO5G0/GPIO121	W4	USB_ID	[13]
KEYOUT1/EXTINT12/CM4_GPIO4G0/GPIO122	L3	CAMERA_FLASH_SYNC	[13]
KEYOUT2/PWRBOOM_GPIO7G0/GPIO123	K4	GPIO123_KEYOUT2_PWMB	

SPI 0

SPI0_DO/GPIO91	E1	FTID_SPI_DI	[12]
SPI0_DI/EXTINT7G0/GPIO92	D2	FTID_SPI_DO	[12]
SPI0_CLK/EXTINT8G0/GPIO93	C1	FTID_SPI_CLK	[12]
SPI0_CSN/GPIO90	F2	FTID_SPI_CS	[12]

SPI 2

SPI2_DO/EXTINT14G1/BT_RFCTL4G0/GPIO53	E7	LCM_SPI2_MOSI	[13]
SPI2_DI/EXTINT15G1/BT_RFCTL5G0/GPIO54	D6	LCM_SPI2_MISO	[13]
SPI2_CLK/EXTINT6G1/BT_RFCTL6G0/GPIO55	C3	LCM_SPI2_CLK	[13]
SPI2_CSN/EXTINT5G1/BT_RFCTL7G0/GPIO52	C5	LCM_SPI2_CSN	[13]
SPI2_CS1/N-SE_GPIO4G2/GPIO172	D4	GPIO172_SUBLCM_RST	[13]
SPI_TE/SE_GPIO3/EXT_XTL_EN1/GPIO167	F12	GPIO167	

SDIO 0

SD0_CLK/GPIO153	AL11	TF_SD0_CLK0	[13]
SD0_CMD/AUD_DSP_TCK/GPIO150	AT12	TF_SD0_CMD	[13]
SD0_D0/AUD_DSP_TMS/GPIO151	AT10	TF_SD0_D0	[13]
SD0_D1/AUD_DSP_RTCK/GPIO152	AU9	TF_SD0_D1	[13]
SD2_D2/AUD_DSP_TDI/GPIO149	AU7	TF_SD0_D2	[13]
SD0_D3/AUD_DSP_TDO/GPIO148	AT8	TF_SD0_D3	[13]

SDIO 2

SD2_CLK/SPI1_CLK/GPIO134	AP8	VSYNC	[13]
SD2_CMD/SPI1_DI/GPIO135	AR7	LCM_SOURCE_AVDDEN	[12]
SD2_D0/SPI1_DO/GPIO136	AR5	LCM_SOURCE_AVEEN	[12]
SD2_D1/SE_GPIO7/GPIO137	AP6	UID_INT	[13]
SD2_D2/SE_GPIO8/GPIO138	AP4	LED_EN	[13]
SD2_D3/SPI1_CSN/GPIO139	AR3	CAMERA_FLASH_EN	[13]

R600 0R

SIM 0 (VSIM0)

SIM3CLK/GPIO157	AN11	SIM0_CLK	[13]
SIM3DAT0/GPIO158	AR11	SIM0_DA	[13]
SIM3RST0/GPIO159	AP10	SIM0_RST	[13]

SIM 1 (VSIM1)

SIM3CLK1/GPIO160	AM10	SIM1_CLK	[13]
SIM3DAT1/GPIO161	AR9	SIM1_DA	[13]
SIM3RST1/GPIO162	AN9	SIM1_RST	[13]

SIM 2 (VSIM2)

SIM2CLK2/SCL4-SE_GPIO11G0/GPIO154	AP12	I2C4_SCL	[12,13]
SIM3AT2/SDA4-SE_GPIO12G0/GPIO155	AN13	I2C4_SDA	[12,13]
SIM3RST2/CLK_AUX1/GPIO156	AM12	1V_LDO_EN	[13]

IIS 1

I0S1DI/CM4_GPIO5G1/WCN_COEX0/GPIO130	B2	AUDIO_SWITCH_GPIO	[12]
I0S1DO/CM4_GPIO1G1/WCN_COEX1/GPIO131	B4	MIC_GND_SWITCH_GPIO	[12]
I0S1CLK/EXTINT5G0/WCN_COEX2/GPIO132	A3	SUB_TP_RST	[13]
I0S1LRCK/EXTINT6G0/WCN_COEX3/GPIO133	A5	SUB_TP_INT	[13]

IIS 3

I0S3DI/WCN_GPIO0/SE_GPIO9G1/GPIO112	AP2	GPIO112_CAM_PDTA	[13]
I0S3DO/WCN_GPIO1/SE_GPIO10G1/GPIO113	AN1	GPIO113_CAM_PWM4	[13]
I0S3CLK/WCN_GPIO2/SE_GPIO9G1/GPIO114	AM2	CAM_RSTD	[13]
I0S3LRCK/WCN_GPIO3/SE_GPIO11G1/GPIO115	AL1	CHG_INT	[13]

UART 0

U3TXD/SE_GPIO9G0/GPIO60	A13	GPIO60_TE	[13]
U3RXD/SE_GPIO10G0/GPIO61	B12	SUB_LED_CTL	[13]
U3CTS/SE_GPIO13G0/GPIO62	B10	GPIO_NFC_ISTB	[5,6]
U3RTS/SE_GPIO6G0/GPIO63	A11	GPIO63_CAM_PWR_EN	[13]

UART 1

U1TXD	L7	BB_U1TXD	[13]
U1RXD/WDRST/GPIO71	M6	BB_U1RXD	[13]

UART 2

U2TXD/CM4_GPIO2G1/GPIO171	E9	GPIO171_CAM_ID	[13]
U2RXD/SE_GPIO2/CM4_GPIO4G0/GPIO170	G9	AG_INT1	[12]

UART 5

U5TXD/SCL5/GPIO38	C9	I2C5_SCL	[12,13]
U5RXD/SDA5/GPIO39	B8	I2C5_SDA	[12,13]

CLK

CLK_AUX0/-PROBE_CLK/GPIO129	C11	GPIO129	
CLK_AUX2/-CM4_GPIO7G1/GPIO88	E3	NFC_26M	[6,14]
PWMC/CM4_GPIO3G1/GPIO77	M8	LCM_BL_PWM	[12]

TSX

T_DIG/U4RTS/GPIO35	H32	PMU_T_DIG	[6]
TSX_OSC_SEL/U4CTS/GPIO34	K32	TSX_OSC_DYNAMIC_SEL	[6]

ARM JTAG

TCK_ARM/GPIO82	N1	XOA_CLK_EN	[6]
TMS_ARM/GPIO83	M2		

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A TO D I/F (VIO1V8)

[6,13] ADI_SCLK	AR17	ADI_SCLK	
[6,13] ADI_D	AU15	ADI_D	
[6] I2C6_SCL	AR15	ADI_SCLK2/SCL6/GPIO80	
[6] I2C6_SDA	AP16	ADI_D2/SDA6/GPIO81	
[6] AUD_SCLK	AU21	AUD_SCLK/I3S2CLK/VBC_AUD_SCLK	
[6] AUD_ADSYNC	AT18	AUD_ADSYNC/VBC_AUD_ADD1	
[6] AUD_ADD0	AT20	AUD_ADD0/I3S2DO/VBC_AUD_ADD0	
[6] AUD_DASYNC	AT16	AUD_DASYNC/I3S2LRCK/VBC_AUD_SYNC	
[6,13] AUD_DAD0	AN17	AUD_DAD0/-I3S2DO/VBC_AUD_DAD0	
[6,13] AUD_DAD1	AP18	AUD_DAD1/VBC_AUD_DAD1	
[6] VDDAMM1_EN	AU19	DCDCARM0_EN	
[6] VDDARM1_EN	AU17	DCDCARM1_EN	
[6] EXT_RST_B	AP20	EXT_RST_B	
[6] XTL_BUF_EN0	AT14	XTL_EN0	
[6] XTL_BUF_EN1	AN15		
[6] XTL_BUF_ENO	AP14	XTL_EN	
[6] ANA_INT	AR19		
[6] CHIP_SLEEP	AN21	CHIP_SLEEP	
[6] CLK_32K	AP21	CLK_32K	
[13] CHG_TYPE	AN19	CHG_TYPE/GPIO163	
[6] PMU_26M_IN	V6		

D TO A CLK26M

		CLK26M_OUT	

DNS

[6] DNS_D0	AT2	DNS_D0/DNS_PGA_LVL_1./GPIO110	
[6] DNS_D1	AR1	DNS_D1/DNS_PGA_LVL_0./GPIO111	

CSI 4L

[13] MCS0_DATA0_P	E17	CSI1_DP0	
[13] MCS0_DATA0_N	C17	CSI1_DN0	
[13] MCS0_DATA1_P	D18	CSI1_DP1	
[13] MCS0_DATA1_N	F18	CSI1_DN1	
[13] MCS0_DATA2_P	C19	CSI1_DP2	
[13] MCS0_DATA2_N	E19	CSI1_DN2	
[13] MCS0_DATA3_P	B20	CSI1_DP3	
[13] MCS0_DATA3_N	A19	CSI1_DN3	
[13] MCS0_CLK_P	A17	CSI1_CKP	
[13] MCS0_CLK_N	B18	CSI1_CKN	

CSI M

[13] MCS02_DATA0_P	A27	CSI2_DP0	
[13] MCS02_DATA0_N	B28	CSI2_DN0	
[13] MCS02_DATA1_P	C29	CSI2_DP1	
[13] MCS02_DATA1_N	E29	CSI2_DN1	
[13] MCS12_CLK_P	D28	CSI2_CKP0	
[13] MCS12_CLK_N	F28	CSI2_CKN0	

CSI S

MCS02_DATA0_P	B26	CSI2_DP2	
MCS02_DATA0_N	A25	CSI2_DN2	
MCS02_DATA1_P	D26	CSI2_DP3	
MCS02_DATA1_N	F26	CSI2_DN3	
MCS12_CLK_P	E27	CSI2_CKP1	
MCS12_CLK_N	C27	CSI2_CKN1	

CSI RO M

[13] MCS31_DATA0_P	B24	CSI0_DP0	
[13] MCS31_DATA0_N	A23	CSI0_DN0	
[13] MCS31_DATA1_P	D24	CSI0_DP1	
[13] MCS31_DATA1_N	F24	CSI0_DN1	
[13] MCS31_CLK_P	C23	CSI0_CKP0	
[13] MCS31_CLK_N	E23	CSI0_CKN0	

CSI RO S

[13] MCS31_DATA2_P	E21	CSI0_DP2	
[13] MCS31_DATA2_N	C21	CSI0_DN2	
[13] MCS31_DATA3_P	D22	CSI0_DP3	
[13] MCS31_DATA3_N	F22	CSI0_DN3	
	A21	CSI0_CKP1	
	B22	CSI0_CKN1	

CSI CTRL

[13] CAM_MCLK0	B14	CMMCLK0/CLK_AUX2G0	
[13] CAM_MCLK1	A15	CMMCLK1/DTDO/GPIO43	
[13] CAM_MCLK2 DTDO	C15	CMMCLK2/EXTINT7G1/GPIO143	
[13] CAM_PWDN0	D14	CMPD0/DTCK/GPIO46	
[13] CAM_PWDN1	G15	CMPD1/DRTCK/GPIO47	
	W16	CMPD2/KEYIN3/GPIO40	
[13] CAM_RSTN0	C13	CMRST0/DTDI/GPIO44	
[13] CAM_RSTN1	F16	CMRST1/DTMS/GPIO45	
CAM_RST2	E15	CMRST2/KEYIN4/GPIO41	
[13] I2C0_SCL	D10	SCL0/GPIO48	
[13] I2C0_SDA	E11	SDA0/GPIO49	
[13] I2C1_SCL	F14	SCL1/KEYIN5/GPIO74	
[13] I2C1_SDA	G13	SDA1/KEYIN6/GPIO75	
[13] I2C8_SCL	D12	SCL8/SE_GPIO4G1/GPIO86	
[13] I2C8_SDA	E13	SDA8/SE_GPIO5G1/GPIO87	

A TO D I/F (VIO1V8)

	P4	LVDS_I3P_P_RFA	[7]
	P6	LVDS_I3P_N_RFA	[7]
	T3	LVDS_I3P_P_RFB	[7]
	R1	LVDS_I3P_N_RFB	[7]

LVDSRF RX

	T4	LVDS_DI_P_RFA	[7]
	T6	LVDS_DI_N_RFA	[7]
	R3	LVDS_DI_P_RFB	[7]
	R5	LVDS_DI_N_RFB	[7]
	W1	LVDS_DI_P_RFB	[7]
	Y2	LVDS_DI_N_RFB	[7]
	Y6	LVDS_DI_P_RFB	[7]
	Y4	LVDS_DI_N_RFB	[7]

APCOUT

APCOUT0	AA1	RF_PA_RAMP	[8]
APCOUT1	AA3	APC_APT	[6]
APCOUT2	Y4		

WF5G IQ

WF_IP	C41	WF5G_IP	[14]
WF_IN	B40	WF5G_IN	[14]
WF_QP	A39	WF5G_QP	[14]
WF_QN	B38	WF5G_QN	[14]

BT IQ

BT_IP	A37	WB_IP	[14]
BT_IN	B36	WB_IN	[14]
BT_QP	A35	WB_QP	[14]
BT_QN	B34	WB_QN	[14]

GNSS IQ

GPS_IP	A33	GNSS_IP	[14]
GPS_IN	B32	GNSS_IN	[14]
GPS_QP	A31	GNSS_QP	[14]
GPS_QN	B30	GNSS_QN	[14]

CLK IN

CLK26M_IN_AP	AB2	AP_26M_IN	[6,10]
CLK26M_WCN	H28	WCN_26M_IN	

WCN TEST

WCN_VTEST0	G29		
WCN_VTEST1	H30		

CLK TEST

CLK26M_IN_MPLL0	AL21		
CLK26M_IN_MPLL1	AL9	R603 NC	AP_26M_IN [6,10]
CLKOUT_TEST_MPLL1	AJ7		
CLKOUT_TEST_PLL	AD2		

MISC TEST

TEST_DIODE_P	AA5		
TEST_DIODE_N	AA7		

UFS

CLK26M_IN_UFS	AL33		
UFS_RCLK	AT36	UFS_RCLK	[11]
UFS_RST	AU35	UFS_RST	[11]
UFS_TXP0	AT38	UFS_TX_P_L0	[11]
UFS_TXN0	AU37	UFS_TX_N_L0	[11]
UFS_TXP1	AU39	UFS_TX_P_L1	[11]
UFS_TXN1	AT40	UFS_TX_N_L1	[11]
UFS_RXP0	AP34	UFS_RX_P_L0	[11]
UFS_RXN0	AR35	UFS_RX_N_L0	[11]
UFS_RXP1	AR33	UFS_RX_P_L1	[11]
UFS_RXN1	AN33	UFS_RX_N_L1	[11]

USB20

USB_DP	AR23	BB_USB_DP	[6]
USB_DM	AN23	BB_USB_DM	[6]
USB_REXT	AU23 R608 NC		

DSI

DSI_DP0	AU27	MDSI_DATA0_P	[12]
DSI_DN0	AT26	MDSI_DATA0_N	[12]
DSI_DP1	AN27	MDSI_DATA1_P	[12]
DSI_DN1	AR27	MDSI_DATA1_N	[12]
DSI_DP2	AR25	MDSI_DATA2_P	[12]
DSI_DN2	AN25	MDSI_DATA2_N	[12]
DSI_DP3	AT24	MDSI_DATA3_P	[12]
DSI_DN3	AU25	MDSI_DATA3_N	[12]
DSI_CKP	AM26	MDSI_CLK_P	[12]
DSI_CKN	AP26	MDSI_CLK_N	[12]

DSI CTRL

DSI_TE/GPIO51	AR21	LCM_PARRK	[12]
LCM_RSTN/GPIO50	AT22	LCM_RSTN	[12]

UMS9230

close to BB

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VSSCORE

D6	VSS		
E37	VSS		
E39	VSS		
E41	VSS		
F36	VSS		
G11	VSS		
G35	VSS		
H34	VSS		
J37	VSS		
K12	VSS		
K16	VSS		
K20	VSS		
K28	VSS		
K38	VSS		
K40	VSS		
L11	VSS		
L13	VSS		
L19	VSS		
L27	VSS		
L33	VSS		
M12	VSS		
M18	VSS		
M20	VSS		
M24	VSS		
M32	VSS		
M36	VSS		
N15	VSS		
N19	VSS		
N23	VSS		
N27	VSS		
N31	VSS		
N37	VSS		
P13	VSS		
P15	VSS		
P23	VSS		
P27	VSS		
P29	VSS		
P33	VSS		
P35	VSS		
R15	VSS		
R19	VSS		
R23	VSS		
R27	VSS		
R31	VSS		
R33	VSS		
R35	VSS		
R37	VSS		
R39	VSS		
R41	VSS		

VSSCORE

VSS	T12		
VSS	T16		
VSS	T20		
VSS	T24		
VSS	T32		
VSS	T34		
VSS	U15		
VSS	U19		
VSS	U23		
VSS	U27		
VSS	U31		
VSS	V16		
VSS	V20		
VSS	V24		
VSS	V32		
VSS	V34		
VSS	Y36		
VSS	W13		
VSS	W15		
VSS	W17		
VSS	W19		
VSS	W21		
VSS	W27		
VSS	W33		
VSS	W35		
VSS	W37		
VSS	Y12		
VSS	Y18		
VSS	Y24		
VSS	Y30		
VSS	AA11		
VSS	AA21		
VSS	AA25		
VSS	AA31		
VSS	AA33		
VSS	AA35		
VSS	AA37		
VSS	AB14		
VSS	AB18		
VSS	AB32		
VSS	AB34		
VSS	AC7		
VSS	AC15		
VSS	AC21		
VSS	AC27		
VSS	AC31		
VSS	AD18		
VSS	AD26		
VSS	AD32		
VSS	AD34		

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GND

AD36	VSS		
AE7	VSS		
AE25	VSS		
AE31	VSS		
AE33	VSS		
AE37	VSS		
AE39	VSS		
AE41	VSS		
AF18	VSS		
AF22	VSS		
AF26	VSS		
AF32	VSS		
AG7	VSS		
AG11	VSS		
AG21	VSS		
AG25	VSS		
AG27	VSS		
AG31	VSS		
AG35	VSS		
AH14	VSS		
AH18	VSS		
AH22	VSS		
AH26	VSS		
AH32	VSS		
AJ11	VSS		
AJ21	VSS		
AJ33	VSS		
AJ35	VSS		
AK14	VSS		
AK18	VSS		
AK22	VSS		
AK34	VSS		
AK36	VSS		
AK40	VSS		
AL23	VSS		
AL27	VSS		
AL29	VSS		
AL37	VSS		
AM35	VSS		
AM36	VSS		
AP22	VSS		
AP28	VSS		
AR39	VSS		
AR13	VSS		

AGND

U13	AVSS_BB		
V8	AVSS_BB		
W5	AVSS_BB		
W7	AVSS_BB		
Y5	AVSS_BB		
AB4	AVSS_BB		
AC1	AVSS_BB		
AC3	AVSS_BB		

VSSCORE

AVSS_CSI	A29		
AVSS_CSI	B16		
AVSS_CSI	C25		
AVSS_CSI	D16		
AVSS_CSI	D20		
AVSS_CSI	E25		
AVSS_CSI	F20		
AVSS_CSI	G19		
AVSS_CSI	G21		
AVSS_CSI	G23		
AVSS_CSI	G25		
AVSS_CSI	G27		
AVSS_CSI	J23		
AVSS_CSI	J25		
AVSS_CSI	K22		
AVSS_DPLL	AA27		
AVSS_DSI	AK28		
AVSS_DSI	AP24		
AVSS_VDSRF	N3		
AVSS_VDSRF	N7		
AVSS_VDSRF	P2		
AVSS_VDSRF	P8		
AVSS_VDSRF	P10		
AVSS_VDSRF	R7		
AVSS_VDSRF	R11		
AVSS_VDSRF	T8		
AVSS_VDSRF	U1		
AVSS_VDSRF	U3		
AVSS_VDSRF	U5		
AVSS_VDSRF	U7		
AVSS_VDSRF	W3		
AVSS_UFS	AJ31		
AVSS_UFS	AK32		
AVSS_UFS	AL31		
AVSS_UFS	AM33		
AVSS_UFS	AP36		
AVSS_UFS	AT34		
AVSS_MPLL0	AF20		
AVSS_MPLL1	AF8		
AVSS_MPLL2	AF12		
AVSS_PLL	AB24		
AVSS_RPLL	V8		
AVSS_THM0	AD20		
AVSS_THM2	AA23		
AVSS_WCN	C31		
AVSS_WCN	C33		
AVSS_WCN	C35		
AVSS_WCN	C37		
AVSS_WCN	C39		
AVSS_WCN	D30		
AVSS_WCN	D32		
AVSS_WCN	E31		
AVSS_WCN	F30		
AVSS_WCN	F32		
AVSS_WCN	G31		
AVSS_WCN	J37		
AVSS_WCN	J29		

POWER

U603-D
BB_UMS9230_BGA5_704_P040

POWER 4 of 7

VDDMODEM

VDDMODEM
[6] VFBMODEM
[6] VFBMODEM_N

Bottom side placement
22uF-0603 C2
22uF-0603 C3
4.7uF-0402 C4
1.0uF C5
100nF C6
100nF C7

VDDMODEM	K14	VDDCORE	J13
VDDMODEM	K18	VDDCORE	J17
VDDMODEM	L13	VDDCORE	K10
VDDMODEM	L17	VDDCORE	M10
VDDMODEM	M14	VDDCORE	N29
VDDMODEM	M18	VDDCORE	U29
VDDMODEM	N13	VDDCORE	V22
VDDMODEM	N17	VDDCORE	V26
VDDMODEM	P14	VDDCORE	W23
VDDMODEM	P18	VDDCORE	W25
VDDMODEM	R13	VDDCORE	W29
VDDMODEM	R17	VDDCORE	Y22
VDDMODEM	T14	VDDCORE	Y26
VDDMODEM	T18	VDDCORE	Y30
VDDMODEM	U13	VDDCORE	Y32
VDDMODEM	U17	VDDCORE	AA9
VDDMODEM	Y14	VDDCORE	AB12
VDDMODEM	Y18	VDDCORE	AB26
VDDMODEM	AB28	VDDCORE	AC29
VDDMODEM	AD28	VDDCORE	AG29
VDDMODEM	AE27	VDDCORE	AL9
VDDMODEM	AF28	VDDCORE	AL13
VDDMODEM	AH28	VDDCORE	AM22
VDDMODEM	AJ27		

VDDCORE

VDDCORE
VFBCORE [6]
VFBCORE_N [6]

Bottom side placement
22uF-0603 C8
22uF-0603 C9
4.7uF-0402 C10
1.0uF C11
100nF C12
100nF C13
100nF C14
100nF C15
4.7uF-0402 C16
1.0uF C17

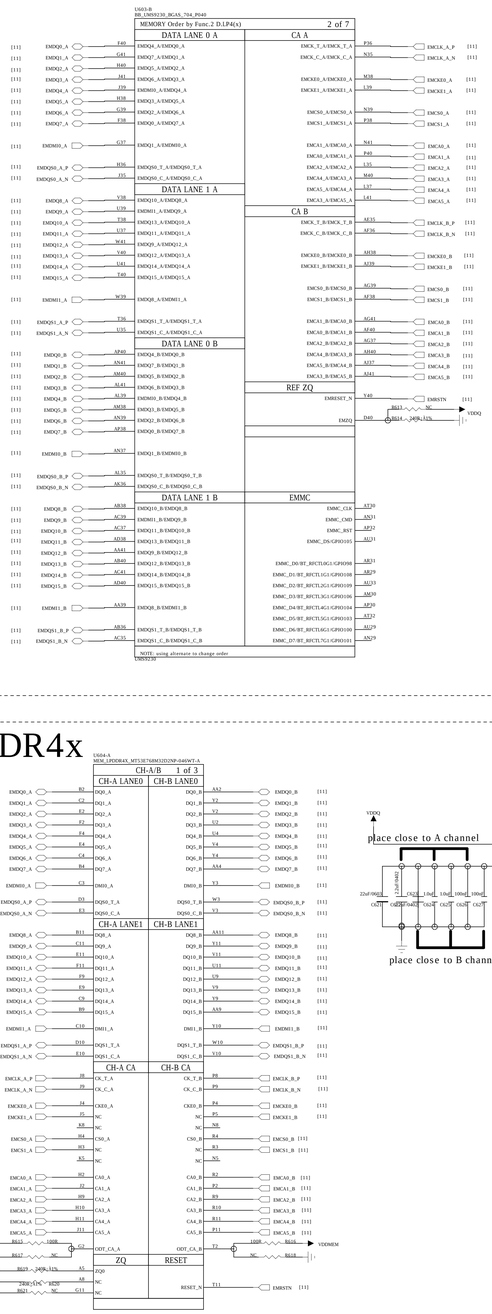
VDDCPU0

VDDCPU0
[6] VFBCPU0
[6] VFBCPU0_N

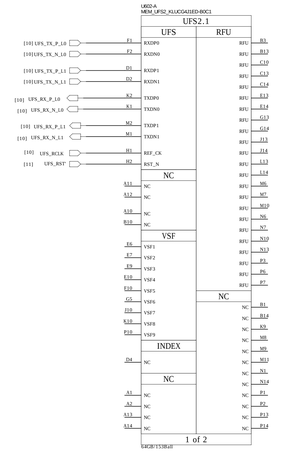
Bottom side placement
22uF-0603 C18
22uF-0603 C19
4.7uF-0402 C20
1.0uF C21
100nF C22
100nF C23

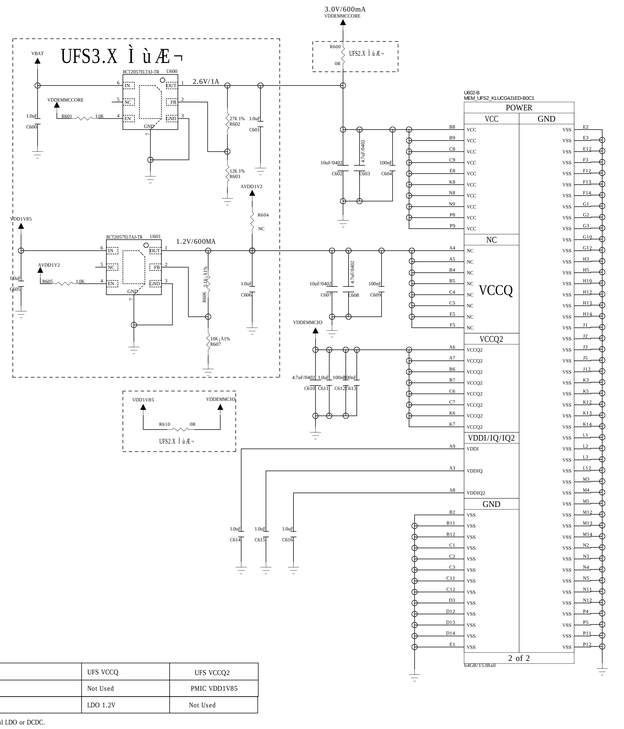
VDDCPU0_LITTLE	Y16	VDDCPU0_LITTLE	AA13
VDDCPU0_LITTLE	Y20	VDDCPU0_LITTLE	AA15
VDDCPU0_LITTLE	AA15	VDDCPU0_LITTLE	AA19
VDDCPU0_LITTLE	AA19	VDDCPU0_LITTLE	AB16
VDDCPU0_LITTLE	AB16	VDDCPU0_LITTLE	AB20
VDDCPU0_LITTLE	AB20	VDDCPU0_LITTLE	AC15
VDDCPU0_LITTLE	AC15	VDDCPU0_LITTLE	AC19
VDDCPU0_LITTLE	AC19	VDDCPU0_LITTLE	AG15
VDDCPU0_LITTLE	AG15	VDDCPU0_LITTLE	AG19
VDDCPU0_LITTLE	AG19	VDDCPU0_LITTLE	AH16
VDDCPU0_LITTLE	AH16	VDDCPU0_LITTLE	AH20
VDDCPU0_LITTLE	AH20	VDDCPU0_LITTLE	AJ13
VDDCPU0_LITTLE	AJ13	VDDCPU0_LITTLE	AJ19
VDDCPU0_LITTLE	AJ19	VDDCPU0_LITTLE	AK16
VDDCPU0_LITTLE	A

MEMORY



UFS

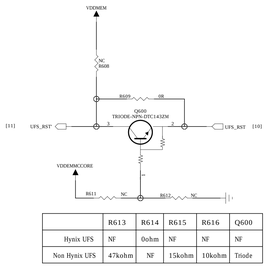




PMIC PN	PMIC VDDEMMCCORE
UMP510G	3.0V/600mA

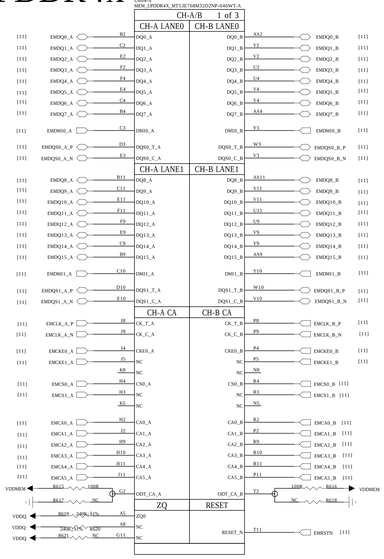
Memory	UFS VCC	UFS VCCQ	UFS VCCQ2
UFS2.X Device	PMIC VDDEMMCCORE 3.0V	Not Used	PMIC VDD1V85
UFS3.X Device	LDO VDDEMMCCORE 2.5V	LDO 1.2V	Not Used

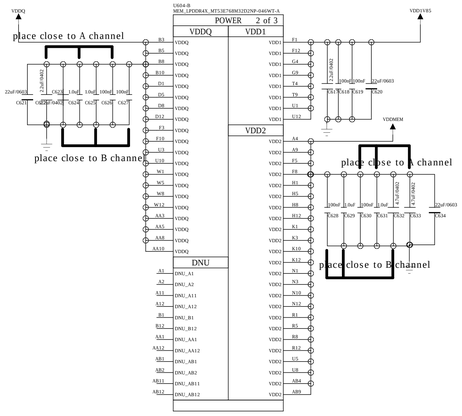
Notes:If UFS ICC is greater than 600mA,please use external LDO or DCDC.

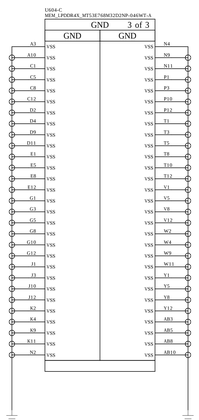


	R613	R614	R615	R616	Q600
Hynix UFS	NF	0ohm	NF	NF	NF
Non Hynix UFS	47kohm	NF	15kohm	10kohm	Triode

LPDDR4x







UFS3.X Device

- **Operating Voltage Range**
  - V_{CC} (NAND) : 2.4V ~ 2.7V
  - V_{CCQ} (CTRL) : 1.14V ~ 1.26V
  - V_{CCQ2} (CTRL) : Not Used

UFS2.X Device

Electrical Specifications

According to JEDEC UFS v2.1 specification, power-up timing starts when the supply voltage crosses 300mV and ends when it reaches the minimum operating value. Micron device only supports V_{CC} and V_{CCQ2}. V_{CCQ} is not used.

Table 39: Power Supply Parameters

Parameter	Symbol	Min	Max	Unit
V_{CC} operating range	V_{CC}	2.7	3.6	V
V_{CCQ} operating range	V_{CCQ}	–	–	–
V_{CCQ2} operating range	V_{CCQ2}	1.7	1.95	V

REVISION RECORD			
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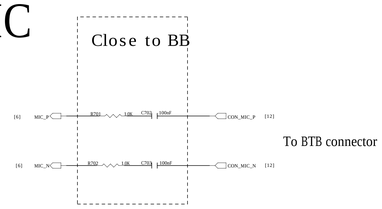
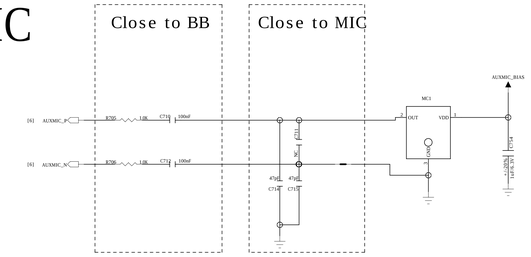
		DOCUMENT NO.:	
EQ1:	DATED:	DEPARTMENT: Hardware DEPT.	
APPROVED:	DATED:	COMPANY: Spreadtrum communications, Inc.	
		CONFIDENTIAL AND PROPRIETARY	

MAIN MIC

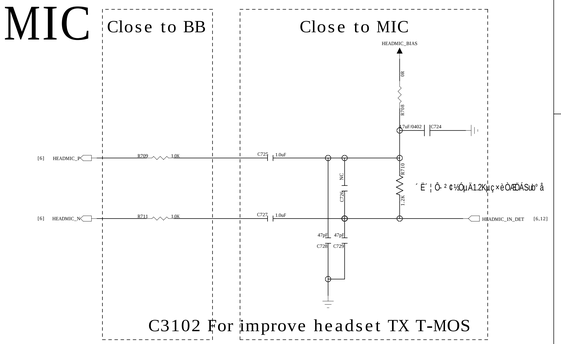


To BTB connector

AUX MIC

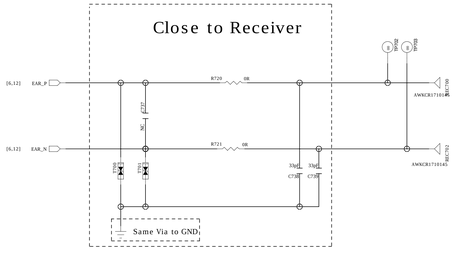


HEAD MIC

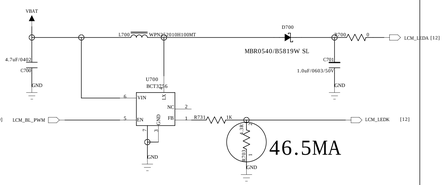


C3102 For improve headset TX T-MOS

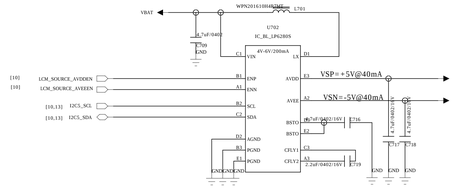
RECEIVER



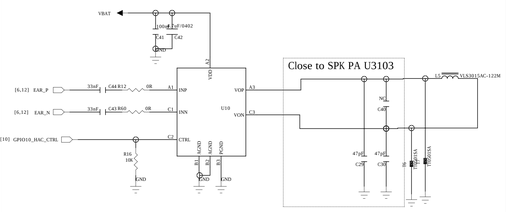
Back Light Driver



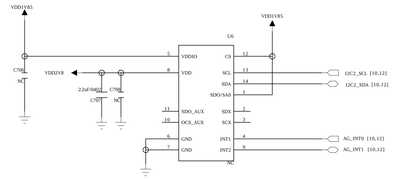
Source Driver

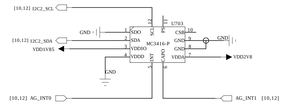


HAC

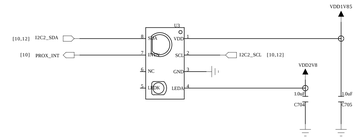


Accelerometer

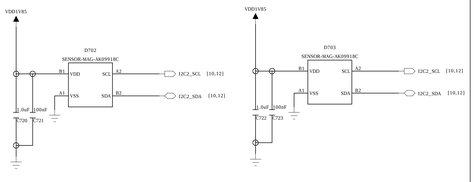




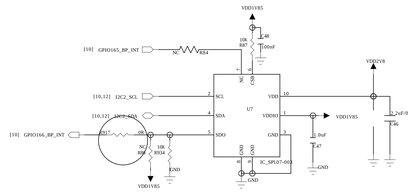
ALS & PROX



Magnetic Sensor



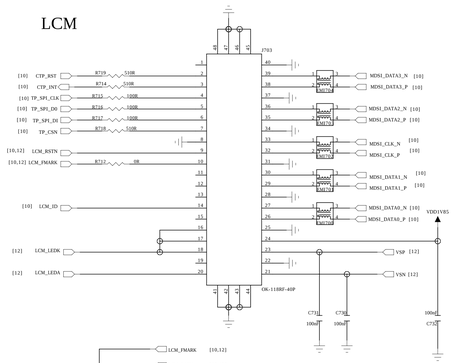
Barometric Pressure Sensor-ÆøÑ¹¼Æ



	R84	R87
SPL07-003	NC	NC
STK7161	0R	10K

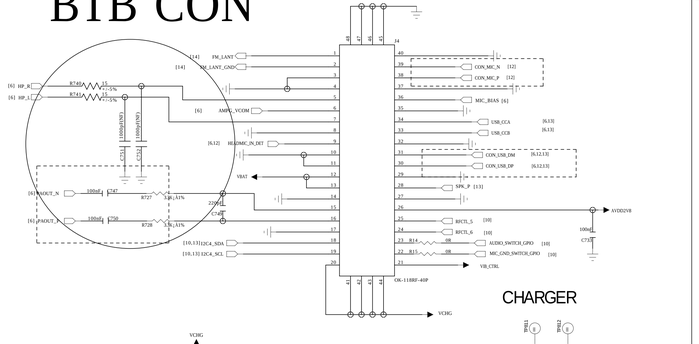
	ADDRESS:
SPL07-003	R934=10K,R86=NC: 0X76 R934=NC,R86=NC: 0X77
STK7161	R934=10K,R86=NC: 0X3A R934=NC,R86=10K: 0X3B

LCM

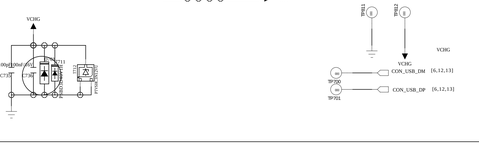


1	NC
2	GPIO_CTP_RSTB
3	HINTO_CTP
4	SPIO_SCK
5	SPI_MISO
6	SPI_MOSI
7	SPIO_CSB
8	GND
9	LCM_RST
10	DSI_TE
11	NC
12	NC
13	NC
14	LCD_ID
15	NC
16	LED_K
17	LED_K
18	LED_K
19	NC
20	LED_A
21	AVEE
22	GND
23	AVDD
24	VIO18_PMU
25	GND
26	LCM_DATA0_P
27	LCD_DATA0_N
28	GND
29	LCM_DATA1_P
30	LCM_DATA1_N
31	GND
32	LCM_CLK_P
33	LCM_CLK_N
34	GND
35	LCM_DATA2_P
36	LCM_DATA2_N
37	GND
38	LCM_DATA3_P
39	LCM_DATA3_N
40	GND
41	GND
42	GND
43	GND
44	GND
45	GND
46	GND
47	GND
48	GND

BTB CON



CHARGER



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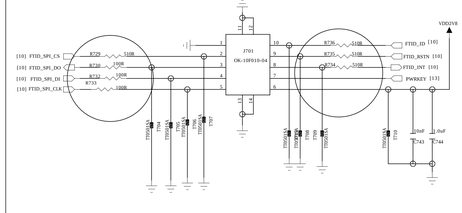

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DESIGNER:	DATED:	DEPARTMENT: Hardware DEPT.	
EQA:	DATED:	COMPANY: Spreadtrum communications, Inc.	
APPROVED:	DATED:		
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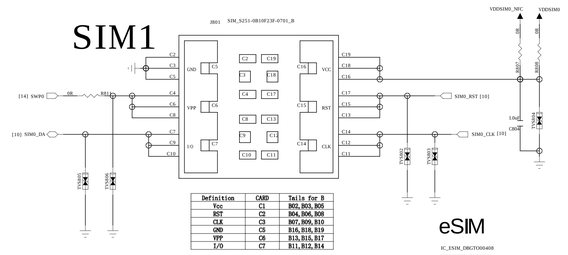
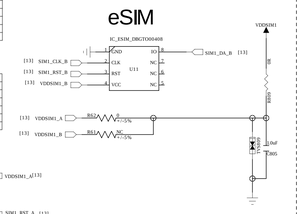
SIM

SIM1



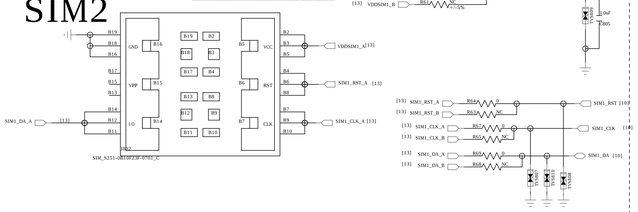
Definition	CARD	Tails for B
Vcc	C1	B02, B03, B05
RST	C2	B04, B06, B08
CLK	C3	B07, B09, B10
GND	C5	B16, B18, B19
VPP	C6	B13, B15, B17
I/O	C7	B11, B12, B14

eSIM

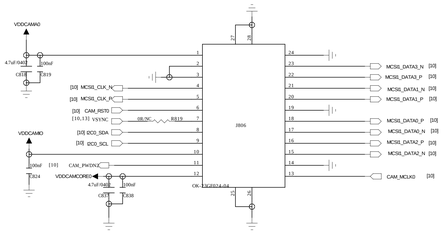


Definition	CARD	Tails for C
Vcc	C1	C16, C18, C19
RST	C2	C13, C15, C17
CLK	C3	C11, C12, C14
GND	C5	C02, C03, C05
VPP	C6	C04, C06, C08
I/O	C7	C07, C09, C10

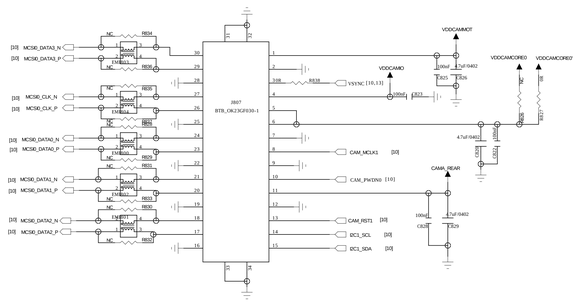
SIM2



FRONT CAM

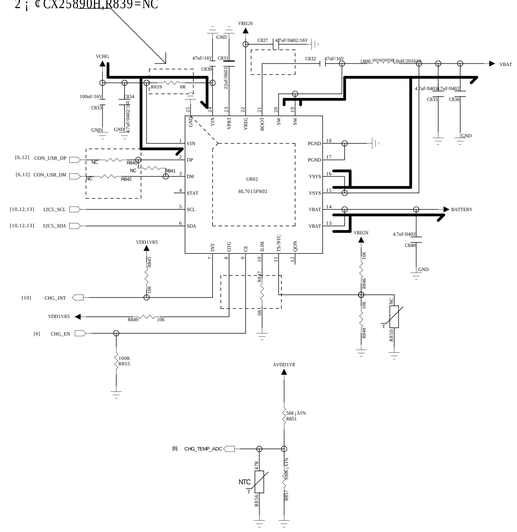


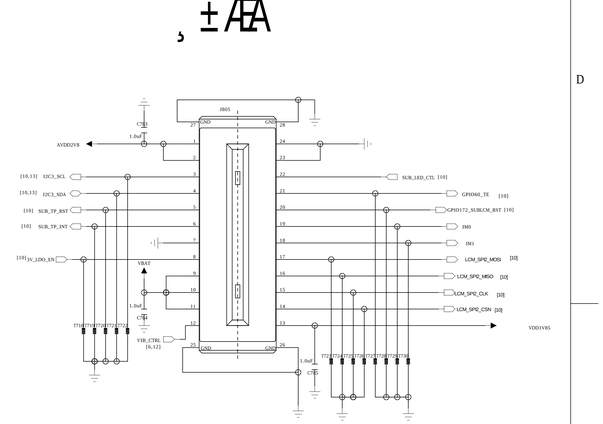
REAR MAIN CAM



CHARGER

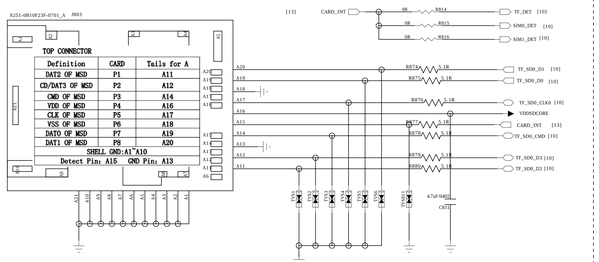
1 ¡ ¢HL7015/CX25601D,R839=0R
2 ¡ ¢CX25890H,R839=NC





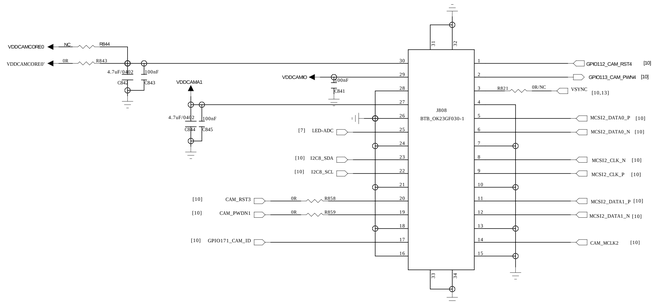
SD

Tray	Tray DET Value
Without Tray	L
Tray Inserted	H

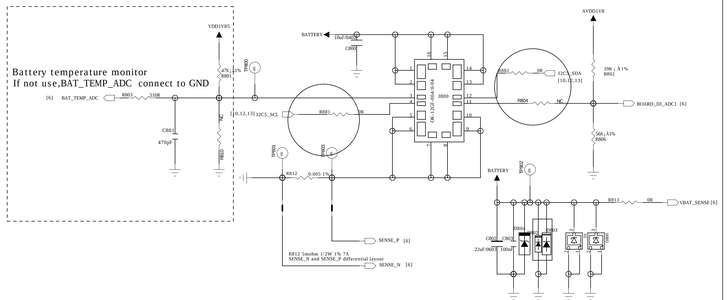


Definition	CARD	Tails for A
DAT2 OF MSD	P1	A11
CD/DAT3 OF MSD	P2	A12
CMD OF MSD	P3	A14
VDD OF MSD	P4	A16
CLK OF MSD	P5	A17
VSS OF MSD	P6	A18
DAT0 OF MSD	P7	A19
DAT1 OF MSD	P8	A20
SHELL GND:A1~A10		
Detect Pin: A15 GND Pin: A13		

Macro CAM



BATTERY CONNECTOR

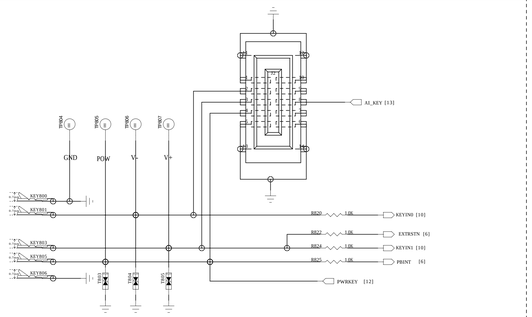


CC Detect

CC DET NOTE:

	R73	R76	R72	R77
UMP510GE	0R	0R	NC	NC
AW35615	NC	NC	0R	0R

KEY



spport two keys 7S reset ,also support single key 7S reset with UMP510G
Two keys :EXTRSTN+PBINT

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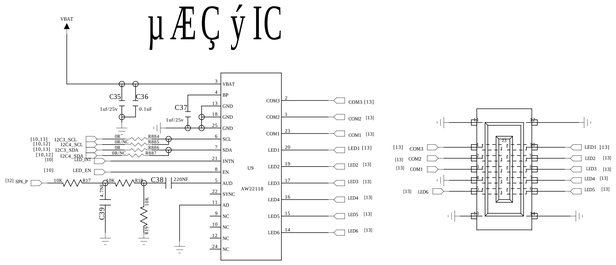
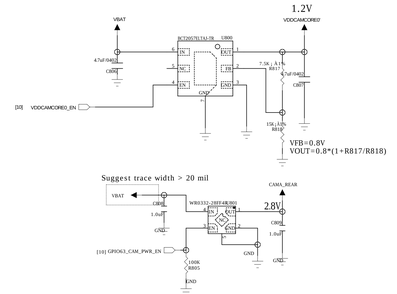
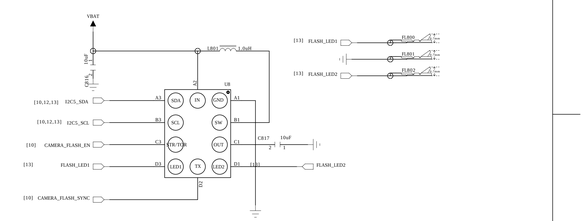


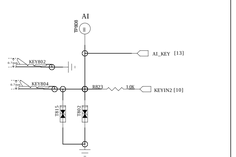
CAM EXT. PWR



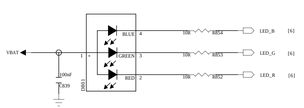
FLASH LED



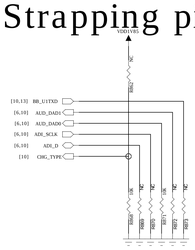
AI Key



RGB LED

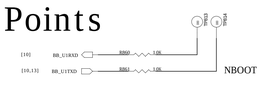


Strapping pin



Ball name	Signal name in boot code	Value	Descriptions	Default vale
U1TXD	USB_DLOAD_EN	0	USB download(no time out)	1(ie=1,wpu)
		1	UART download	
AUD_DAD1	ARM_BOOT_MD0	00	Reserved	11(ie=1,wpu) (MSB=MD1, LSB=MD0)
		01	UFS boot	
AUD_DAD0	ARM_BOOT_MD1	10	SD boot	
		11	eMMC 6.5Mhz	
ADI_SCLK	ARM_BOOT_MD2	0	Reserved	1(ie=1,wpu)
		1	Reserved	
ADI_D	ARM_BOOT_MD3	0	NON-KEY Download(With timeout) mode	1(ie=1,wpu)
		1	Normal mode	
CHG_TYPE	ARM_BOOT_MD4	0	Other(DCP/other)	0(ie=1,wpd)
		1	USB insert(SDP/CDP)	³ Ì Ñ§ÐÒÔÐ ² Í ± ð £ ¬3s time out

UART Points



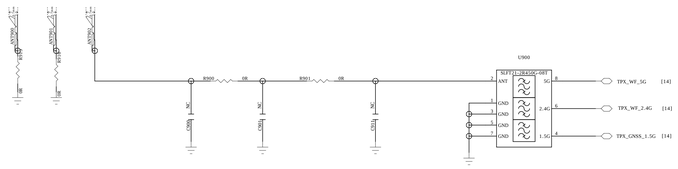
MARK POINT

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

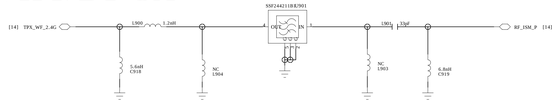
DESIGNER:	DATED:	TITLE & REV:
		DOCUMENT NO.:
EQA:	DATED:	DEPARTMENT: Hardware DEPT.
APPROVED:	DATED:	COMPANY: Spreadtrum communications, Inc.
		CONFIDENTIAL AND PROPRIETARY

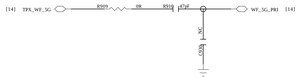
REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:

WIFI&BT ANT

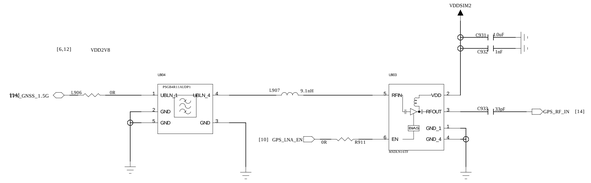


WIFI/BT SAW

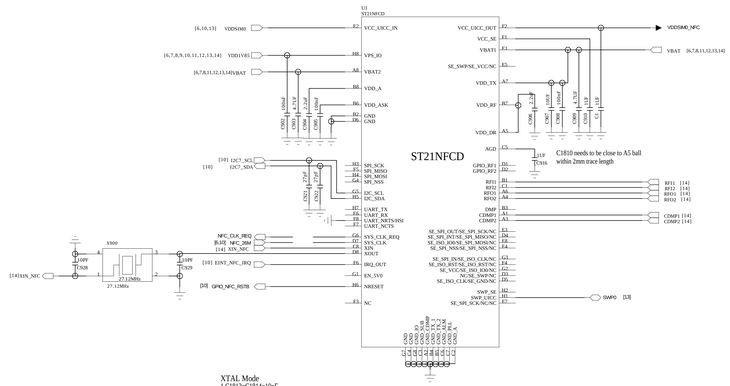




GNSS SAW LNA

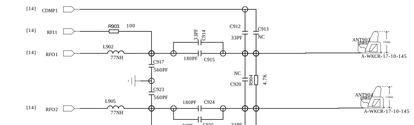


NFC



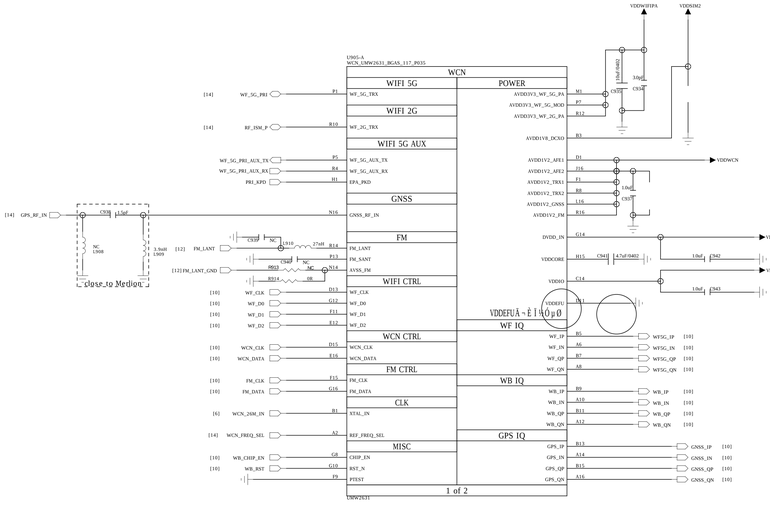
XTAL Mode
1.C1813=C1814=10pF
2.X1801=FA-128
3.R1886=R1891=NC
As for co-clock mode, if customers need to pass CT NFC certification-A, recommend to increase NFC antenna size > 1500mm^2 to assure enough PCD distance margin.

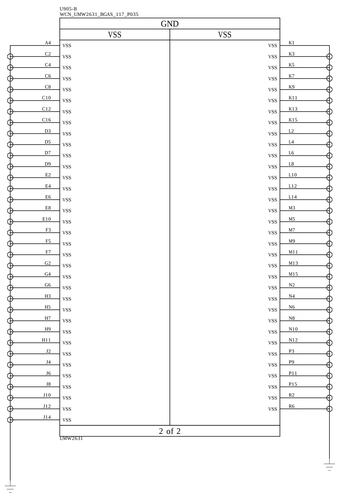
Co-Clock Mode
1.C1813=C1814=X1801=NC
2.R1886=R1891=0 ohm



R1623 is reserved for RF network matching tuning

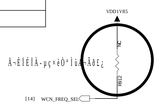
Merlion





Bonding Option

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



TSX (PMU) Only

	X7200	R7220	R7238	R7218	C7244	C7201	R7245	R7225
--> TSX (PMU) Only	NF	NF	NF	NF	NF	NF	NF	NF
TCXO+DCXO	TCXO	NF	0R	0R	22pF	1uF	0R	NF
TCXO+32K	TCXO	0R	0R	NF	22pF	1uF	0R	NF

DESIGNER:	DATED:	TITLE & REV:	
		DOCUMENT NO.:	
EQA:	DATED:	DEPARTMENT:	
		COMPANY:	
APPROVED:	DATED:	CONFIDENTIAL AND PROPRIETARY	