OPPO

Realme 1

Size 2018-03-21 Rev

Date: Realme 1 of

Revision History

SCHEMATIC MCN	HW VERSION	VERSION	DESCRIPTION OF CHANGE
LD20-NC003	EVT2.0	A	EVT2.0 Initial release
		B	Please refer to Item 1 in "Change List " page
		C	Please refer to Item 2 to Item 4 in "Change List " page
		D	Please refer to Item 5 in "Change List " page
		E	Please refer to Item 6 to Item 8 in "Change List " page

OPPO

Realme 1

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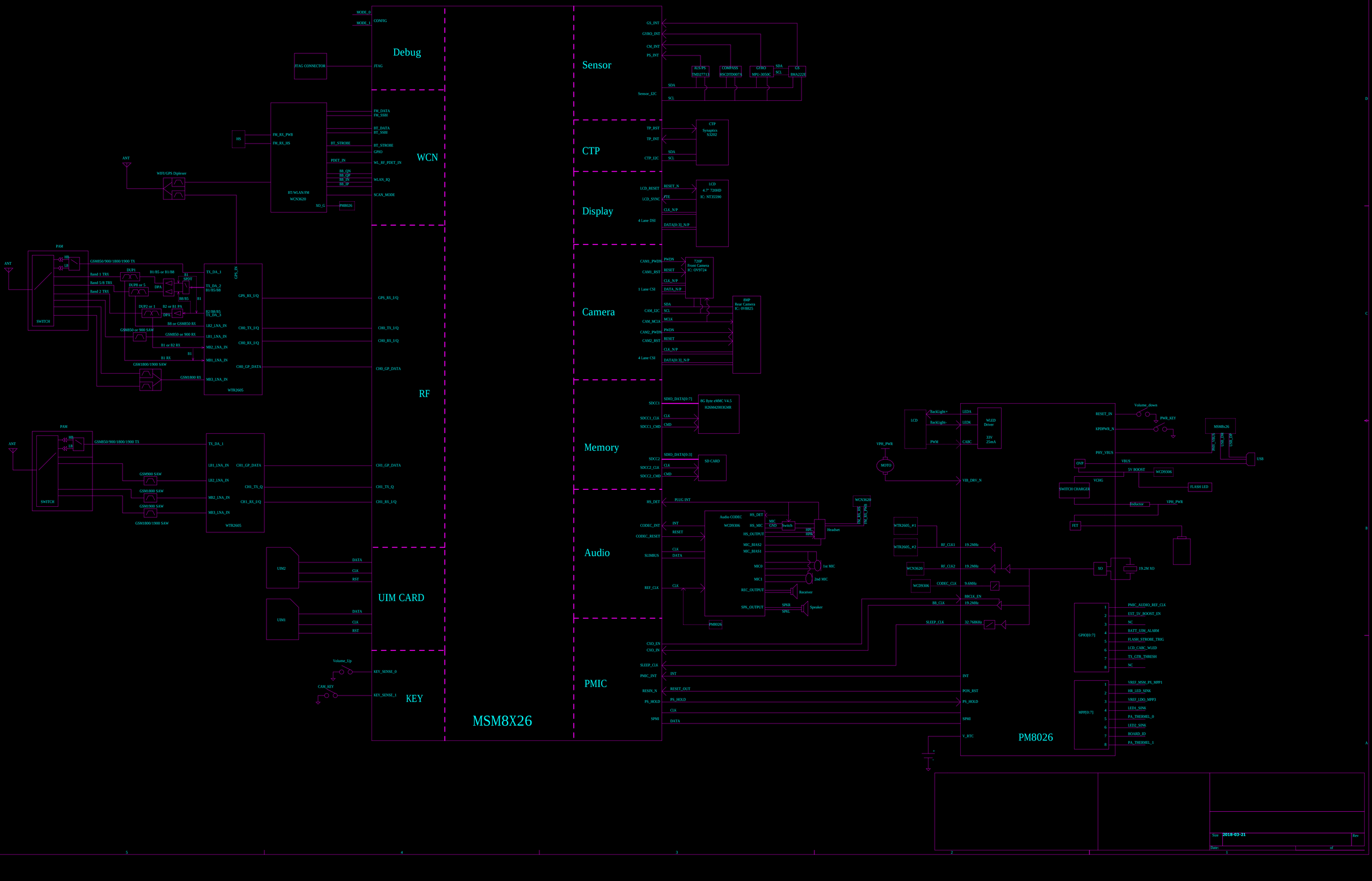
Debug
JTAG CONNECTOR
JTAG
MODE_0
MODE_1
CONFIG
WCN
BT/WLAN/FM
WCN3620
HS
FM_RX_PWR
FM_RX_HS
FM_DATA
FM_SSBI
BT_DATA
BT_SSBI
BT_STROBE
GPIO
PDET_IN
WL_RF_PDET_IN
BB_QN
BB_QP
BB_IN
BB_IP
WLAN_IQ
SCAN_MODE
XO_G
PM8026
ANT
WIFI/GPS Diplexer
RF
PAM
HB
LB
SWITCH
GSM850/900/1800/1900 TX
Band 1 TRX
Band 5/8 TRX
Band 2 TRX
DUPL
B1/B5 or B1/B8
DUP8 or 5
DPA
B1
SPDT
B8/B5
DUP2 or 1
B2 or B1 PA
B2/B8/B5
TX_DA_5
B8 or GSM850 RX
GSM850 or 900 SAW
GSM850 or 900 RX
B1 or B2 RX
GSM1800/1900 SAW
GSM1800 RX
WTR2605
TX_DA_1
TX_DA_2
B1/B5/B8
GPS_IN
LB2_LNA_IN
MB2_LNA_IN
LB1_LNA_IN
MB1_LNA_IN
MB3_LNA_IN
GPS_RX_I/Q
CH0_TX_I/Q
CH0_RX_I/Q
CH0_GP_DATA
GSM900 SAW
GSM1800 SAW
GSM1900 SAW
GSM1800/1900 SAW
CH1_GP_DATA
CH1_TX_Q
CH1_RX_I/Q
CH1_TX_I/Q
UIM CARD
UIM2
UIM1
DATA
CLK
RST
KEY
Volume_Up
CAM_KEY
KEY_SENSE_0
KEY_SENSE_1
MSM8X26
Sensor
GS_INT
GYRO_INT
CM_INT
PS_INT
ALS/PS
TMD27713
COMPASS
HSCDTD007A
GYRO
MPU-3050C
GS
BMA222E
SDA
SCL
Sensor_I2C
CTP
TP_RST
TP_INT
CTP_I2C
Synaptics
S3202
Display
LCD_RESET
LCD_SYNC
4 Lane DSI
RESET_N
TE
CLK_N/P
DATA[0:3]_N/P
LCD
4.7" 720HD
IC: NT35590
Camera
CAM1_PWDN
CAM1_RST
1 Lane CSI
CAM_I2C
CAM_MCLK
CAM2_PWDN
CAM2_RST
4 Lane CSI
PWDN
RESET
MCLK
720P
Front Camera
IC: OV9724
8MP
Rear Camera
IC: OV8825
Memory
SDCC1
SDCC1_CLK
SDCC1_CMD
SDIO_DATA[0:7]
8G Byte eMMC V4.5
H26M42003GMR
SDCC2
SDCC2_CLK
SDCC2_CMD
SDIO_DATA[0:3]
SD CARD
Audio
HS_DET
PLUG INT
CODEC_INT
CODEC_RESET
SLIMBUS
REF_CLK
INT
RESET
CLK
DATA
Audio CODEC
WCD9306
HS_DET
HS_MIC
HS_OUTPUT
MIC_BIAS2
MIC_BIAS1
MIC0
MIC3
REC_OUTPUT
SPK_OUTPUT
MIC
GND
Switch
HPL
HPR
Headset
1st MIC
2nd MIC
Receiver
SPKR
SPKL
Speaker
PMIC
CXO_EN
CXO_IN
SLEEP_CLK
PMIC_INT
RESIN_N
PS_HOLD
SPMI
RESET_OUT
INT
PM8026
WTR2605_#1
WTR2605_#2
WCN3620
WCD9306
RF_CLK1
RF_CLK2
CODEC_CLK
BB_CLK
SLEEP_CLK
19.2MHz
9.6MHz
32.768KHz
BBCLK_EN
XO
19.2M XO
LCD
BackLight+
BackLight-
PWM
LEDA
LEDK
CABC
WLED Driver
33V
25mA
VPH_PWR
MOTO
VIB_D8V_N
RESET_IN
KPDPWR_N
PHY_VBUS
VBUS
OVP
5V BOOST
WCD9306
VCHG
SWITCH CHARGER
FLASH LED
Inductor
FET
Volume_down
PWR_KEY
MSM8x26
USB_DP
USB_DM
USB
GPIO[0:7]
MPP[0:7]
PMIC_AUDIO_REF_CLK
EXT_5V_BOOST_EN
NC
BATT_UIM_ALARM
FLASH_STROBE_TRIG
LCD_CABC_WLED
TX_GTR_THRESH
VREF_MSM_PX_MPP1
HR_LED_SINK
VREF_LDO_MPP3
LED1_SINK
PA_THERM1_0
LED2_SINK
BOARD_ID
PA_THERM1_1
PM8026
Size
2018-03-21
Rev
Date:
of

MSM8x26 GPIO Configuration For QRD8x26

GPIO_0	NC	GPIO_41	WCSS_WLAN_DATA1	GPIO_82	CH0_PA_RANGE1
GPIO_1	NC	GPIO_42	WCSS_WLAN_DATA0	GPIO_83	CH0_TXM_CTL1_SW1
GPIO_2	NC	GPIO_43	WCSS_WLAN_SET	GPIO_84	CH0_TXM_CTL2_SW0
GPIO_3	NC	GPIO_44	WCSS_WLAN_CLK	GPIO_85	CH0_GSM_PA_ON_HB
GPIO_4	NC	GPIO_45	WCSS_FM_SSBI	GPIO_86	CH0_GSM_PA_ON_LB
GPIO_5	NC	GPIO_46	WCSS_FM_SDI	GPIO_87	TX_GTR_THRESH
GPIO_6	I2C2_SDA_SENS	GPIO_47	WCSS_BT_CTL	GPIO_88	NC
GPIO_7	I2C2_SCL_SENS	GPIO_48	WCSS_BT_DAT_STB	GPIO_89	NC
GPIO_8	UART3_TX	GPIO_49	NC	GPIO_90	NC
GPIO_9	UART3_RX	GPIO_50	NC	GPIO_91	NC
GPIO_10	I2C6_SDA_NFC	GPIO_51	NC	GPIO_92	NC
GPIO_11	I2C6_SCL_NFC	GPIO_52	NC	GPIO_93	NC
GPIO_12	NC	GPIO_53	UIM2_DATA	GPIO_94	NC
GPIO_13	MSM_HS_DET	GPIO_54	UIM2_CLK	GPIO_95	CH0_GSM_TX_PHASE_D0
GPIO_14	NC	GPIO_55	UIM2_RST	GPIO_96	CH0_GSM_TX_PHASE_D1
GPIO_15	CAM_1V8_EN	GPIO_56	NC	GPIO_97	NC
GPIO_16	CTP_RST_N	GPIO_57	UIM1_DATA	GPIO_98	NC
GPIO_17	CTP_INT	GPIO_58	UIM1_CLK	GPIO_99	NC
GPIO_18	I2C5_SDA_CTP	GPIO_59	UIM1_RST	GPIO_100	NC
GPIO_19	I2C5_SCL_CTP	GPIO_60	LCD_ID	GPIO_101	CH0_SSBI_PRX
GPIO_20	NFC_DISABLE_N	GPIO_61	BATT_UIM_ALARM	GPIO_102	CH0_SSBI_TX_GPS
GPIO_21	NFC_INT_N	GPIO_62	NC	GPIO_103	NC
GPIO_22	SPI_CS_EHT	GPIO_63	ACCL_INT1_N	GPIO_104	NC
GPIO_23	NC	GPIO_64	NC	GPIO_105	GPS_ELNA_EN
GPIO_24	DSI_LCD_TE	GPIO_65	ALSP_INT_N	GPIO_106	VOLUME+
GPIO_25	DSI_LCD_RST	GPIO_66	MAG_INT_N	GPIO_107	VOLUME-
GPIO_26	CAM_MCLK0	GPIO_67	MSM_CODEC_REF_CLK	GPIO_108	NC
GPIO_27	NC	GPIO_68	CEDEC_INT1_N	GPIO_109	NC
GPIO_28	CAM2_RST_N	GPIO_69	NC	GPIO_110	NC
GPIO_29	I2C0_SDA_CAM	GPIO_70	CODEC_SLIMBUS_CLK	GPIO_111	NC
GPIO_30	I2C0_SCL_CAM	GPIO_71	CODEC_SLIMBUS_DATA	GPIO_112	NC
GPIO_31	NC	GPIO_72	CODEC_RST_N	GPIO_113	FORCE_USB_BOOT
GPIO_32	FLASH_STROBE_TRIG	GPIO_73	FORT_CAM_ID	GPIO_114	NC
GPIO_33	NC	GPIO_74	BACK_CAM_ID	GPIO_115	NC
GPIO_34	NC	GPIO_75	CH0_PA_ON4_B1	GPIO_116	NC
GPIO_35	CAM2_STANDBY	GPIO_76	NC	GPIO_117	NC
GPIO_36	CAM1_STANDBY	GPIO_77	WTR0_GSM_TDS_SEL	GPIO_118	NC
GPIO_37	CAM1_RST_N	GPIO_78	CH0_PA_ON1_B8	GPIO_119	NC
GPIO_38	NC	GPIO_79	CH0_TXM_CTL0_SPDT	GPIO_120	NC
GPIO_39	WCSS_BT_SSBI	GPIO_80	CH0_WTR_RF_ON		
GPIO_40	WCSS_WLAN_DATA2	GPIO_81	CH0_PA_RANGE0 (BOOT_CONFIG_0)		

PM8026 GPIO/MPP Configuration For QRD8x26

GPIO_1	AUDIO_REF_CLK (DIVCLK1)	MPP_1	VREF_PX
GPIO_2	EXT_5VBOOST_EN	MPP_2	HR_LED_SNK
GPIO_3	BBCLK2_EN	MPP_3	VREF_LDO
GPIO_4	BATT_UICC_ALARM	MPP_4	LED1_SINK
GPIO_5	FLASHNOW	MPP_5	PA2_THERM
GPIO_6	CABC_WLED	MPP_6	LED2_SINK
GPIO_7	TX_GTR_THRESH	MPP_7	HWID
GPIO_8	SYS_BOOST_FORCE_BYP	MPP_8	PA1_THERM

I2C Address List For QRD8x26

I2C GPIO	Device	MPN	Write Address	Read Address
GPIO[6:7]	Accelerometer	BMA222E	0x31	0x30
	Magnetometer	HSCDTD007A	0x19	0x18
	Gyroscope	MPU-3050C	0xD1	0xD0
	ALS/Proximity	TMD27713T	0x73	0x72
GPIO[18:19]	Touch Screen	S3202	0x41	0x40
GPIO[29:30]	Front Camera	OV9724	0x41	0x40
	Rear Camera	OV8825	0x6D	0x6C

Interrupt List For QRD8x26

GPIO	2018-03-21	Description	State
GPIO_11	MSM_HS_DET	Headset Plug In Detection	Active Low
GPIO_17	CTP_INT	Interrupt From CTP Sensor	Defualt Low /Open Drain
GPIO_38	SD_CARD_DET_N	SD Card Insert Detection	Insert Low/Remove High
GPIO_49	ACCL_INT2_N	Interrupt2 From Accelerometer	Default High/Push-Pull
GPIO_63	ACCL_INT1_N	Interrupt1 From Accelerometer	Default High/Push-Pull
GPIO_64	GYRO_INT_N	Interrupt From Gyroscope	Default High/Push-Pull
GPIO_65	ALSP_INT_N	Interrupt From ALS/Proximity	Active Low /Open Drain
GPIO_66	MAG_INT_N	Interrupt From Magnetometer	Active High /Push-pull
GPIO_68	CODEC_INT1_N	Interrupt From CODEC	PA1_THERM
GPIO_115	ETH_INT_N	Interrupt From Ethernet Driver	Active Low /Push-pull

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U0501-A

MSM-8926-0-784PNSP-TB-00-0

MSM8X26

CONTROL

Connect GND when use WCN3620

BBCLK1_MSM should be routed as daisy chain, but not star type

refer to 80-NC833-14

Route to G20 first

K37 WCN_XO

G20 USB_HS2_SYSCLK

[12] BBCLK1_MSM — I6 CXO

[12] MSM_CXO_EN — B27 CXO_EN

[12] SLEEP_CLK — B35 SLEEP_CLK

[12] PON_RESET_N — D33 RESIN

[16] MSM_RESOUT_N — E32 RESOUT

C0505 0201_NC

AU32 MODE_0

AV31 MODE_1

[12] PS_HOLD — C34 PS_HOLD

AT31 SRST

AN34 TCK

AY35 TDI

AR32 TDO

AW34 TMS

AP33 TRST

Y39 VREF_DQ

AC2 VREF_CA

[12] VREF_LPDDR2 — AF33 EBI0_VREF_D0

C0201_100NF_6.3V_K C0501

P33 EBI0_VREF_D1

AM29 EBI0_VREF_D2

F30 EBI0_VREF_D3

AN10 EBI0_VREF_CA

[6,12] VREF_LDO_MPP3 — U6 VREF_APC_MPM

C0201_100NF_6.3V_K C0502

0402 package

R0501R0402_1M — F27 NC_20

R0502 R0402_1M — E28 NC_21

AP29 NC_18

AN30 NC_19

K3 NC_16

J4 NC_17

MSM8926_0

Note1: Place pad termination for 100MHz

SDC_CLK close to MSM within 5mm

SDC1_CLK	F1	SDC1_EMMC_CLK	[16]
SDC1_CMD	G6	SDC1_EMMC_CMD	[5,16]
SDC1_DATA_0	F3	SDC1_EMMC_D0	[16]
SDC1_DATA_1	E2	SDC1_EMMC_D1	[16]
SDC1_DATA_2	G4	SDC1_EMMC_D2	[16]
SDC1_DATA_3	J2	SDC1_EMMC_D3	[16]
SDC1_DATA_4	E4	SDC1_EMMC_D4	[16]
SDC1_DATA_5	D1	SDC1_EMMC_D5	[16]
SDC1_DATA_6	G2	SDC1_EMMC_D6	[16]
SDC1_DATA_7	K1	SDC1_EMMC_D7	[16]

SDC2_CLK	M3	SDC2_SDCARD_CLK	[16]
SDC2_CMD	L4	SDC2_SDCARD_CMD	[16]
SDC2_DATA_0	M5	SDC2_SDCARD_D0	[16]
SDC2_DATA_1	L2	SDC2_SDCARD_D1	[16]
SDC2_DATA_2	M1	SDC2_SDCARD_D2	[16]
SDC2_DATA_3	P1	SDC2_SDCARD_D3	[16]

RSVD — J26

90 ohm differential impedence routing

USB_HS2_DM	F21	USB_HS_DM	[18]
USB_HS2_DP	E22	USB_HS_DP	[18]
USB_HS2_ID	D23		
USB_HS2_VBUS	G24		

PMIC_SPMI_CLK	G28	PMIC_SPMI_CLK	[12]
PMIC_SPMI_DATA	D27	PMIC_SPMI_DATA	[12]

C0201_NC C0503

C0201_NC C0504

C0503 and C0504 need to be placed with 10mm from MSM

GND_324 B25

USB_HS2_REXT A22 — R0508 R0201_200R_F

EBI0_CAL_REXT AM9 — R0509R0201_240R_F

EBI0_ZQ0 AD1 — R0510 R0201_240R_F

EBI0_ZQ1 AY19 — R0511 R0201_NC

Note: Place resisters close to MSM

	R0511
2 die DDR memory	0R
1 die DDR memory	NC

É¼³ýJTAG²âÊÔµã

TP0509 TP_1.0

TP0524 TP_1.0

JTAG

TP0510 TP_1.0 — UART3_TX [7]

TP0511 TP_1.0 — UART3_RX [7]

00 = Native mode, 11 = Boundary Scan - (BSAN) mode.

Reserved for Test

GND Screw

Shielding Frame

[13,18] USB_VBUS — TP0522 TP_1.0

[18] USB_DP — TP0525 TP_1.0

[18] USB_DM — TP0526 TP_1.0

TP0527 TP_1.0

[12,13] VBATT — TP0528 TP_1.0

TP0529 TP_1.0

TP0530 TP_1.0

TP_1.0 TP0523 — SDC1_EMMC_CMD [5,16]

D0501 PESD5V0S1UL

Test Point

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U0501-B

MSM-8926-0-784PNSP-TR-00-0

MSM8X26

CONTROL

MIPI CSI0-MAIN CAM

[17] MIPI_CSI0_D0_N — AU26 — MIPI_CSI0_LAN0N
[17] MIPI_CSI0_D0_P — AR26 — MIPI_CSI0_LAN0P
[17] MIPI_CSI0_CLK_N — AY25 — MIPI_CSI0_LAN1N
[17] MIPI_CSI0_CLK_P — AW26 — MIPI_CSI0_LAN1P
[17] MIPI_CSI0_D1_N — AP23 — MIPI_CSI0_LAN2N
[17] MIPI_CSI0_D1_P — AN24 — MIPI_CSI0_LAN2P
AY23 — MIPI_CSI0_LAN3N
AW22 — MIPI_CSI0_LAN3P
AU22 — MIPI_CSI0_LAN4N
AR22 — MIPI_CSI0_LAN4P

MIPI CSI1-SUB CAM

[17] MIPI_CSI1_D0_N — AV27 — MIPI_CSI1_LAN0N
[17] MIPI_CSI1_D0_P — AT27 — MIPI_CSI1_LAN0P
[17] MIPI_CSI1_CLK_N — AY27 — MIPI_CSI1_LAN1N
[17] MIPI_CSI1_CLK_P — AW28 — MIPI_CSI1_LAN1P

MIPI_DSI0_CLKN — AV17 — MIPI_DSI0_CLK_N — [17]
MIPI_DSI0_CLKP — AT17 — MIPI_DSI0_CLK_P — [17]
MIPI_DSI0_LAN0N — AT21 — MIPI_DSI0_D0_N — [17]
MIPI_DSI0_LAN0P — AV21 — MIPI_DSI0_D0_P — [17]
MIPI_DSI0_LAN1N — AP19 — MIPI_DSI0_D1_N — [17]
MIPI_DSI0_LAN1P — AR20 — MIPI_DSI0_D1_P — [17]
MIPI_DSI0_LAN2N — AY15 — MIPI_DSI0_D2_N — [17]
MIPI_DSI0_LAN2P — AW14 — MIPI_DSI0_D2_P — [17]
MIPI_DSI0_LAN3N — AR16 — MIPI_DSI0_D3_N — [17]
MIPI_DSI0_LAN3P — AU16 — MIPI_DSI0_D3_P — [17]

MIPI DSI0-LCD

MIPI CSI signal: 100 ohm differential impedence routing

U0501-C

MSM-8926-0-784PNSP-TR-00-0

MSM8X26

CONTROL

WTR0 Primary RX

[23] WAN_BB_PRX_FVRX_I_M — AG2 — BBRX_CH0_IM
[23] WAN_BB_PRX_FVRX_I_P — AH1 — BBRX_CH0_IP
[23] WAN_BB_PRX_FVRX_Q_M — AG4 — BBRX_CH0_QM
[23] WAN_BB_PRX_FVRX_Q_P — AG6 — BBRX_CH0_QP

AF5 — BBRX_CH1_IM
AF3 — BBRX_CH1_IP
AF1 — BBRX_CH1_QM
AE2 — BBRX_CH1_QP

WTR0 Diversity RX

[23] CH2_WAN_BB_DRX_FVRX_I_M — AA4 — BBRX_CH2_IM
[23] CH2_WAN_BB_DRX_FVRX_I_P — AJ6 — BBRX_CH2_IP
[23] CH2_WAN_BB_DRX_FVRX_Q_M — AH5 — BBRX_CH2_QM
[23] CH2_WAN_BB_DRX_FVRX_Q_P — AH3 — BBRX_CH2_QP

AK3 — BBRX_CH3_IM
AL4 — BBRX_CH3_IP
AK1 — BBRX_CH3_QM
AL2 — BBRX_CH3_QP

R0601 R0201_3.92K_F — U32 — WLAN_REXT

[26] WCSS_BB_IN — U34 — WLAN_BB_IM
[26] WCSS_BB_IP — V35 — WLAN_BB_IP
[26] WCSS_BB_QN — P35 — WLAN_BB_QM
[26] WCSS_BB_QP — R34 — WLAN_BB_QP

ET_DAC_M — AC4
ET_DAC_P — AA4

VREG_L7_1P85V — [8,11]

C0201_NC C0601

Close to MSM

Add IQ series 0ohm

TX_DAC0_IM — AB5 — R0602 R0201_0R — WAN_BB_TX_I_M — [23]
TX_DAC0_IP — AB3 — R0603 R0201_0R — WAN_BB_TX_I_P — [23]
TX_DAC0_QM — Y1 — R0604 R0201_0R — WAN_BB_TX_Q_M — [23]
TX_DAC0_QP — W2 — R0605 R0201_0R — WAN_BB_TX_Q_P — [23]
TX_DAC0_IREF — AA6 — WAN_TXDAC_IREF_REXT — [23]
TX_DAC0_VREF — V5 — C0201_NC C0602 — VREF_LDO_MPP3 — [5,12]

C0201_NC C0603 C0201_NC C0604 C0201_NC C0605 C0201_NC C0606

TX_DAC1_IM — AD3
TX_DAC1_IP — AD5
TX_DAC1_QM — AD7
TX_DAC1_QP — AC6
TX_DAC1_IREF — AE8
TX_DAC1_VREF — AC8

ET UNUSED

GNSS_BB_IP — AN4 — GPS_BB_I_P — [23]
GNSS_BB_IM — AM3 — GPS_BB_I_M — [23]
GNSS_BB_QP — AR4 — GPS_BB_Q_P — [23]
GNSS_BB_QM — AP3 — GPS_BB_Q_M — [23]

TXDAC1 and ETDAC Connections Under Different RF Configurations

All use cases below use TXDAC0 dedicated for WTR0

ET can only be used with primary RF path (WTR0 path)

I/Q Usage Scenarios	ET Usage	VDD_A2 (pin AD9)	TX_DAC1_I/Q	ETDAC_P/M	TX_DAC1_IREF	TX_DAC1_VREF
Single WTR designs such as ATT CSFB (with one WTR1625L) or Carrier Aggregation (CA) with WTR1625L+WFR1620						
TX_DAC1_I/Q Unused	ET Unused	* GND	GND	Floating	GND	GND
TX_DAC1_I/Q Unused	ET Used	PM8926 VREG_L7	GND	QFE1100 AMP_IN*/M	PM8926 VREG_L7	PM8626 MPP_03
Two WTR designs such as SVLTE (WTR1625L+WTR1625) or DSDA/SGLTE (WTR1605L/WTR1625L+WTR2100)						
TX_DAC1_I/Q Used	ET Unused	PM8926 VREG_L7	WTR1_I/Q	Floating	WTR1_DAC_IREF	PM8626 MPP_03
TX_DAC1_I/Q Used	ET Used	PM8926 VREG_L7	WTR1_I/Q	QFE1100 AMP_IN*/M	WTR1_DAC_IREF	PM8626 MPP_03

* Note: DNI R2998, remove C757 and ground AD9.

MSM892

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U0501-D

MSM-8926-0-784PNSP-TR-00-0

MSM8X26

CONTROL

[14] AUDIO_PA_EN	F7	GPIO_0	GPIO_37	AR40	CAM1_RST_N [17]
[15] HALL_INT_N	E6	GPIO_1	GPIO_38	AL34	
	D3	GPIO_2	GPIO_39	Y37	WCSS_BT_SSBI [26]
[18] GPIO_KEYLIGHT	D5	GPIO_3	GPIO_40	R40	WCSS_WLAN_DATA2 [26]
	F29	GPIO_4	GPIO_41	N38	WCSS_WLAN_DATA1 [26]
	F31	GPIO_5	GPIO_42	T39	WCSS_WLAN_DATA0 [26]
[15] I2C2_SDA_SENS	D35	GPIO_6	GPIO_43	V37	WCSS_WLAN_SET [26]
[15] I2C2_SCL_SENS	C36	GPIO_7	GPIO_44	P39	WCSS_WLAN_CLK [26]
[5] UART3_TX	AE34	GPIO_8	GPIO_45	AC38	WCSS_FM_SSBI [26]
[5] UART3_RX	AD33	GPIO_9	GPIO_46	W40	WCSS_FM_SDI [26]
[19] I2C6_SDA_NFC	AB37	GPIO_10	GPIO_47	AD39	WCSS_BT_CTL [26]
[19] I2C6_SCL_NFC	AC34	GPIO_11	GPIO_48	AC40	WCSS_BT_DAT_STB [26]
	AV37	GPIO_12	GPIO_49	L34	
	AU38	GPIO_13	GPIO_50	D37	
	AR36	GPIO_14	GPIO_51	A30	
[17] CAM_AVDD_2V8_EN	AN36	GPIO_15	GPIO_52	B31	
[15] CTP_RST_N	AV39	GPIO_16	GPIO_53	A8	UIM2_DATA [18]
[15] CTP_INT	AP35	GPIO_17	GPIO_54	B9	UIM2_CLK [18]
[15] I2C5_SDA_CTP	AY37	GPIO_18	GPIO_55	C10	UIM2_RST [18]
[15] I2C5_SCL_CTP	AW36	GPIO_19	GPIO_56	A10	
[19] NFC_REG_PU	AT37	GPIO_20	GPIO_57	C6	UIM1_DATA [18]
[19] NFC_IFC_REQ	AU40	GPIO_21	GPIO_58	A4	UIM1_CLK [18]
	AP37	GPIO_22	GPIO_59	B7	UIM1_RST [18]
[17] BACK_CAM_ID	AR38	GPIO_23	GPIO_60	C4	LCD_ID [17]
[17] DSI_LCD_TE	AE40	GPIO_24	GPIO_61	B3	
[17] DSI_LCD_RST	Y33	GPIO_25	GPIO_62	J38	
[17] CAM_MCLK0	AC36	GPIO_26	GPIO_63	H35	ACC3_INT1_N [15]
[17] FORT_CAM_ID	AB35	GPIO_27	GPIO_64	C38	
[17] CAM2_RST_N	AD37	GPIO_28	GPIO_65	D39	AUSP_INT_N [15]
[17] I2C0_SDA_CAM	AH39	GPIO_29	GPIO_66	C40	MAG_INT_N [15]
[17] I2C0_SCL_CAM	AG40	GPIO_30	GPIO_67	B29	
	AD35	GPIO_31	GPIO_68	M35	CODEC_INT [14]
[12] FLASH_STROBE_TRIG	AH35	GPIO_32	GPIO_69	G34	
[19] NFC_WAKE_UP	AJ36	GPIO_33	GPIO_70	A28	CODEC_SLIMBUS_CLK [14]
	AJ40	GPIO_34	GPIO_71	C28	CODEC_SLIMBUS_DATA [14]
[17] CAM2_STANDBY	AK35	GPIO_35	GPIO_72	K35	CODEC_RST_N [14]
[17] CAM1_STANDBY	AM35	GPIO_36	GPIO_73	AW10	BTFE2_CLK [20]

[7,8,11,15,17] VREG_LVS1_1P8V

R0201_2.2K R0701 2.2K

R0201_2.2K R0702 2.2K

[8,11,14,15,16,19,26] VREG_L6_1P8V

R0704 R0201_2.2K

R0705 R0201_2.2K

R0201_2.2K R0706 2.2K

R0201_2.2K R0707 2.2K

R0201_2.2K R0708 2.2K

R0201_2.2K R0709 2.2K

R0201_10K R0710

C0201_NC C0701

U0501-E

MSM-8926-0-784PNSP-TR-00-0

MSM8X26

CONTROL

[20] BTFE2_DATA	AY11	GPIO_74	GPIO_110	C24	
	AV11	GPIO_75	GPIO_111	D25	
	AP15	GPIO_76	GPIO_112	F25	
	AU12	GPIO_77	GPIO_113	C2	
[21] CH0_PA_ON1_B34/B38/B39/B40	AN14	GPIO_78	GPIO_114	C26	
[22] CBPC_1	AY9	GPIO_79	GPIO_115	T7	WTR0_RX_ON [23]
[23] WRTD_RF_ON	AT11	GPIO_80	GPIO_116	V1	CH1_TXM_CTL2_SW0 [22]
[21] CH0_PA_RANGE0	AR12	GPIO_81	GPIO_117	W4	
	AP13	GPIO_82	GPIO_118	W6	
[21] CH0_TXM_VCTL1	AW6	GPIO_83	GPIO_119	C22	
[21] CH0_TXM_VCTL2	AY7	GPIO_84	GPIO_120	A24	
	AR10	GPIO_85			
	AY5	GPIO_86			
[12] TX_GTR_THRESH	AV5	GPIO_87			
	AT5	GPIO_88			
[27] CH1_GSM_PA_ON_HB	AR2	GPIO_89			
[27] CH1_GSM_PA_ON_LB	AP1	GPIO_90			
	AN6	GPIO_91			
[22] CH1_TXM_CTL1_SW1	T1	GPIO_92			
[27] CH1_PA_RANGE0	AU6	GPIO_93			
[27] CH1_PA_RANGE1	AR8	GPIO_94			
[23] CH0_GSM_TX_PHASE_D0	AV3	GPIO_95			
[23] CH0_GSM_TX_PHASE_D1	AV1	GPIO_96			
	AU4	GPIO_97			
	AT3	GPIO_98			
	AR6	GPIO_99			
	AT7	GPIO_100			
[23] CH0_SSBI_PRX	U4	GPIO_101			
[23] CH0_SSBI_TX_GPS	U2	GPIO_102			
	T3	GPIO_103			
	R2	GPIO_104			
[25] GPS_ELNA_EN	T5	GPIO_105			
[18] VOLUME+	J40	GPIO_106			
[18] VOLUME-	K39	GPIO_107			
	L40	GPIO_108			
	G40	GPIO_109			

KPSNS2Ê¼³ý

R0703 should not be greater than 10K to ensure the Voltage level for FORCE USB BOOT since there is internal pull-down on GPIO_113

Control signal from debug board

Configuration GPIO Table		
GPIO_81	WDOG_DISABLE	BOOT_CONFIG_0
GPIO_82	FASTBOOT_SEL_0	BOOT_CONFIG_1
GPIO_83	FASTBOOT_SEL_1	BOOT_CONFIG_2
GPIO_84	FASTBOOT_SEL_2	BOOT_CONFIG_3
GPIO_85	FASTBOOT_SEL_3	BOOT_CONFIG_4
GPIO_87		BOOT_CONFIG_5
GPIO_88		BOOT_CONFIG_6
GPIO_89		BOOT_CONFIG_7
GPIO_90		BOOT_CONFIG_8
GPIO_113	FORCE_USB_BOOT	

FASTBOOT_SEL	BOOT MODE
0000 (Default)	eMMC->SDC2->USB
0001	SDC2->eMMC
0010	eMMC only
0011	USB-HS only

Size 2018-03-21 Rev

Date: of

U0501-F
MSM-8926-0-784PNSP-TR-00-0
MSM8X26
CONTROL

VDD_DDR_CORE_1P8 — 27mA
VDD_DDR_CORE_1P2 — 150mA
VDD_EBI0_CDC — ??mA
VDD_MODEM
VDD_USB_3P3 — 38.2mA
VDD_USB_1P8 — 50mA
VDD_USB_CORE
VDD_TXDAC — 32mA
VDD_A2_1
VDD_A2_2
VDD_QFPROM_PRG — 2mA
VDD_SDC_CDC1
VDD_SDC_CDC2
VREF_SDC
VREF_UIM
VDD_PLL1_1 — 2mA
VDD_PLL1_2
VDD_PLL1_3
VDD_PLL2_1 — 5.4mA
VDD_PLL2_2
VDD_PLL2_3
VDD_WLAN — 10mA
VDD_A2_3 — 7.5mA
VDD_A1_3 — 40.5mA
VDD_A1_2 — 15.7mA
VDD_A2_4
VDD_A1_1
VDD_MIPI_CSI — 20mA
VDD_MIPI_DSI_1P2 — 20mA
VDD_MIPI_DSI_1P8 — 3.6mA
VDD_MIPI_DSI_0P4 — 0.4v
MIPI_DSI_LDO
VDD_EBI0_CDC_1
VDD_EBI0_CDC_2
VDD_EBI0_CDC_3
VDD_EBI0_CDC_4
VDD_EBI0_CDC_5
VDD_MODEM1
VDD_MODEM2
VDD_MODEM3
VDD_MODEM4
VDD_MODEM5
VDD_MODEM6
VDD_MODEM7

Delete C0816 0.1uF NC

qualcomm recommend smps mode
max current 60mA,SMPS efficience 80%£¬ LDO 33%

Note: Place C0851 very close to pin AL16

I/Q Usage Scenarios	ET Usage	VDD_A2 (pin AD9)
Single WTR designs such as ATT CSFB (with or		
TX_DAC1_I/Q Unused	ET Unused	* GND
TX_DAC1_I/Q Unused	ET Used	PM8926 VREG_L7

Delete 3 NC capacitor

U0501-H
MSM-8926-0-784PNSP-TR-00-0
MSM8X26
CONTROL

VDD_CORE — 3180mA
VDD_P1 — EBI0 for POP memory — 180mA
VDD_P3 — most peripherals — 100mA
SDC2 — 22mA
UIM1 — 7.5mA
UIM2 — 7.5mA
SDC1 — 7.5mA
VDD_P4 — 7.5mA
VDD_P8 — 7.5mA

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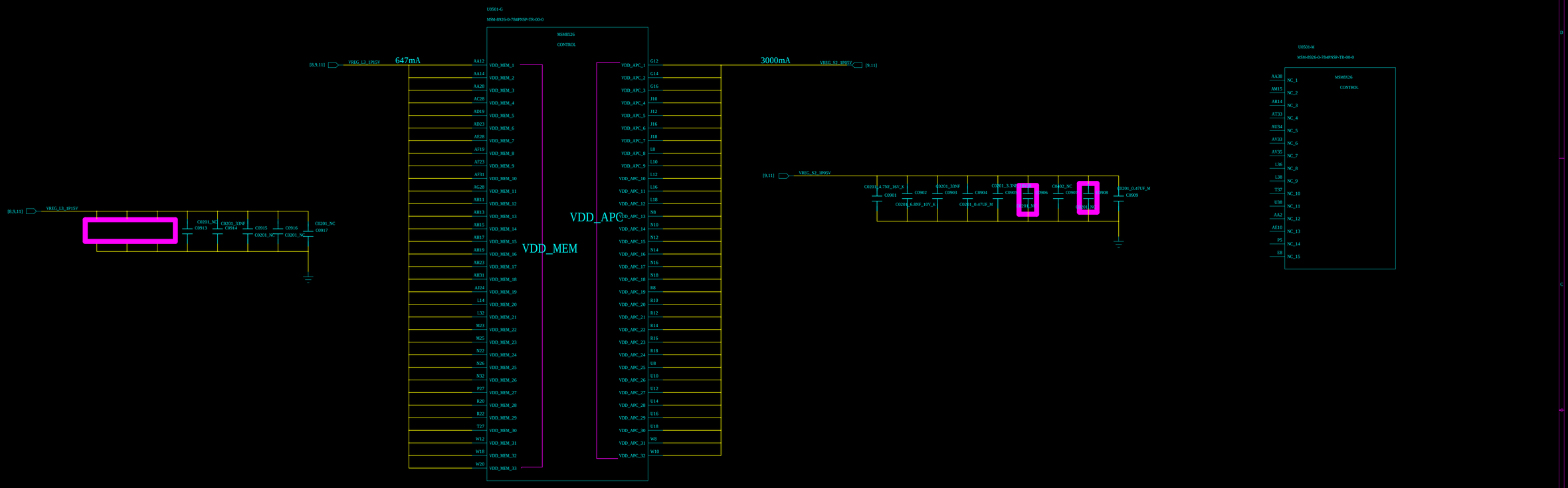

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U1101-E
PM-8926-0-172WLNSP-TR-07-1
VREG
VREG_S3_1P35V 1340mA VDD_GR1 Power for L1,2,4,5
VREG_S3_1P35V 1104mA VDD_GR2 Power for L3,24,26
VREG_S4_2P1V 616mA VDD_GR3 Power for L6,7,8,9,27
VREG_S4(HELP) R0402_0R R1103
VREG_S4_2P1V 63mA VDD_GR4 Power for L10,11,13
VPH_PWR ??mA VDD_GR5 Power for L12,14
VPH_PWR 1906mA VDD_GR6 Power for L15,16,17,18
VPH_PWR 350mA VDD_GR7 Power for L19,20,21,22,23,25
NC the input VDD_GRX capacitor
Sensors; touchscreen (1.8V 400mA) VREG_LVS1_1P8V [7,8,15,17]
Modem IC analog - low V; RFICs - low voltage (1.225V 1200mA) VREG_L1_1P225V [8,24]
Modem IC pad group 1; DDR memory (1.2V 1200mA) VREG_L2_1P2V [8]
Modem IC low V PLLs and on-chip memory (1.15V 1200mA) VREG_L3_1P15V [8,9]
MIPI_CSI, WCD core (1.2V 300mA) VREG_L4_1P2V [8,14]
Available (Main CAM DVDD) (1.2V 300mA) VREG_L5_1P2V [17]
Modem IC pad group 3, 4 & 8; MPM; eMMC; DDR memory; WCN; WCN; QFE (1.8V 600mA) VREG_L6_1P8V [7,8,14,15,16,19,26]
Modem IC analog - high V; TXDAC (1.85V 150mA) VREG_L7_1P85V [6,8]
Modem IC high V PLLs; MIPI_DSI I/Os (1.8V 50mA) VREG_L8_1P8V [8,12,17]
RFICs (2.05V 600mA) VREG_L9_2P05V [24]
HS-USB low V; WCN XO; PMIC low power BBCLK output buffers (1.8V 50mA) VREG_L10_1P8V [8,24,26]
PMIC XO circuits (1.8V 5mA) VREG_L11_1P8V
PMIC HKADC (1.8V 50mA) VREG_L12_1P8V [12,13,21]
PMIC RFCLK circuits (1.3V 5mA) VREG_L13_1P3V
Qualcomm front-end, RF switches, GPS LNA (2.75V 50mA) VREG_L14_2P75V [24,25]
MIPI_CSI (2.8V 300mA) VREG_L15_2P8V [17]
WCN (3.0/3.3V 600mA) VREG_L16_3P3V [26]
eMMC memory (2.95V 600mA) VREG_L17_2P95V [16]
SD/MMC card (2.95V 600mA) VREG_L18_2P95V [16]
Sensors; touchscreen (2.85V 300mA) VREG_L19_2P85V [15,17]
HS-USB high-voltage (3.075V 50mA) VREG_L20_3P075V [8]
Modem IC pad group 2 (2.75V 50mA) VREG_L21_2P75V [8,16]
Dual-voltage UIM1 (1.8 / 2.95 V) (1.8V/2.95V 150mA) VREG_L22_SIM1 [8,18,19]
Dual-voltage UIM2 (1.8 / 2.95 V) (1.8V/2.95V 150mA) VREG_L23_SIM2 [8,18]
WCN (1.3V 1200mA) VREG_L24_1P3V [8,26]
Helper to S4 (Bhelper) (2.075V 600mA) VREG_S4(HELP) [11]
Available (1.225V 1200mA) VREG_L26_1P225V
Available (2.05V 600mA) VREG_L27_2P05V
DSDS design,L26 and L27 is useless
Keep the output capacitor
The dedicated clock LDOs¡¯ load capacitors should each connect directly to the main ground using dedicated vias. This applies to VREG_L11 (XO) and VREG_L13 (RFCLK).
CAD NOTE:
THE INPUT AND OUTPUT CAPS GROUND OF EACH SWITCHING REGULATOR SHOULD BE STAR ROUTED TO THEIR RESPECTIVE REFERENCE GROUND
U1101-D
PM-8926-0-172WLNSP-TR-07-1
VDD_L25 VDD_S1 VDD_S2 VDD_S3 VDD_S4 VDD_S5
Place C1102¡¢C1148 and C1146 ¡¢C1114close to MSM load
Place C1120 and C1124close to PMIC
LQM2MPNR24MGHL L1101 (1.15V 3A) VREG_S1_1P15V [8]
0603 package
CAD NOTE:
S1 and S2 FB SIGNAL CLOSER TO MSM POWER PIN
LQM2MPNR24MGHL L1102 (1.05V 3A) VREG_S2_1P05V [9]
0603 package
SPH252010H1R0MT L1103 (1.35V 2A) VREG_S3_1P35V [11]
1.8A
SPH252012H2R2MT//LVH252A12-2R2M-N L1104 (2.1V 1.5A) VREG_S4_2P1V [11,14]
1.0uH 1.8A
SPH252010H1R0MT L1105 VREG_S5_1P15V [8]
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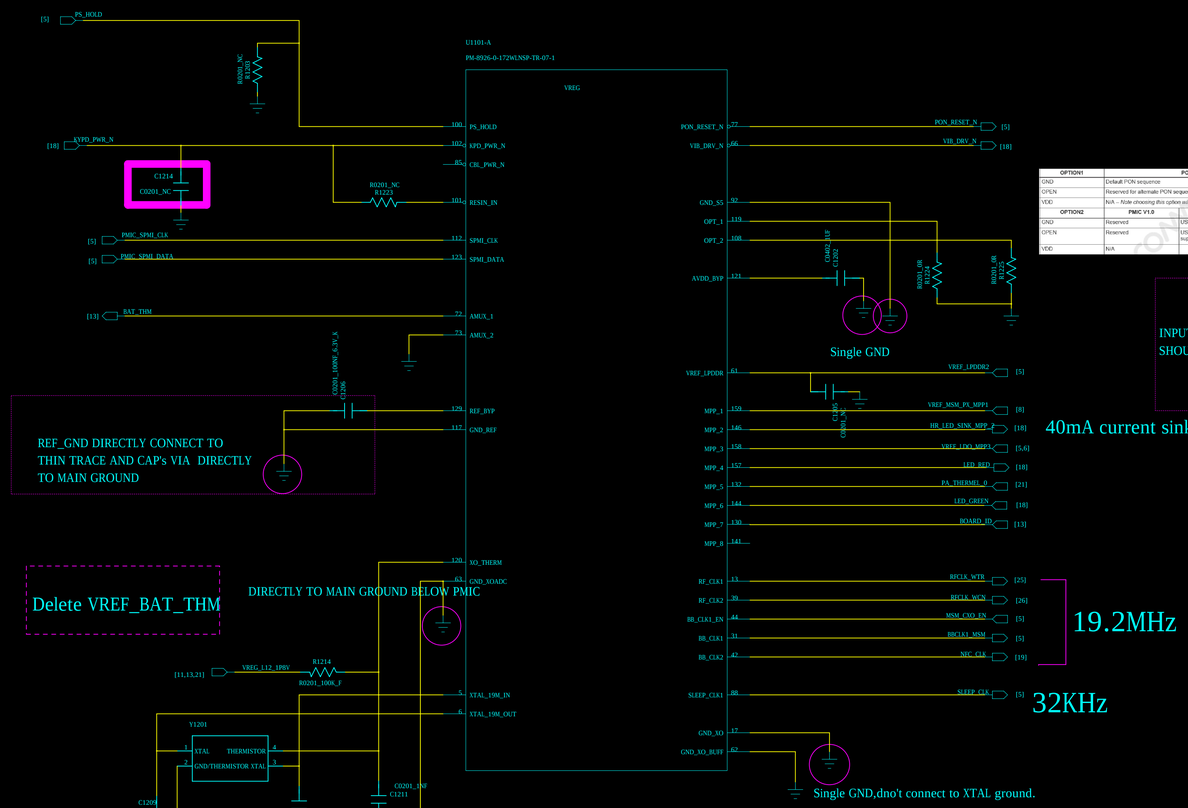


OPTION1	PON sequence
GND	Default PON sequence
OPEN	Reserved for alternate PON sequence. Currently not defined.
VDD	N/A – *Note choosing this option will force the PMIC to shut down.*
OPTION2	**PMIC v1.0-v2.1**
GND	Reserved
OPEN	Reserved
VDD	N/A
	PMIC v2.0-v2.1
	USB OVP threshold set to 6.5 V.
	USB OVP threshold set to 12.5 V. (Use this if supporting wireless charging.)

NOTE:

If not using external 10m Ohm Rsnspopulate a 0 Ohm resistor in its place to tie BMS_CSP and BMS_CSN pins to VBATT

External 10m Ohm Rsns is required for all PM8926 with RR code=06 and below

Layout reference to 80-VP447-10£¬p8 p9

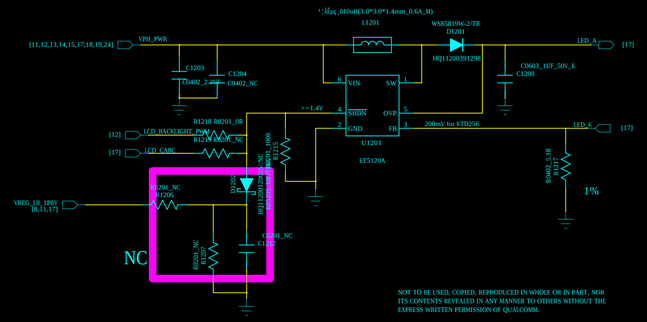
Changed to XO+single Thermisor
Reference to 80-VP447-7 80-VP447-10

	·ÔÅ¢XO	¼¯³ÉXO£¨Å¬ÈÍ£©
R1220	NC	0R
R1221	0R	NC
C1211	100NF	NC
C1212	10NF	NC

MPP Caution:

MPP 2,4,5,6,7,8 can all exhibit a glitch of >3V upon battery insertion or PON

It does not affect our internal designs because these are all connected to voltage dividers or LED cathodes.



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PM_USB_ID : direct connection to USB connector to detect ID when MSM PHY is off
U1101-B
PM-8926-0-172WLNSP-TR-07-1
VREG
LED_CHG
USB_IN
USB_ID_IN
OVP_CP_DRV
OVP_OUT
VDRV_P
ovp protect
BUCK CHARGER
MOS FET
VREF_BAT_THM
VCOIN
VPRE_BYP
VSW_CHG
VPH_PWR
GND_OVP
GND_CHG
GND_CHG_PSUB
GND_DRV
Signal GND. Refer to 80-NC833-5
NTC 47K B=4100
CHARGING:0~55 DEGREE
BAT_THM
VBATT_TEMP
CAD NOTE:
The ground connected
with CHG_PGND
CAD NOTES:
DIRECTLY CONNECT TO BATTERY
CONNECOT OUPUT
SENS pin£¬thin trace
VBAT_SNS
VBAT
CAD NOTES:
Place C1308 close to pin144
CAD NOTE:
The input and output cap ground
of each switching regulator should
be directly connected to these pins:
GND_S1,GND_S2,GND_S3,GND_S4
VCHG
GND_CHG_HP
BATFET_CP_DRV
CAD NOTES:
GND_CHG_HP(PIN 153,165) should be connect
to GND_CHG(PIN 142),then connects
directly to input(C1311,C1312) and output(C1307) capacitors¡¯ grounds,
and last connects to main ground.
VREG_L12_1P8V
BOARD_ID
BATTERY CONNECTOR
J1301
PAN30-03103-S101
BATTERY ID
R1310
ID Resistor
ADC Level
Identification
R1305 R1306
Ver1 10K NC
Ver2 1K 10k
Ver3 10k 47k
Ver4 10K 10K
Ver5 47k 10k
Ver6 10k 1K
Ver7 NC 10k
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Codec Pin	PMIC Reg	Voltage
VDD_Buck	S4	2.1
VDD_SPK_DVR	External boost	5.0
VDD_VBAT	VPH_PWR	2.5 to 4.5
VDD_A	S4/16	1.8
VDD_PX	S4/16	1.8
VDD_CX	S3/14	1.2

HEADSET JACK

¶ú»úµØ×öFMÌì ÏßL1401 BK402_0R FM_HEADSET {26}C1404C0201_NC C1405C0402_NC C1402_4.7NF C1403 ¸ÅÎª²QRD Ê¢ì±Ê

Thick tarce,width>1mm ÃÀ±ê

J1401 GND MIC HQ11950011000

D1401 ESD9B5.0ST5G D1402 ESD9B5.0ST5G D1403 ESD9B5.0ST5G D1404 ESD9B5.0ST5G D1405 ESD9B5.0ST5G R1420 R0402-BK1005HM102-T

Single GND

¶ú»úº´¼üÍ¨¹ýMIC_BIAS2ÊµÏÖ

MIC_BIAS2 [14]

R1420 pull-up resister is used to reject the common mode noise of the mic bias noise.
R1420 must be DNled if planning to install R1423

R0201_2.2K R1421 R0201_0R R1422 C1408 C0402_NC

L1402 BK1005HM102-T MIC2_P [14]

C1411 C0201_NC C1410 C0201_NC MIC2_M [14]

R0201_NC R1423 C1413 C0201_NC C1414 C0201_NC

L1411 BK1005HM102-T R0201_20K L1403 CDC_HS_DET [14]

C1418 C0201_NC close to JACK

L1404 BK1005HM102-T CDC_HPH_L [14]
L1410 BK1005HM102-T CDC_HPH_REF [14]
L1405 BK1005HM102-T CDC_HPH_R [14]

C1420 C0201_33PF_25V_J C1421 C0201_33PF_25V_J R0201_1K R1411 R0201_NC R1412

Routed between CDC_HPH_L and CDC_HPH_R

MAIN MIC

[14] MIC_BIAS R0201_1K R1413 C0201_100NF_6.3V_K C1426 C0201_33PF_25V_J C1427

[18] MIC1_P Differential routed L1406 BK1005HM102-T MIC1_P_CDC [14] C0201_33PF_25V_J C1432

[18] MIC1_M L1407 BK1005HM102-T MIC1_M_CDC [14] C0201_33PF_25V_J C1434 C0201_33PF_25V_J C1435

Close MSM

R0201_1K R1417 Single GND

SECONDARY MIC

MIC_BIAS1 [14] C1437 C0201_NC C1438 C0201_NC R0201_NC R1418

U1402 SOM40135L-G42D-RC-HS HQ12030005000/NC

L1408 BK1005HM102-T MIC1_P_CDC [14] C1441 C0201_NC L1409 BK1005HM102-T MIC1_M_CDC [14]

ESD9B5.0-2TR D1407 ESD9B5.0-2TR D1408 R0201_NC R1416 C1447 C0201_NC C1448 C0201_NC C1449 C0201_NC C1450 C0201_NC

Close MIC Single GND Close MSM

U1401

Chip Mode PIN
SLIMbus = Low
I2S/I2C = HIGH

		5	GND
		33	MODE
[7]	CODEC_RST_N	6	RESET
[12]	PMIC_AUDIO_REF_CLK	29	MCLK
PRIMARY MIC1	[14] MIC1_P_CDC	44	MIC1_INP
	[14] MIC1_M_CDC	35	MIC1_INM
Headset MIC	[14] MIC2_P	47	MIC2_INP
	[14] MIC2_M	53	MIC2_INM
SECONDARY MIC2	[14] MIC3_P_CDC	38	MIC3_INP
	[14] MIC3_M_CDC	43	MIC3_INM
		42	MIC4_INP
		41	MIC4_INM
		52	NC
		46	NC
[14]	CDC_HS_DET	37	MBHC_HSDET
		22	CCOMP
		34	LDO_H1_CAP
[14]	MIC_BIAS1	54	MIC_BIAS1
[14]	MIC_BIAS2	48	MIC_BIAS2
		51	NC
		23	GND_CFILT
[7,8,11,14,15,16,19,26]	VREG_16_1P8V 5mA	10	VDD_IO
		25	GND
[7]	CODEC_SLIMBUS_CLK	20	SLIMBUS_CLK
[7]	CODEC_SLIMBUS_DATA	30	SLIMBUS_DATA
		14	I2S_WS
		15	I2S_SCK
		24	DMIC0_DATA
		9	DMIC0_CLK
[7]	CDDC_INT	1	INTR

Delete MIC4 MIC5

C0201_NC C1424 C0201_100NF_6.3V_K C1416 C0402_1UF C1415

Signle GND

FOR WCD9306,PIN 51 is MIC_BIAS3

°¦PIN18£PIN28¾ÖÓòÍø£¬ÇëÊ¹ÓÃ¾ÖÓòÍø¹¦Ð§£¡

WCD-9302-0-55WLNSP-TR-02-0

RECEIVER

close to IC close to connector HQ12060017000

[14] CDC_EAR_P C0201_33PF_25V_J C1439 [14] CDC_EAR_M

B1406 B0402-BK1005HM102-T B1407 B0402-BK1005HM102-T

TP1406 TP_1.0 TP1407 TP_1.0 TP1405 TP_1.0 TP1404 TP_1.0

C1442 C0201_NC C1443 C0201_NC C1444 C0201_NC C1445 C0201_NC ESD9B5.0-2TR D1409 D1410 ESD9B5.0-2TR

LOUDSPEAKER To FPC connector

[11,12,13,14,15,17,18,19,24] VPH_PWR

6mA C0201_NC C1401 VDD_VBAT 35

9mA C0201_100NF_6.3V_K C1403 VDD_DIG 19 VREG_L4_1P2V [8,11]

20mA C0201_100NF_6.3V_K C1406 VDD_TX_RX 27 VREG_16_1P8V [7,8,11,14,15,16,19,26] GND 28

EAROP 26 CDC_EAR_P [14]
EAROM 31 CDC_EAR_M [14]

Delete seriers 0402 0R

HPH_L 16 CDC_HPH_L [14]
HPH_REF 17 CDC_HPH_REF [14]
HPH_R 21 CDC_HPH_R [14]

R0201_NC R1407

LINE_OUT1 36 [14] LINE_OUT1_P
LINE_OUT2 32 [14] LINE_OUT1_M

VDD_BUCK 3 600mA VREG_S4_2P1V [11]

BUCK_VSW 13 B1402 BLM18BD252SN1 C0402_4.7UF_M C1417

BUCK_VOUT1 6 BUCK_VOUT2 12 C0402_2.2UF C1419

GND_BUCK 7

GND ISLAND FOR BUCK,CONNECT TO C1422 GND

NCP_VNEG 11 C0402_1UF C1422 NCP_C1P 2 C0402_1UF C1423 NCP_C1M 1

GND ISLAND FOR CHARGER PUMP

SPKR_OUT_P [14]
SPKR_DRVP 49 R140 R0201_0R
SPKR_DRVM 50 R1404 R0201_0R
SPKR_OUT_M [14]

B0603_P2160R1221 B1404 SPKR_OUT_P_C [18]
B0603_P2160R1221 B1405 SPKR_OUT_M_C [18]

C0201_NC C1428 C0201_NC C1429

VPH_PWR [11,12,13,14,15,17,18,19,24]

VDD_SPKDRV 45 C0402_4.7UF_M C1430 GND_SPKDRV 55 GND 40 GND 18

GND ISLAND FOR SPK

Signle GND

[11,12,13,14,15,17,18,19,24] VPH_PWR C1409 C0402_1UF C1452 C0201_33PF

[14] LINE_OUT1_P C1451 C0201_33NF
[14] LINE_OUT1_M C1452 C0201_33NF

U1403 AW8145CSR VDD A2 INP A1 INN C1 VOP A3 VON C3 CTRL C2 VREF B2 PGND B1 AGND B3

SPKR_OUT_P [14] SPKR_OUT_M [14]

R0201_10K R1403 C1453 C0201_100NF_6.3V_K C1454 C0402_1UF

connect to C0816 ,then to main GND

[7] AUDIO_PA_EN

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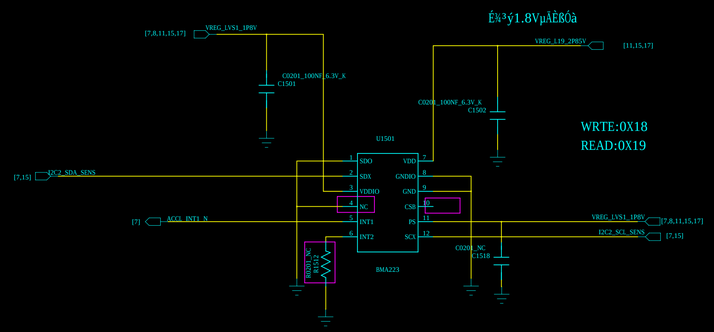
BMA223//KXTJ2-1009



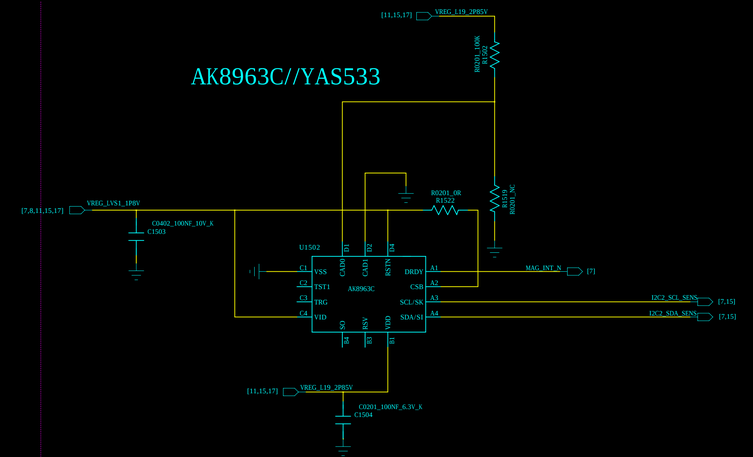
WRTE:0X18
READ:0X19

Write 0 0 0 1 1 1 1 0: 0x1EH

Read 0 0 0 1 1 1 1 1: 0x1FH

G-sensor

AK8963C//YAS533



READ:0X1D
WRITE:0X1C

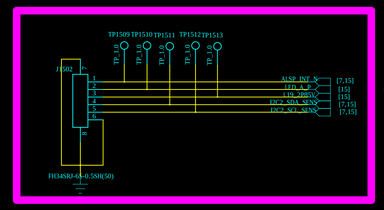
MB

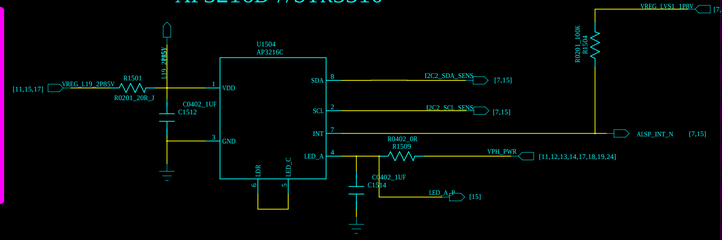
0	0	0	1	1	CAD1	CAD0	W/R
					0	1	0: W 1:R

COMPASS

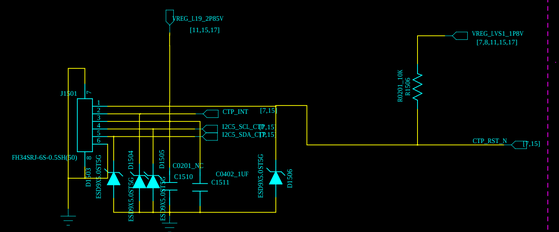
Gyro

AP3216D //STK3310

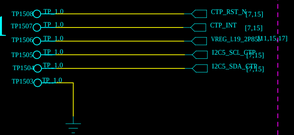




ALS+PS

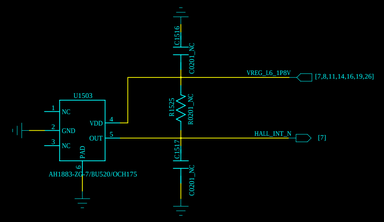


Copy form X211



Capacitor Touch Panel

Motor



Hall

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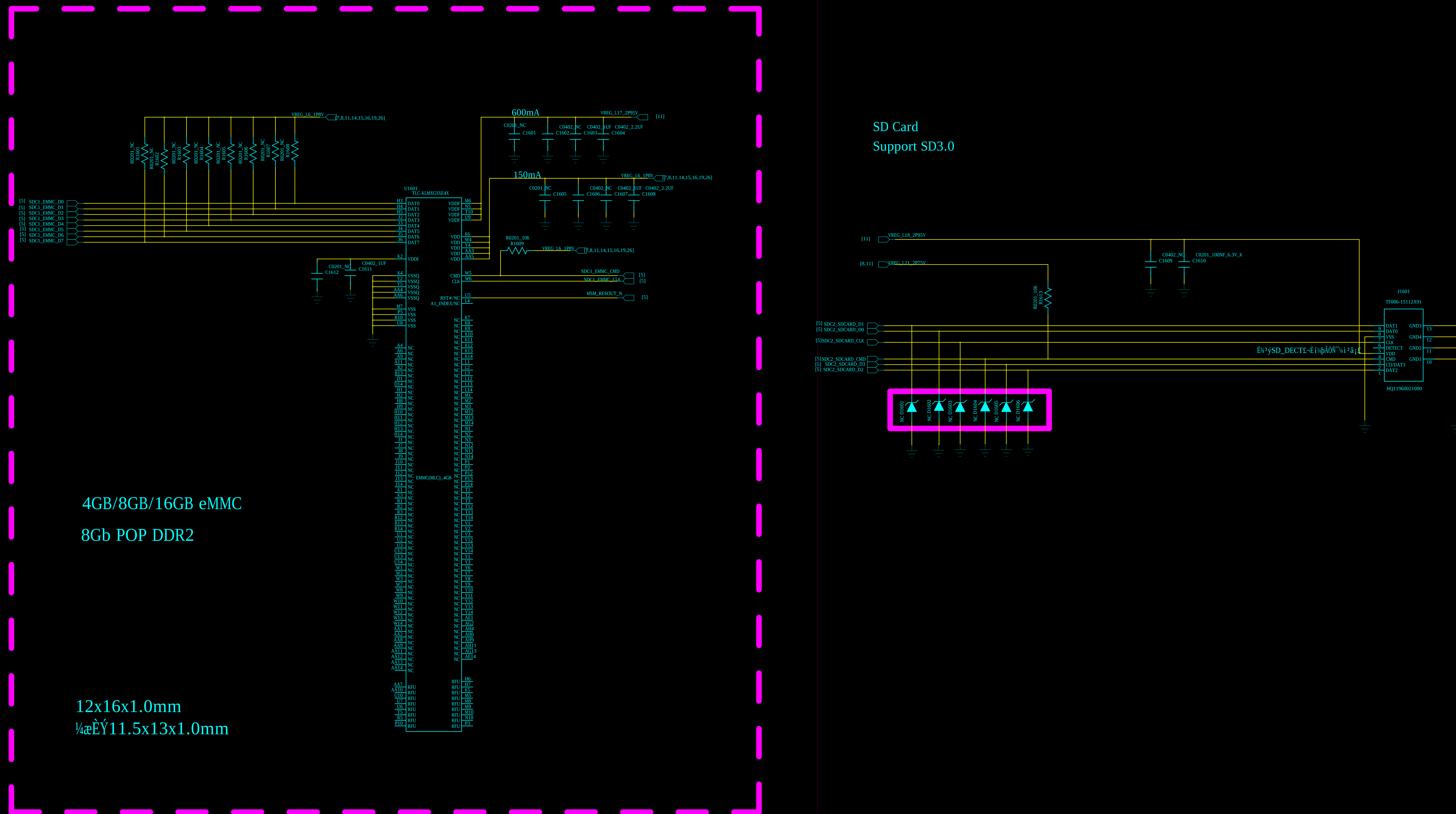

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·ÀÖ¹ÉÏµçÎóÉÁ

FLASH

·ÀÖ¹ÉÏµçÎóÉÁ

¼æÈÝ5´çHDºÍ4.5´çQHD

LCD

Sub CAMERA 0.3M/2M

Delete LANE1

From PMIC

Camera FLASH LED

Camera

Power For Camera AVDD

Main CAMERA 8M/5M

	Pin28	Pin29
5M	RESET	PWDN
8M	XSSHUTDOWN	NC

Main CAMERA

LCD

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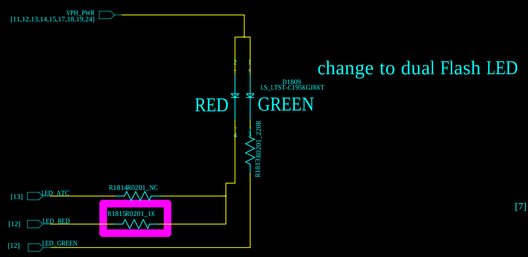
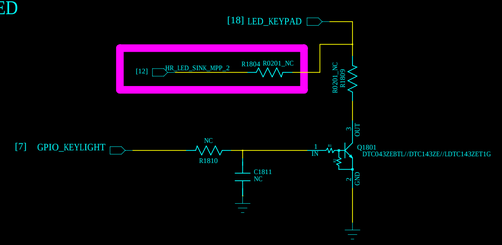
LED

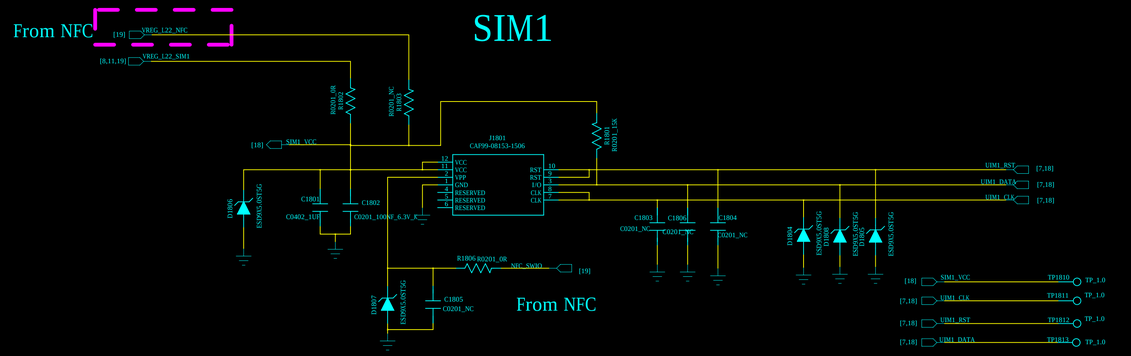


Ö¸Ê¾LED



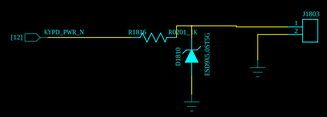
HR LED

SIM Card

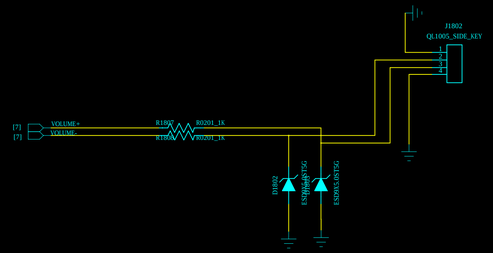


SIM2

Power Key

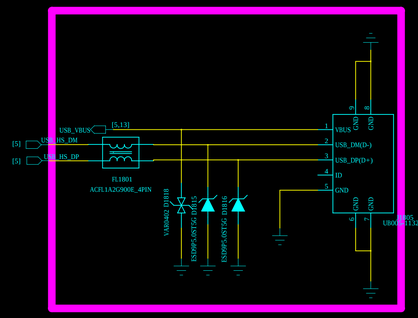


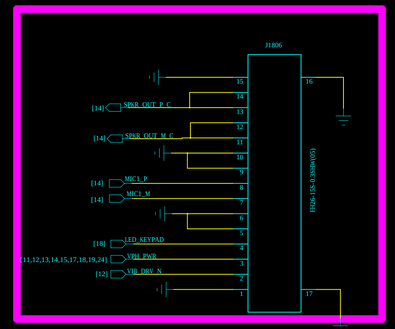
Side Key



SIDE KEY

Sub Board Connector





KBÉÏ£ºMIC£¬SPK£¬KEY LED,Motor

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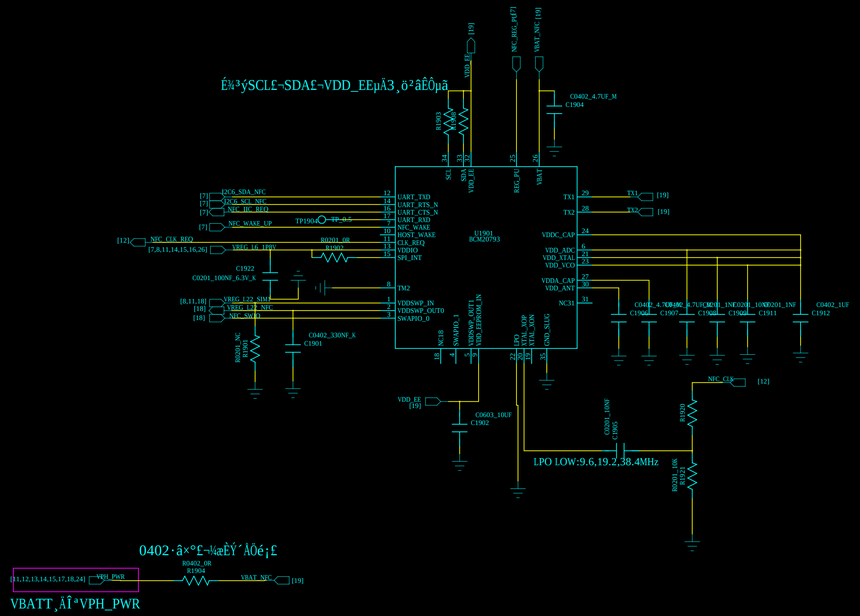
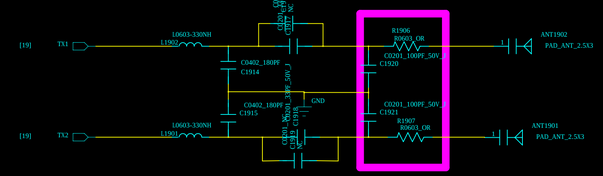
BB



É¾³ýSE¼ÓÃÜ

RF



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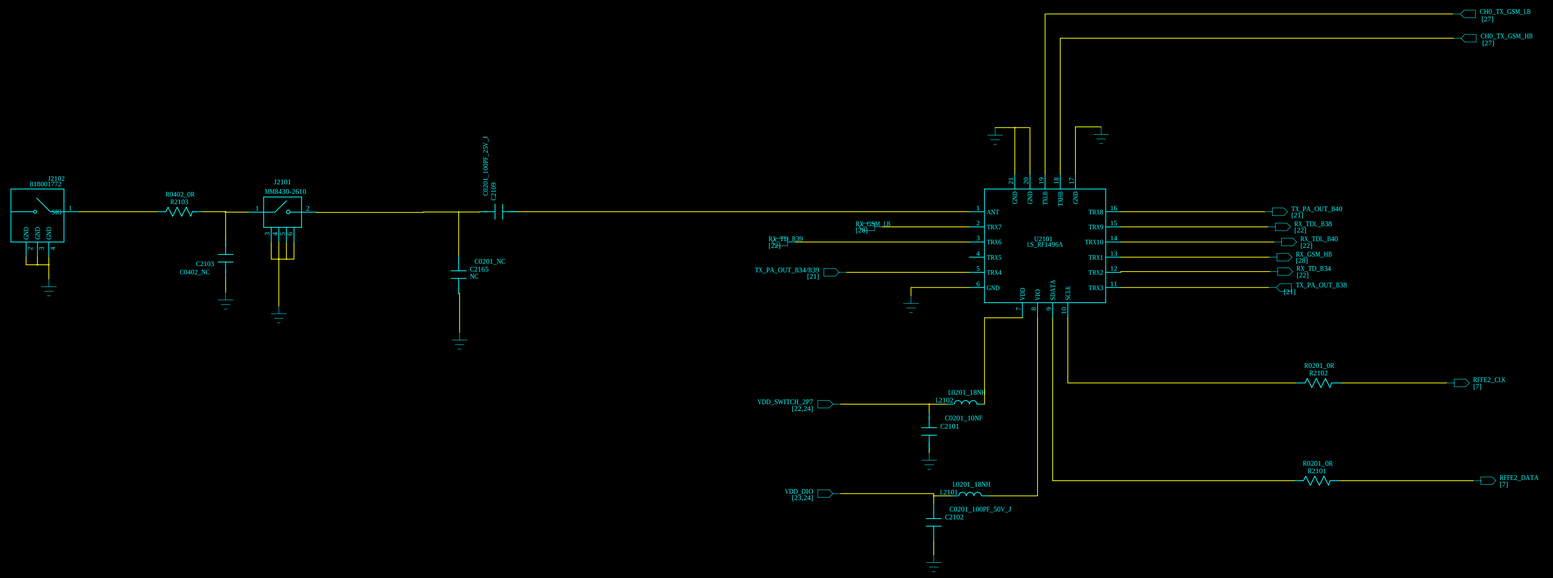
ANT



PRIMARY_ANTENNA_SWITCHPLEXER

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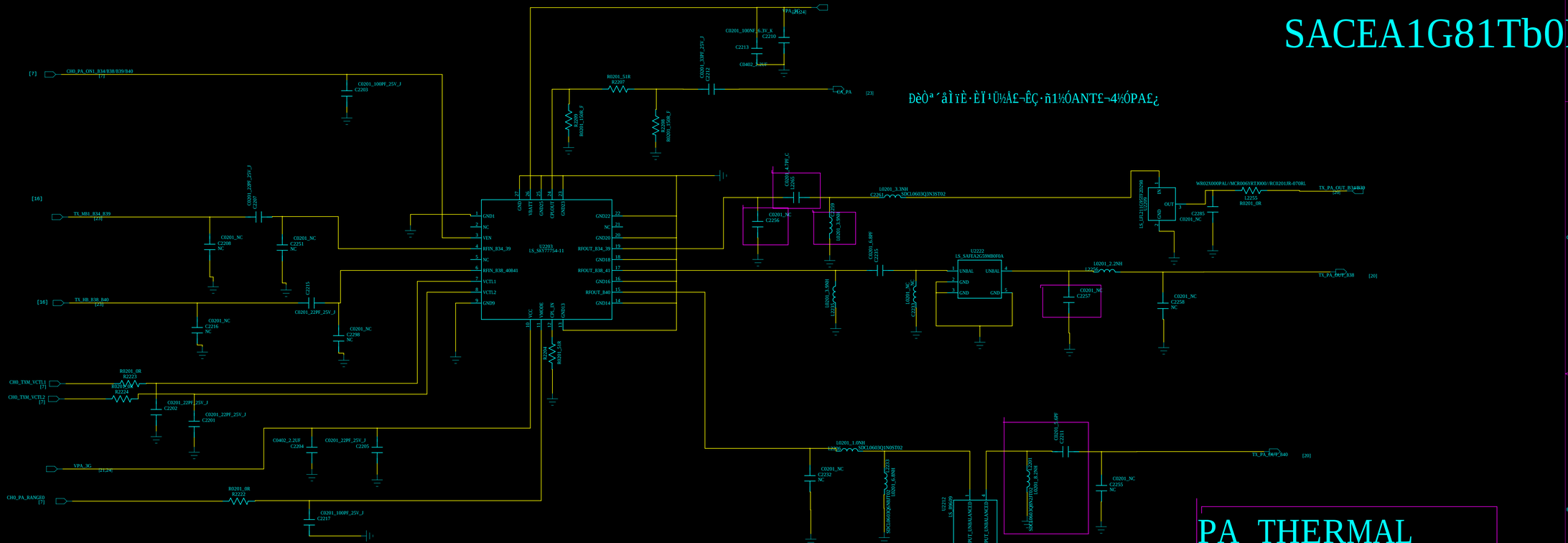
TD/TDD_LTE_B34/B38(B41)/B39/B40

SACEA1G81Tb0F0A



CHANGE TO B9609

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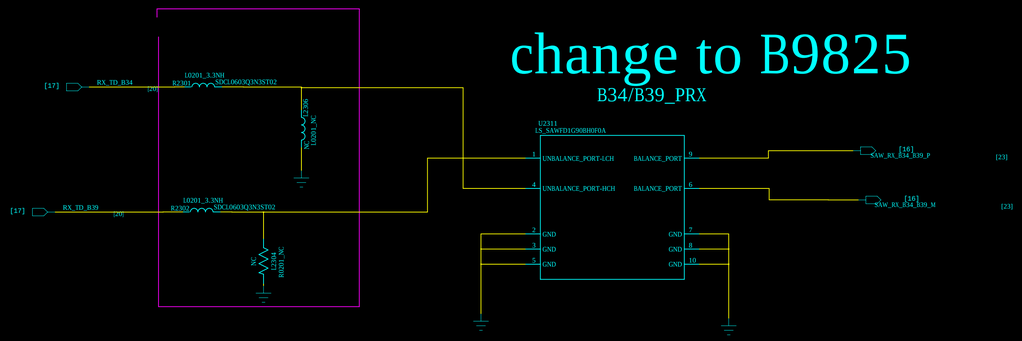
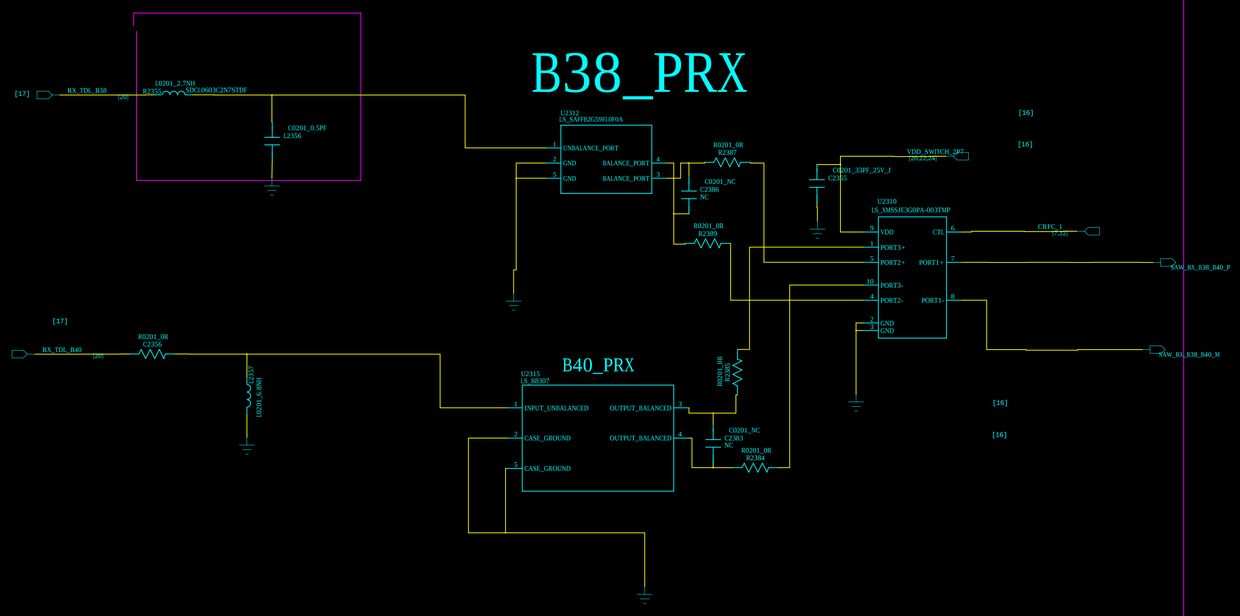
RF_TD/TDD_LTE_RXDRX

change to B9825

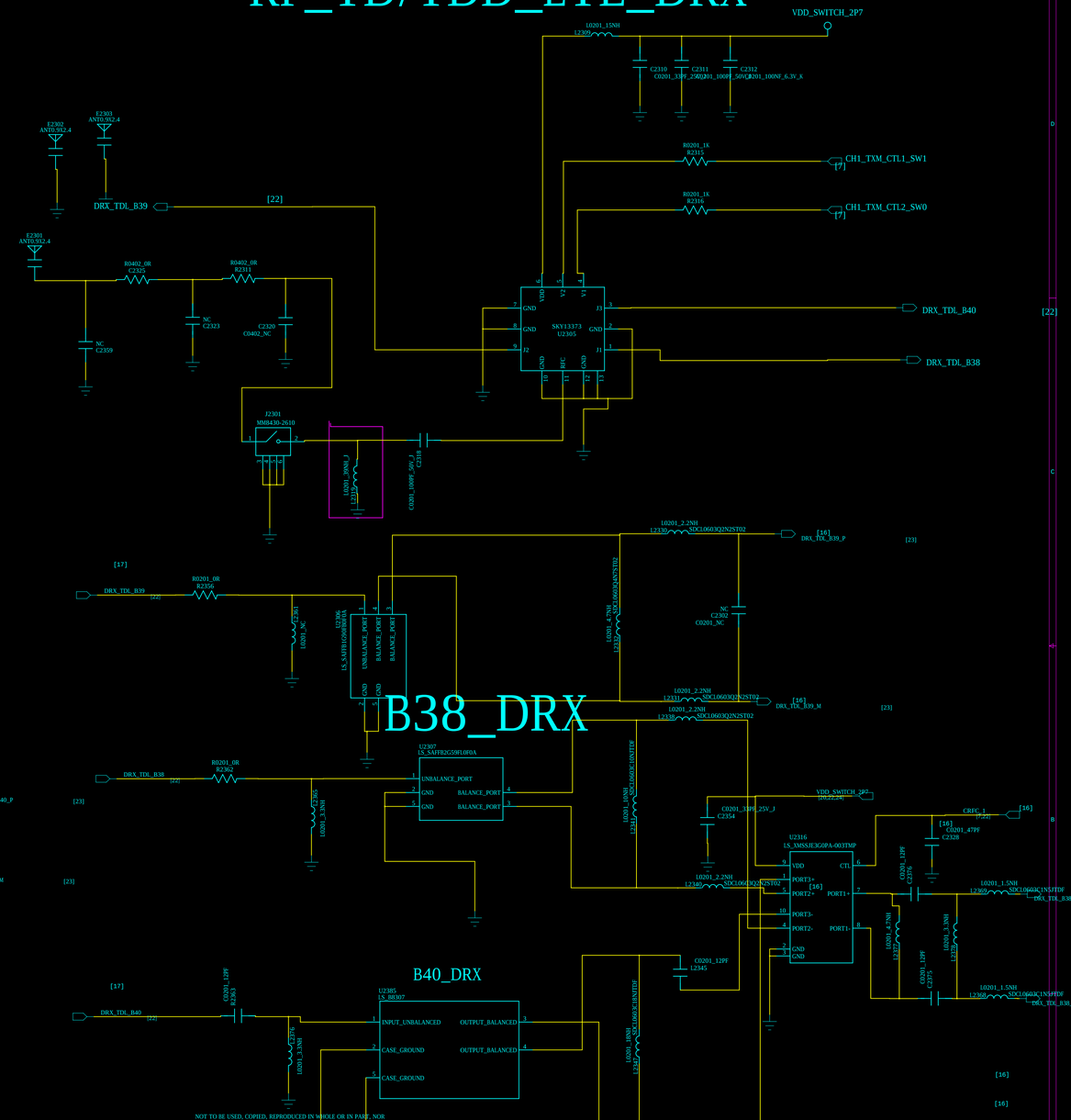
B34/B39_PRX



B38_PRX



RF_TD/TDD_LTE_DRX



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U2401-A
LS_WTR-1605L-0-1429WLNSP-TR-01-1

U2401-C
LS_WTR-1605L-0-1429WLNSP-TR-01-1

U2401-D
LS_WTR-1605L-0-1429WLNSP-TR-01-1

U2401-B
LS_WTR-1605L-0-1429WLNSP-TR-01-1

U2401-E
LS_WTR-1605L-0-1429WLNSP-TR-01-1

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RF_WTR1605L_POWER

[11,21] VREG_L9_2P05V [11] — B0402-BK1005HM102-T R2501 — C0603_4.7UF C2501

AL01 — C0201_100PF_25V_J C2503 — VDD_RF2_T_DA [16]

AL02 — C0201_100NF_6.3V_K C2510 — VDD_RF2_T_VCO [16] [23]

AL03 — VDD_RF2_T_RLL [16] [23]

AL04 — C0201_100NF_6.3V_K C2513 — VDD_RF2_XO [16] [23]

AL05 — VDD_RF2_P_BB [16] [23]

AL06 — VDD_RF2_D_BB [16] [23]

AL07 — C0201_100NF_6.3V_K C2526 — VDD_RF2_P_VCO [16] [23]

AL08 — C0201_100NF_6.3V_K C2527 — VDD_RF2_S_VCO [16] [23]

[8,11,21] VREG_L1_1P225V [RC11] — R2502 BK1005HM102-T — C0603_4.7UF C2504

AL09 — C0201_100NF_6.3V_K C2506 — VDD_RF1_T_SYN [16] [23]

AL10 — C0201_100PF_25V_J C2508 — VDD_RF1_T_UPC [16] [23]

AL11 — C0201_100NF_6.3V_K C2509 — VDD_RF1_T_LO [16] [23]

VDD_RF1_T_DA [16] [23]

AL12 — C0201_100NF_6.3V_K C2514 — VDD_RF1_P_FELO1 [16] [23]

AL25 — VDD_RF1_D_FE [16] [23]

AL13 — C0201_100NF_6.3V_K C2516 — VDD_RF1_P_FELO2 [16] [23]

AL14 — C0201_100NF_6.3V_K C2535 — VDD_RF1_D_MBLO [16] [23]

AL15 — C0201_100NF_6.3V_K C2577 — VDD_RF1_D_LBLO [16] [23]

AL16 — VDD_RF1_JDET [16] [23]

AL17 — C0201_100NF_6.3V_K C2586 — VDD_RF1_G_VCO [16] [23]

AL18 — C0201_100NF_6.3V_K C2584 — VDD_RF1_G_PLL [16] [23]

AL19 — C0201_100NF_6.3V_K C2582 — VDD_RF1_G_LNA [16] [23]

AL20 — C0201_100NF_6.3V_K C2580 — VDD_RF1_G_BB [16] [23]

AL21 — C0201_100NF_6.3V_K C2567 — VDD_RF1_P_PLL [16] [23]

AL22 — C0201_100NF_6.3V_K C2564 — VDD_RF1_P_VCO [16] [23]

AL23 — C0201_100NF_6.3V_K C2562 — VDD_RF1_S_PLL [16] [23]

AL24 — C0201_100NF_6.3V_K C2560 — VDD_RF1_S_VCO [16] [23]

VPH_PWR — SH2501 BLM18PG181SN1D — VPA_3G

VPH_PWR — SH2502 BLM18PG181SN1D — CH1_VPH_PWR

[8,11,21,23] VREG_L10_1P8V [RC11,20] — R2515 R0201_0R — C0402_1UF C2517 — VDD_DIO [16] [20,23]

[8,11,21,23] VREG_L14_2P75V [11,25] — R2509 R0201_0R — VDD_SWITCH_2P7 [16] [20,22]

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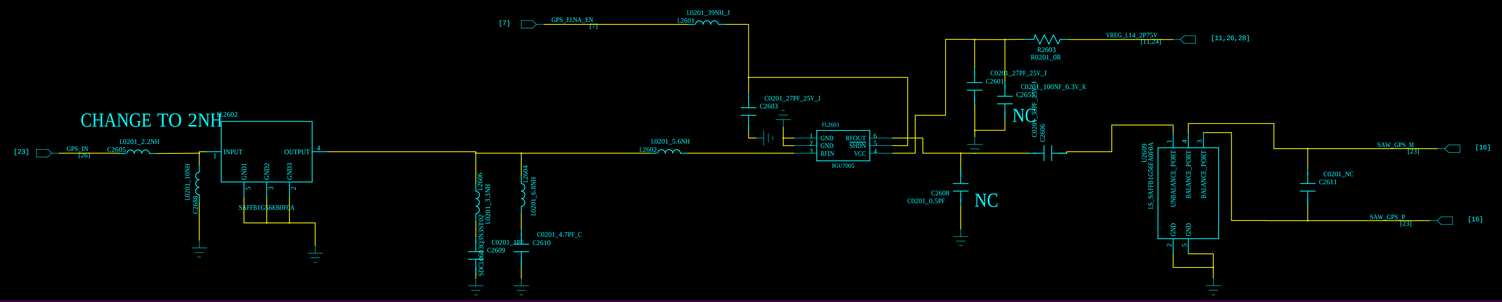
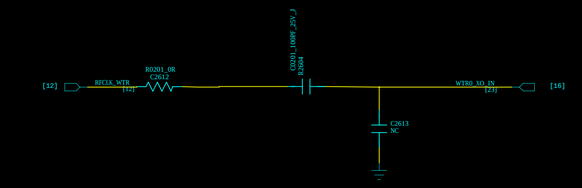
RF_GPS

BYPASS LNA&FILTER



APT

RF_XO



[18,19]

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WIFI/BT

CHANGE TO B9604

E2701
ANTD.0X2.4

E2702
ANTD.0X2.4

R0402_0R
C2705

R0402_0R
R2701

NC
C2708

C2709
C0402_NC

J2701
MM8430-2610

NC
C2702
C0201_NC

C0201_NC
C2703

C0201_1P5PF_NP0

L0201_3N3J

LFD181G58D9FC201

GND
CP:P3
GND
HP:P1
GND
LF:P2
U2701

GPS_IN [25]

Share Pad

SDCL0603Q1N0ST02
L0201_1.0NH

C0201_NC
C2711
NC

U2703

ES.839342980600.0
0R100

GND OUTPUT GND INPUT GND

C0201_NC
C2705

C0201_3.3PF_C0G_25V_C

C2712
NC

C0201_100PF_25V_J
C2704

C0201_47PF
C2704

L0201_82NH_J
L2202

C0201_22PF_25V_J
C2703

L0201_68NH_J
L2221

[12]
RFCLK_WCN
[12]

[25]
FM_HEADSET
[14]

U2702-A
WCN-3620-0-61WLNSP-TR-05-0

CONTROL

TCXO_IN 30
FM_HS_RX 50
FM_SSBI 41
FM_DATA 46
BT_CTL 18
BT_SSBI 33
BT_DATA 28
GND1 8

WL_PDET_IN 49
WL_BB_IP 54
WL_BB_IN 59
WL_BB_QN 47
WL_BB_QP 53
NC1 15
WL_BT_RFIO 5
WL_CMD_SET 6
WL_CMD_CLK 61
WL_CMD_DATA2 55
WL_CMD_DATA1 26
WL_CMD_DATA0 48
NC4 38
NC3 60
NC2 31

WCSS_FM_SSBI [7]
WCSS_FM_SDI [7]
WCSS_BT_CTL [7]
WCSS_BT_SSBI [7]
WCSS_BT_DAT_STB [7]

WCSS_BB_IP [6] [6]
WCSS_BB_IN [6] [6]
WCSS_BB_QN [6] [6]
WCSS_BB_QP [6] [6]
WCSS_WL_BT_RFIO [23] [26]
WCSS_WLAN_SET [7] [7]
WCSS_WLAN_CLK [7] [7]
WCSS_WLAN_DATA2 [7] [7]
WCSS_WLAN_DATA1 [7] [7]
WCSS_WLAN_DATA0 [7] [7]

Note: if no WAN filtering, remove C2303,L2301 and L2302

C0201_1P5PF_C
C2710

WCSS_WL_BT_RFIO [26]

U2702-B
WCN-3620-0-61WLNSP-TR-05-0

CONTROL

VREG_L6_1P8V [7,9,11,13,15,16,26] [23]
VREG_L10_1P8V [8,11,24,26] [23]
VDD_MODEM_1P2 [26] [23]
VREG_L24_1P3V [8,11,26] [23]
VREG_L24_1P3V [8,11,26] [23]
VREG_L24_1P3V [8,11,26] [23]
VREG_L24_1P3V [8,11,26] [23]
VREG_L24_1P3V [8,11,26] [23]
VREG_L24_1P3V [8,11,26] [23]
VDD_WL_LO_1P3 [26] [23]
VDD_WL_2GPA_BTDA_3P0 [26] [23]
VDD_WL_2GPA_BTDA_3P0 [26] [23]

VDD_IO_1P8 22
VDD_XO_1P8 24
VDD_DIG_1P2 29
VDD_FM_RXFE_1P3 56
VDD_FM_RXBB_1P3 57
VDD_FM_PLL_1P3 52
VDD_FM_VCO_1P3 51
VDD_BT_RF_1P3 3
VDD_BT_BB_1P3 13
VDD_BT_PLL_1P3 16
VDD_BT_VCO_1P3 7
VDD_BT_FM_DIG_1P3 23
VDD_WL_BB_1P3 60
VDD_WL_2GPA_1P3 37
VDD_WL_UPC_1P3 41
VDD_WL_2GLNA_1P3 9
VDD_WL_PLL_1P3 58
VDD_WL_LO_1P3 36
VDD_WL_2GPA_BTDA_3P0 11
VDD_WL_2GPA_BTDA_3P0 4
VDD_BT_DA_3P3

GND2 1
GND3 2
GND4 10
GND5 12
GND6 14
GND7 17
GND8 19
GND9 20
GND10 21
GND11 25
GND12 27
GND13 32
GND14 34
GND15 35
GND16 39
GND17 42
GND18 44
GND19 45

[8,11] VREG_L24_1P3V [8,11,26]

C0603_10UF
C2713

C0201_100PF_25V_J
C2714

C0402_4.7UF_M
C2717

C0201_100PF_25V_J
C2718

C0201_100PF_25V_J
C2719

L0402_NC
B2703
BLM03AX2415N1
B2701

C0603_10UF
C2720

C0201_100PF_25V_J
C2721

C0201_10NF
C2724

C0201_10NF
C2725

C0201_10NF
C2727

C0201_10NF
C2728

VREG_L24_1P3V [8,11,26] [23]
VDD_WL_LO_1P3 [26] [23]

[11] VREG_L16_3P3V [11]

B2705
R0201_0R

C0201_100PF_25V_J
C2716

near pin11

VDD_WL_2GPA_BTDA_3P0 [26]

[8,11,15,21] VREG_L10_1P8V [8,11,24,26]

C0201_0.47UF_M
C2722

C0402_4.7UF_M
C2723

VDD_MODEM_1P2 [26]

[5,7,8,13,24,26] VREG_L6_1P8V [7,9,11,13,15,16,26] [23]

C0201_0.47UF_M
C2726

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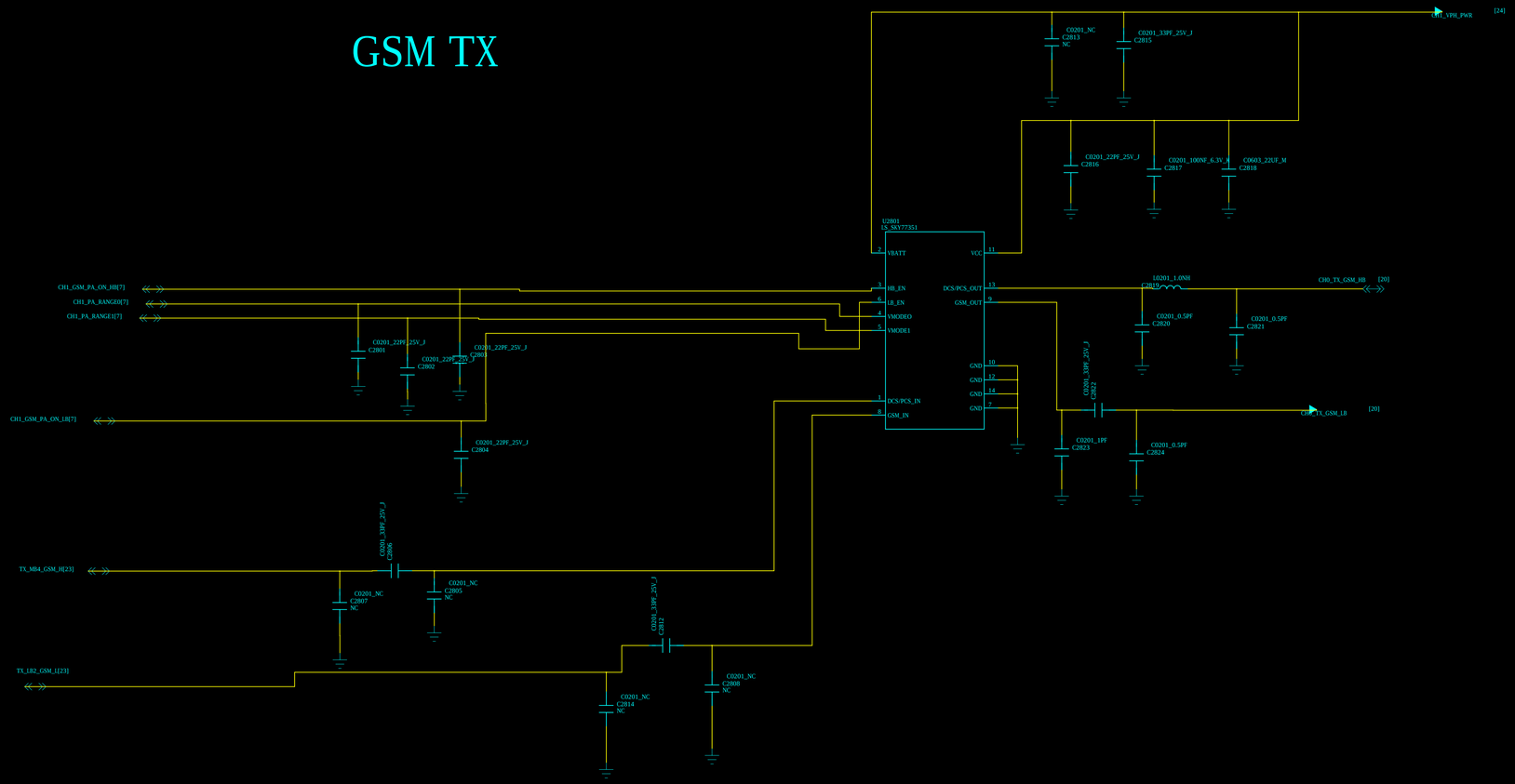
San Diego, CA 92121-1714
U.S.A.

Size 2018-03-21 Rev
Date: of

GSM TX



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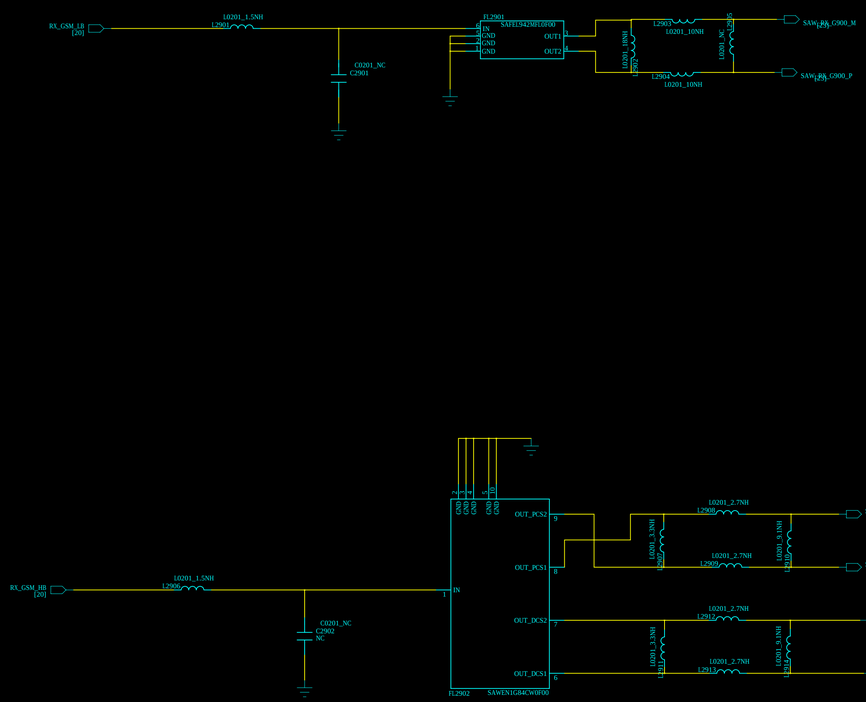
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C2901
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GND
GND
GND
OUT1
OUT2
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L2906
L0201_10NH
L0201_NC
C2905
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SAW_RX_G900_P
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NC
FL2902
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GND
GND
GND
IN
OUT_PCS2
OUT_PCS1
OUT_DCS2
OUT_DCS1
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L2908
L0201_2.7NH
L0201_5.1NH
L2911
L0201_2.7NH
L0201_2.7NH
L2909
L0201_2.7NH
L0201_3.9NH
L2912
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L0201_3.9NH
L2913
L0201_2.7NH
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